Letter-Comment Number	Comment	Response
588-1	As the Board of Directors of Palmdale Water District (PWD), we are writing to express support for the Delta Conveyance Project (DCP). The DCP is the right project at this time for the modernization of California's water transport infrastructure. In the face of climate change, rising sea levels, more extreme weather cycles, and warming trends accelerating snow runoff, the project will provide the necessary tools to increase the flexibility of our water system. It will allow for better collection of excess storm flows that can be transported and stored to improve the stability of the state's water supply while reducing future risks of disruption due to seismic activity. We also laud the mindful way the DCP is being developed to reduce impacts on the environment and the communities in the Delta.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support for the project.
588-2	PWD [Palmdale Water District] is a provider of safe and affordable water to over 126,000 residents and a wide range of businesses and industries. For more than a century, PWD has had to adapt its strategies and infrastructure to provide water security in the midst of ever-changing environment and population.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
588-3	As we foresee California's continuing water struggles, we know it is a wise choice and good governance to modernize the State Water Project (SWP) to deal with these challenges and protect the water security of over 27 million residents and hundreds of thousands of businesses in California.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
588-4	Like water agencies across the state, PWD [Palmdale Water District] actively invests in conservation, water storage, water re-use and modernizing our local. infrastructure to improve water security for our community. We recommend and encourage that the state join our local efforts by enabling the modernization of the SWP [State Water Project], certifying the DCP Draft Environmental Impact Report and supporting the	Please see response to comment 588-1 regarding comments stating opinions of support for the project.

Letter-Comment Number	Comment	Response
	continued development of the DCP. The modernization of the Delta infrastructure will help PWD and agencies like us ensure the future of water for residents and businesses for many generations.	
588-5	Thank you for considering our support for the DCP.	This comment provides general closing text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support for the project.
589-1	Thank you for the opportunity to submit comments under the California Environmental Quality Act (CEQA) on the Delta Conveyance Project Draft Environmental Impact Report (DCP DEIR). The Town of Discovery Bay (District) has a vested interest in the health of the Delta and the associated water quality (surface and groundwater), as the District serves water for residential, commercial, industrial, public, and irrigation use for the Town of Discovery Bay (pop. 16,000). In addition to being the water purveyor, the District also serves as the Groundwater Sustainability Agency within its service area.	This information describes the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
589-2	The District [Town of Discovery Bay] is submitting this comment letter on the Draft Environmental Impact Report (DEIR) of the Delta Conveyance Project (Project). The comments provided herein focus on Project impacts on groundwater resources. The District is located within the East Contra Costa (ECC) Subbasin, which is situated within the domain of the proposed Delta Conveyance Project (Project). Our agency would be directly impacted if the Project is completed as described in the Delta Conveyance Environmental Impact Report (DEIR). The following outlines the District's concerns regarding how the Project may have an	This information describes the structure or organization of the comment letter section on groundwater resources, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the specific contents of the EIR.

Letter-Comment Number	Comment	Response
	impact on the future sustainable management of groundwater resources in the ECC Subbasin.	
589-3	The review of the DEIR focused on whether the impacts analysis on groundwater resources in the DEIR is adequate. The District [Town of Discovery Bay] along with our water engineers Luhdorff & Scalmanini, Consulting Engineers ("LSCE") evaluated and compared relevant aspects of the modeling assumptions and inputs used in the development of Project impacts in addition to whether the DEIR accurately represents the Hydrogeological Conceptual Model (HCM) of the groundwater system in the ECC Subbasin. This evaluation is important in order to assess whether the model used in the impacts analysis was a suitable tool to adequately identify Project impacts on the groundwater system. Based on the review conducted by engineers several components of the DEIR were identified that would impact the sustainability of the Subbasin. Discovery Bay is of the opinion that the review performed by LSCE discovered significant issues with the DEIR to warrant the Department of Water Resources (DWR) to conduct additional evaluation of the feasibility of the Project. Discovery Bay requests that DWR cease any further advancement of the Project until the comments in this letter have been fully addressed. This letter presents general comments that are in response to specific sections within the DEIR.	This information describes the structure or organization of the comment letter section on groundwater resources,. This comment is an introductory statement summarizing points raised in the below comments from the same letter and addressed accordingly. It does not raise any new additional comments regarding significant environmental impacts or other contents of the EIR. For additional information, please reference comment responses 589-4 through 589-18.
589-4	Surface Water Quality and Sea Level Rise Impacts Several entities in the ECC [East Contra Costa] Subbasin receive surface water deliveries from diversion points in the Sacramento- San Joaquin Delta (Delta). Under the Project, lower salinity water would be removed from the Delta upstream of ECC surface water diversion points therefore i.)	Chapter 9, Water Quality, provides a complete assessment of impacts on salinity-related parameters in the Delta. The water quality impact analysis concludes that there could be some increases in bromide (Impact WQ-3), chloride (Impact WQ-4), and electrical conductivity (Impact WQ-5) at western Delta locations in some months, but increases would not adversely affect beneficial uses, including agricultural water supply, and impacts on these constituents would be less than significant. Furthermore, Chapter 5,

Letter-Comment Number	Comment	Response
	decreasing the availability of lower salinity water making its way to the region of the Delta near surface water diversion points to blend with the higher salinity water from the San Pablo Bay and ii.) increasing the likelihood that higher salinity water from the San Pablo Bay could migrate further into the Delta towards ECC Subbasin surface water diversion points. When groundwater suppliers within the Subbasin are unable to be blended with good quality surface water from the Delta, higher proportions of groundwater have to be utilized. This will lead to an increased reliance on groundwater in the Subbasin and will lead to increased groundwater pumpage in the region. The DEIR failed to discuss the potential impacts from increased groundwater use by ECC Subbasin entities in the region as a result of increased Delta Salinity.	Surface Water, provides an analysis of the potential changes to surface water resources that could result from the project. Chapter 15, Agricultural Resources, in the section titled Impacts of the Project Alternatives on Farmland Productivity, describes how the timing and magnitude of the increases in electrical conductivity would not result in substantial effects to cropland that currently receive somewhat saline irrigation water. Chapter 8, Groundwater, provides an analysis of the project's impacts on groundwater resources, all of which were found to be less than significant. As such, increased reliance on groundwater supplies is not anticipated as a result of the project.
589-5	Additionally, there are several entities within the [East Contra Costa] Subbasin that supply water to Disadvantaged Areas (DAs) comprised of both Severely Disadvantaged and Disadvantaged Communities. If these DAs lose the ability to receive good quality surface water from the Delta and are forced to seek more expensive water supplies or groundwater from other entities, there could be significant economic impacts on an already strained area and potentially impact the ability of the Subbasin entities to sustainably use groundwater resources.	Please see Common Response 8, Relationship to Other Plans, Projects Policies, and Programs, regarding the Sustainable Groundwater Management Act (SGMA) and subbasins. As described in Common Response 8, the impacts related to groundwater and surface water quality and sea level rise are evaluated in the EIR and would not conflict with actions that may occur within subbasins as part of SGMA. Impacts on surface water and groundwater quality related to sea level rise-driven saltwater intrusion in the Delta are less than significant and beneficial uses including water supply would not be adversely affected. Furthermore, considering the force of sea level rise on seawater intrusion into the Delta compared to the limited dewatering effects on local groundwater elevations along with the provision of Mitigation Measure GW-1, construction dewatering would not draw water seawater all the way up to the intakes or other construction sites. Therefore, as concluded in Chapter 29, Environmental Justice, the loss of water supply reliability to environmental justice communities within the Delta is not anticipated.

Letter-Comment Number	Comment	Response
589-6	The DeltaGW model was used to simulate existing and future conditions with andwithout the Delta Conveyance Project. The DEIR mentions sea level rise several times with respect to degradation of water quality, but there is no indication that sea level rise was simulated in the DeltaGW model. In fact, the DEIR states: "Notably, the DeltaGW modeling analysis did not include effects of sea level rise, which could contribute to saltwater intrusion in the Delta under 2040 conditions. [Footnote 1: This statement is made on line 39-40 on page 8-24 of Chapter 8].'' The DeltaGW model did not simulate sea level rise with its 2040 analysis, and therefore the DEIR is not able to quantify or provide a qualitative analysis of the potential impacts sea level rise would have on groundwater resources with the construction and implementation of the Project. Chapter 3 describes an extreme sea level rise scenario in which sea levels would by 1.8 feet by 2040 at the tide gage in San Francisco, but this was not described in any of the groundwater impact discussions in Chapter 8 (nor the appendices 8A, 8B, and 8C). Furthermore, the Sustainable Groundwater Management Act (SGMA) regulations required GSPs to model future groundwater conditions up to 2070. The use of the DeltaGW model projecting conditions into 2040 is not a sufficient time frame to make statements on future forecast impacts from climate change or sea level in particular. The DEIR must look at climate change and sea level rise impacts projected by 2070 as part of any cumulative impacts analysis and/or future projections.	As described in Common Response 10, Surface Water Resources and Groundwater Quality, sea level rise is not evaluated as part of the analysis conducted using the DeltaGW Model. The DeltaGW Model focuses primarily on assessing changes in groundwater elevations resulting from the project. The changes in groundwater elevations caused by the project are not expected to directly influence the potential impacts of sea level rise that would occur, even in the absence of the project. Therefore, the DeltaGW Model does not incorporate sea level rise considerations into its analysis. Furthermore, based on the evaluation of Impact GW-2, which specifically assesses changes in groundwater elevations, it was determined that the observed changes were not deemed significant. Given the lack of significant changes in groundwater elevations, there was no need for further analysis using the DeltaGW Model. Please refer to Chapter 4, Framework for the Environmental Analysis, for an explanation of how climate change was incorporated into the EIR analyses. As described in the section titled Additional Analyses of Potential Future Conditions, the purpose of a 2070 analysis is to provide additional information regarding potential impacts of the proposed longer-term future scenario, but the 2070 analysis is not used as the basis for CEQA findings. Please refer to Appendix 4A, Consideration of 2070 Conditions, regarding a discussion of 2070 conditions. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's SGMA and how groundwater sustainability plans (GSPs) were considered, including a discussion of the climate change assumptions.
589-7	Groundwater Storage Changes The DEIR states that groundwater storage would experience an overall increase under the Project (Table 8-8: Long-Term Changes in Groundwater Storage in Acre-Feet and Change	DeltaGW model is based on the best available model and data at the time of initiating the study pursuant to the CEQA guidelines. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for impact analysis.

Letter-Comment Number	Comment	Response
	Relative to Existing (CEQA Baseline) Conditions); hypothesizing any reductions in groundwater storage would be localized and short-term in nature. Impact GW-4: Changes to Long-Term Change in Groundwater Storage describes an increase in groundwater storage under all Project alternatives due to an increase in surface water supplies and a decrease in groundwater demand, however, this would only be applicable to entities that receive surface water deliveries from the Project. In the [East Contra Costa] DeltaGW model's Subregion 4, which contains the ECC Subbasin, most entities do not receive Project water deliveries, therefore, the increased storage simulated under the Project alternatives is likely overestimated for the ECC Subbasin.	The groundwater analysis reflects the changes in surface water deliveries and resulting increase in groundwater storage. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, includes reservoir storage results, changes in streamflow, and changes in water supply as a result of project operations. Changes in surface water deliveries between existing conditions and project alternatives as simulated by CalSim 3 for surface water analyses are reflected in the DeltaGW Model. As described in the Delivery Data section of Appendix 8B, water demands and water use in CalSim 3 are designated by demand units, which generally correspond to water districts, water agencies, Central Valley Project (CVP) and State Water Project (SWP) contractors, and non-district water users. Surface water delivery areas within the DeltaGW Model were assigned to match the CalSim 3 demand units. In Chapter 8, Groundwater, Impact GW-4 has been updated to clarify statements regarding changes in groundwater storage under project operations. None of the revisions to Impact GW-4 resulted in a new significant environmental impact or substantial increase in the severity of an environmental impact or required additional mitigation measures to which DWR was unwilling to commit. As discussed in Impact GW-4, modeling results indicate a slight increase in groundwater storage compared to existing conditions. These modeled changes are so small that they would have no noticeable effect on East Contra Costa County Subbasin. Therefore, model simulation supports the understanding that the project will not affect surface water deliveries within the region.
589-8	Monitoring of Baseline Conditions The DEIR fails to establish a clear plan for monitoring baseline conditions in order to evaluate Project impacts. 'Mitigation Measure GW-1: Maintain Groundwater Supplies in Affected	As described in the section titled Field Investigations in Chapter 3, Description of the Proposed Project and Alternatives, baseline groundwater data would be collected for several years before project construction begins. Information would be collected at the location of the proposed intakes and tunnel shafts. Groundwater-related data collected

Letter-Comment Number	Comment	Response
	Areas' states that groundwater monitoring would begin upon completion of monitoring wells close to the Project sites however, it does not establish a baseline timeframe in which data would be collected prior to Project commencement.	would include information on the seasonal variation in groundwater levels and groundwater quality and would be used to inform final project design. Monitoring of groundwater would occur over the project's construction period and would continue as part of project operations at the intakes and Southern Forebay. As described in Mitigation Measure GW-1, during construction or maintenance dewatering, if groundwater monitoring indicates that the difference between average groundwater elevation declines in monitoring wells inside the area of influence of dewatering and those of control (background) monitoring well outside the area of influence is more than 10% of the depth of the shallowest known well inside the area, mitigation of impacts on groundwater supplies would be needed. Injection wells would be constructed as needed to recharge the groundwater basin while potable supplies would be temporarily brought in to meet supply needs. In areas where injection wells are not feasible or not sufficient to mitigate impacts on groundwater in the area of influence, domestic and irrigation wells would be deepened or modified and potable supplies would be temporarily brought in while wells are modified, if needed. Monitoring would continue through the construction phase for up to 6 months following termination of construction dewatering activities and for at least 5 years after commencement of conveyance operations at the intakes. Impacts on groundwater as a result of dewatering activities would be minimized through the construction of seepage cut off walls at the intakes sites and in-wet construction methods used at the tunnel shaft locations. Common Response 10, Surface Water Quality and Groundwater Resources, provides additional details regarding the performance of seepage cut off walls relative to dewatering effects..
589-9	Mitigation Measure GW-1 also states that existing wells would be used to evaluate groundwater conditions. This statement incorrectly assumes that existing wells are actually present at	As described under Mitigation Measure GW-1, monitoring would be conducted in areas of dewatering. During the design phase, the locations of existing wells that would require monitoring would be determined. The

Letter-Comment Number	Comment	Response
	appropriate locations and depths and owners of those wells are willing to provide access to their wells for monitoring purposes. Using existing wells to establish a baseline would only be sufficient if the wells are constructed solely in the shallow zone where recharge and dewatering activities will occur. Furthermore, if the existing wells are used for supply, data from such wells may not represent true static conditions. Without a reliable baseline upon which to compare, determining Project impacts would be unreliable and erroneous.	information would be used to determine the need and location for construction of new monitoring wells. If existing wells are not suitable for monitoring purposes, additional monitoring wells would be constructed. Please see response to comment 589-8 regarding pre-construction field investigations to help determine baseline conditions, mitigation that may be implemented to offset observed adverse effects on groundwater as a result of dewatering and expected performance of the seepage cut off walls.
589-10	Equally, the use of average seasonal variations as a baseline for determining recharge and dewatering impacts is not sufficient if the data record is too long (Impact GW-2: Changes in Groundwater Elevations). A long data record, such as the almost 100 year record used in the DeltaGW Model (1922-2015), mutes the shorter-term seasonal variation averages while not accounting for recent groundwater conditions that are closely related to climatic changes.	The thresholds developed for Impact GW-2 are based on historical data for the 1974-2015 period from 132 wells within the Delta region, as described in the section titled Thresholds of Significance in Chapter 8, Groundwater. Measurements from the 132 wells were evaluated to determine interannual and seasonal variability over a 41-year period. A 41-year record is sufficiently long to detect decadal climate variability and any possible effects from climate change over that period. The historical fluctuations over the 41-year period were used to establish the threshold of +/- 5 feet change in groundwater elevations more than 5% of the time.
589-11	Groundwater Elevation Change in Supply Wells Changes in groundwater elevation can impact the reliability of water supply wells used by private domestic well owners and water suppliers. The DeltaGW model provides an estimate of changes in groundwater level for different nodes in different layers of the model grid to determine the impact of the construction and implementation of the Project. The model makes no attempt to simulate actual wells pumping specified amounts at specified times, but rather the IWFM modeling platform distributes pump within elements or areas based on the groundwater demand in that water balance area. This essentially smooths any localized changes in groundwater elevation over a larger area, resulting in the simulation of	Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts, including a discussion of how local wells were considered in the modeling analysis, and model resolution and representation of local surface water features.

Letter-Comment Number	Comment	Response
	groundwater level changes that do not represent the declines in groundwater levels that are experienced in real wells in real time during and after Project construction and implementation. The DEIR fails to acknowledge this issue in the evaluation of Project impacts.	
589-12	Water levels in supply wells, including domestic, irrigation, industrial, and public supply wells, may exhibit greater drawdown in areas where slurry walls or cutoff walls provide an impedance to lateral flow towards wells, thereby resulting in greater than normal decreases in groundwater elevations within wells. A more thorough analysis of the impact the slurry/cutoff walls will have on local drawdowns from supply wells is crucial to determine the significance of this particular groundwater concern from the Project, as the DeltaGW model is an insufficient tool to make that determination.	Slurry walls and cutoff walls were included in the model and assessed as part of the model simulations for project alternatives. Changes in groundwater elevation and reductions in groundwater levels affecting supply wells were assessed as part of Impact GW-2 and Impact GW-3, respectively. Using slurry walls to minimize dewatering flows would minimize the volume of water to be removed from the groundwater and isolate groundwater under the construction site from water in the adjacent groundwater aquifer, as described above and in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022a, 2022b). As such, there would be no adverse effects. As described in the Engineering Project Reports, the slurry walls, which will be constructed to state standards, should substantially limit reduction of external groundwater levels during internal construction dewatering activities and limit mounding of water external to the walls during operations when basin levels are higher than the surrounding groundwater levels. As described under Impact GW-1, piezometers would be installed outside the slurry wall and/or sheet pile walls to allow monitoring of potential groundwater level impacts affecting neighboring supply wells during construction for adaptive management of dewatering activities.
589-13	Lack of Southern Complex Simulation The DeltaGW model simulates slurry walls or cutoff walls along the intake and conveyance for the Project. The "deep cut walls" that are to be installed in the Southern Forebay levees are not simulated in the DeltaGW model. These walls will be no-flow barriers, and may impact the operation of local wells, and potentially impede groundwater flow toward surface water features that rely on groundwater (e.g. [East Contra	Please see response to comment 589-12 regarding cutoff walls. As described in Chapter 8, Groundwater, the physical features of the project were modeled for each alternative as low-permeability model elements whose alignments are shown in figure titled DeltaGW Model Physical Project Components. The Southern Complex is included within the footprint of the model elements associated with the Central and Eastern Corridors.

Letter-Comment Number	Comment	Response
	Costa] Groundwater Dependent Ecosystems [GDEs] as well as areas where gaining stream conditions occur). The permanent footprint of the Southern Complex is estimated to be approximately 900 acres, located within the ECG Subbasin. This feature was not described in the DeltaGW model documentation (Chapter 8, as well as Appendices 8A, 8B, and BC), and so it is assumed that this large feature was not simulated at all. Therefore, the impacts to groundwater based on the DeltaGW model are deficient to determine impacts in that area of the model's Subregion 4.	
589-14	Groundwater Dependent Ecosystem The DEIR notes the presence of Groundwater Dependent Ecosystems (GDEs) within the Project area and maps the permanent and non-permanent Project areas in Ch. 13 and on Mapbook 13-1. GDEs are not discussed in Ch. 8 in the context of potential Project impacts related to groundwater conditions. A large percentage of ECCs [East Contra Costa] GDEs are located near Clifton Court Forebay which is designated as a potential Project area. It is acknowledged in the DEIR that some of the GDEs will be permanently destroyed as a result of the Project. GDEs that will not be permanently destroyed have no defined threshold of significance for impacts or mitigation measures. SGMA regulations specifically call out the need for the Subbasin to protect GDEs.	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding a description and discussion of GDEs in the context of SGMA. GDEs are not discussed in Chapter 8, Groundwater, because substantial changes in interconnected surface waters and groundwater elevation would not occur. The EIR addresses temporary and permanent impacts on GDEs as a result of other potential impact mechanisms by identifying and evaluating potential impacts on all natural systems and habitat supported by groundwater that could be impacted by the project in Chapter 13, Terrestrial Biological Resources. For example, groundwater dependent ecosystems including tidal and nontidal perennial aquatic, tidal and nontidal freshwater emergent wetland, tidal brackish emergent marsh, valley/foothill riparian, alkaline seasonal wetland and vernal pool complex are evaluated in Impact BIO-1 through Impact BIO-8 in Chapter 13. Thresholds of significance for these and other sensitive resources are listed in the section titled Thresholds of Significance. Mitigation and Avoidance and Minimization Measures are allocated in the following sections: - Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources, describes the mitigation that would be implemented to offset impacts on these land cover types. - Attachment 3F.1, Compensatory Mitigation Design Parameters,

Letter-Comment Number	Comment	Response
		provides the design commitments and guidelines for compensatory mitigation of impacts. Avoidance and minimization measures that would apply during construction of the project (including but not limited to construction of the compensatory mitigation sites themselves) are contained in Appendix 3B, Environmental Commitments and Best Management Practices.
589-15	Cumulative Impacts Covered in Simulation Cumulative impacts were not simulated using the DeltaGW model, so despite the brief statements in Chapter 8 that claim most of the Projects will improve surface water reliability and therefore benefit groundwater resources, there is no analysis on the cumulative impact on groundwater resources in the ECC [East Contra Costa] Subbasin with the introduction of slurry walls, cutoff walls, conveyance tunnels, new intake feature, and a large forebay structure. Table 8-10 lists 26 programs or projects that could have impacts on groundwater resources in the vicinity of the Project, but the DEIR fails to explain how the Project may have on implementing the PMAs or how the PMAs may impact the DC Project.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of the qualitative nature of the cumulative impact assessment. Where there is insufficient information in the record to perform a quantitative analysis of reasonably foreseeable future projects, CEQA directs the agency to prepare a qualitative analysis. In addition, there is no specific CEQA requirement to synthesize or integrate cumulative effects of the project across multiple impact or resource types. Physical features of the project described in the comment (slurry walls, cutoff walls, conveyance tunnels, new intake feature, and a large forebay structure) are all simulated by the DeltaGW model for all project alternatives. As described in the section titled Cumulative Impacts of the Project Alternatives in Chapter 8, Groundwater, the simultaneous operation of the Delta Conveyance Project along with projects listed in the table titled Cumulative Impacts on Groundwater from Plans, Policies, and Programs are anticipated to have more beneficial impacts on groundwater than adverse impacts for all alternatives. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding consideration of GSPs. As described in Common Response 8, the groundwater analysis contained in Chapter 8 found that groundwater impacts would be less than significant and that they would not interfere with the ECC Basin's ability to maintain sustainability.

Letter-Comment Number	Comment	Response
589-16	Conclusion While the Draft Delta Conveyance DEIR is a very detailed report, an initial review of the information presented at this time leaves several concerns unanswered as noted in this letter. Significant negative impacts such as changes in surface water quality and sea level rise, and groundwater elevation changes were not sufficiently discussed, and no mitigation plan was provided.	Please see detailed responses to comments in letter 589 (e.g., 589-1 through 589-15) regarding responses to the concerns listed in this summary comment. As described in the responses to this comment letter, Mitigation Measure GW-1 is included in Chapter 8, Groundwater, and the significant negative impacts asserted in this comment are not supported by the impact analyses contained in Chapter 8 or Chapter 9, Water Quality. Impacts in these chapters are identified as either less than significant or less than significant with mitigation incorporated (e.g., Impact WQ-6 in Chapter 9). Furthermore, sea level rise is evaluated in multiple locations throughout the EIR and potential effects on resources, such as water quality, are disclosed. (See Common Response 6, Climate Resilience and Adaptation, for a discussion of the multiple climate change evaluations contained in the EIR.)
589-17	The report also had several modeling data gaps that LSCE [Luhdorff & Scalmanini, Consulting Engineers] finds to be consequential and recommends that the DEIR review model simulations for the Project particularly focusing on future simulations, surface water groundwater interactions, sea level rise and SGMA PMAs.	Future simulations under 2040 conditions are detailed extensively in Appendix 5B, Surface Water 2040 Analysis; Appendix 6A, Water Supply 2040 Analysis; and Appendix 8C, Groundwater 2040 Analysis. Impacts under a potential 2070 condition scenario are documented in Appendix 4A, Consideration of 2070 Conditions. Groundwater surface water interaction impacts are addressed in Chapter 8, Groundwater, under Impact GW-1. Sea level rise is addressed under Chapter 30, Climate Change. The climate change analysis considers project alternatives using a projection of future climate that includes changes in temperature, precipitation, hydrology, and sea level rise. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the consideration of groundwater sustainability plans in the analysis. While SGMA PMAs were not explicitly included in the analysis, the groundwater analysis found all impacts to be less than significant and are not expected to interfere with the basin's

Letter-Comment Number	Comment	Response
		ability to maintain sustainability.
589-18	The current Project as presented in the DEIR has the potential to impact the sustainability of the ECC [East Contra Costa] Subbasin. ECC Subbasin is currently sustainable and is projected to maintain sustainable conditions based on model computations and current management of the [East Contra Costa] Subbasin. The DEIR does not adequately provide enough information to definitively say that current sustainable conditions will be maintained with the construction and operation of the proposed Delta Conveyance. Based on review of the DEIR it is determined that the DEIR is inadequate and fails to address concerns that would impact the continual sustainability observed in the ECC Subbasin.	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's SGMA and how GSPs were considered. The currently available GSPs in the domain of the DeltaGW Model used for the groundwater analyses in Chapter 8, Groundwater, included the ECC subbasin. As described in response to comment 589-15 and Common Response 8, the groundwater analysis contained in Chapter 8 found that groundwater impacts would be less than significant and that they are not expected to interfere with the ECC basin's ability to maintain sustainability.
596-1	I am writing on behalf of the Alameda County Water District (ACWD), which serves over 345,000 residents and businesses in the cities of Fremont, Newark, and Union City in the southeastern San Francisco Bay Area. Thank you for the opportunity to share ACWD's comments on the Delta Conveyance Project Draft Environmental Impact Report (DEIR).	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
596-2	ACWD receives on average 40% of its water supply from the State Water Project, so has a significant interest in the long-term reliability of the State's water system. ACWD customers have made significant investments over many years in a diversified portfolio of water supplies, and we continue to pursue significant water use efficiency and conservation in our service area, as well as regional partnerships. Even with these intensive efforts, the State Water Project remains an important water supply for our customers and region.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
596-3	With the threats of climate change and sea level rise quickly approaching, the Delta Conveyance Project seeks to address these significant challenges. It would also reduce the risk of	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support for the project. Common Response 1 also

Letter-Comment Number	Comment	Response
	disruptions in State Water Project supplies to ACWD customers in the event of emergencies, such as earthquakes or other water quality emergencies in the Delta. Addressing these risks and challenges is critically important to us. We anticipate that the Delta Conveyance Project will have significant benefits to ACWD customers, and remain optimistic that it will be a cost-effective way to maintain a reliable and resilient water supply for our region.	describes the project's purpose and project objectives. Please also refer to Common Response 6, Climate Resilience and Adaptation, regarding how the Delta Conveyance project increases the resilience of the State Water Project to climate change, sea level rise, and a hotter, dryer future.
596-4	ACWD is currently providing planning funding for the Delta Conveyance Project. Long-term costs that would be borne by ACWD's customers are still being determined, and we will continue to evaluate the cost effectiveness and benefits of the project as updated information becomes available.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
596-5	ACWD also recognizes the importance of balancing water supply needs with other issues and appreciates the DEIR's thorough analysis of the Project based on best available science.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available science in the analysis presented in the EIR.
596-6	Thank you for your consideration of ACWD's comments.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-1	Attached please find the Sacramento County Water Agency's comment letter regarding the Delta Conveyance Project Draft EIR. The exhibits are attached in the Sharefile link below: https://somachlaw.sharefile.com/d-se2b85594a8294091a7183437a2e7ecee	This information describes clarification on the submittal of the comment letter. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
610-2	Attached please find the Sacramento County Water Agency's comment letter regarding the Delta Conveyance Project Draft EIR.	This information describes the structure or organization of the comment letter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-3	Re: Sacramento County Water Agency Comments on Delta Conveyance Project Draft Environmental Impact Report (SCH No. 2020010227) To the Delta Conveyance Office: Sacramento County Water Agency (SCWA) submits these comments on the Department of Water Resources' (DWR) draft environmental impact report (Draft EIR) prepared for the proposed Delta Conveyance Project ("DCP" or "Project").	This information describes the structure or organization of the comment letter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-4	I. Background SCWA [Sacramento County Water Agency] currently supplies potable and recycled groundwater and surface water to approximately 150,000 persons through more than 49,000 residential and business connections throughout its Zone 40 service area. SCWA's service area also includes the major growth areas of Sacramento County, south of Jackson Highway and east of State Route 99, which are anticipated to accommodate roughly 100,000 new persons and more than 20,000 new connections by buildout. SCWA's diverse surface water supply portfolio, combined with its conjunctive management of groundwater resources, provide stable and reliable water supplies to meet SCWA's current and future water demands. In 2002, SCWA, in conjunction with East Bay Municipal Utility District (EBMUD), formed the Freeport Regional Water Authority (FRWA). The FRWA was created to guide the	The information presented in the first portion of this comment describes the background of the Sacramento County Water Agency and the development of the Freeport Regional Water Authority (FRWA) in conjunction with East Bay Municipal Utility District (EBMUD). A description of the Freeport Regional Water Project (FRWP) is also provided. This introductory text is not a comment on the contents of the EIR. The second portion of the comment asserts that the location and operation of the project's intakes may result in reverse flow events that could affect the operation of the FRWP. The analysis in Chapter 5, Surface Water, in the section titled Changes to Sacramento River Basin Flows, does not support this assertion. Chapter 5 includes an assessment of the limited duration and frequency of reverse flows on the Sacramento River, as well as the extent (measured in miles) of reverse flows when they are expected to occur. The total number of reverse flow events were analyzed using DSM2, and for each event the total flow and distance was analyzed. New figures have been added to Chapter 5—one titled Frequency of Duration of Reverse Flow Events and another titled Frequency of Reverse Flow Distances—which show that there is no increase in frequency of stronger

Letter-Comment Number	Comment	Response
	financing, ownership, development, construction, and operation of the Freeport Regional Water Project (FRWP). The FRWP is a cooperative effort of SCWA and EBMUD to supply surface water from the Sacramento River to customers in central Sacramento County and the East Bay area of California via a water intake facility and pumping plant on the Sacramento River at the Freeport Bend, approximately 10 miles south of downtown Sacramento. SCWA relies on the FRWP facilities to provide surface water supplies and fulfill SCWA's conjunctive use program. The FRWP consists of: (1) an intake and pump station near Freeport Bend; (2) pipelines extending from the intake to SCWA's Vineyard Surface Water Treatment Plant and to the Folsom South Canal; (3) a pipeline extending from the Folsom South Canal terminus to EBMUD's Mokelumne River Aqueduct; and (4) related pumping plants, terminal facilities, and water treatment facilities. The FRWP intake can divert 185 million gallons per day (MGD), of which 85 MGD is dedicated to SCWA and 100 MGD to EBMUD. SCWA has invested in multiple sources of surface water to divert through FRWA at the FRWP, to supplement groundwater and maintain a diverse and reliable water supply portfolio for SCWA customers. Currently, SCWA diverts water at the FRWP intake under appropriative water rights, contract rights for Central Valley Project (CVP) water, and a contract for delivery of remediated groundwater. The FRWP intake, located at Sacramento River Mile 47.1, can be impacted by the Sacramento Regional Wastewater Treatment Plant's (SRWTP) treated wastewater discharge located downstream at Sacramento River Mile 46. "Reverse flows" predictably occur on the Sacramento River during periods of high tides on the San Francisco Bay and low	reverse flow events between existing conditions and project alternatives. These figures demonstrate that there is no change in the frequency and duration of reverse flow events at a distance of 0.8 miles from the Sacramento Regional Wastewater Treatment Plant outfall. The inclusion of the information in Chapter 5 does not result in a new significant environmental impact or substantially increase the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Furthermore, as described in Chapter 3, Description of the Proposed Project and Alternatives, operation of the project includes sweeping velocity requirements which limit the diversions to times when velocity at the north Delta intakes is in the downstream direction at 0.4 feet per second. This sweeping velocity requirement would minimize changes in reverse flows. As discussed in Chapter 21, Public Services and Utilities, no impacts on water supply or wastewater treatment attributable to reverse flows would occur under the Delta Conveyance Project. Please refer to Chapter 8, Groundwater, for the analysis of potential groundwater impacts associated with the construction, operation and maintenance of the proposed project and its alternatives, which were determined to be less than significant. Please refer to Common Response 3, Alternatives Development and Description, regarding Delta Conveyance Project proposed operations, which do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Please also refer to Chapter 6, Water Supply, for a description of potential changes to water supply.

Letter-Comment Number	Comment	Response
	downstream flows in the river. To avoid water quality impacts to the FRWP, FRWA halts diversions at the FRWP intake when SRWTP wastewater effluent has traveled 0.9 miles upstream from its discharge point during reverse flow events. These intake shutdowns are required by the domestic water supply permits issued by the State Water Resources Control Board (SWRCB) Division of Drinking Water to SCWA and EBMUD. The FRWP resumes operation only after the river resumes flowing in the downstream direction and the effluent zone has moved back downstream to a location not more than 0.7 miles upstream from the SRWTP discharge point. The location and operation of the Project's intakes present the potential for significant adverse impacts to operation of the FRWP from reverse flow events in the Sacramento River, and to the Sacramento region's water supply, through impacts to surface and groundwater quality and availability (including groundwater levels during construction and operation in the Project area and South American Subbasin [SASb]) and changes in upstream reservoir operations and in river flows in the Delta and upstream tributaries. The comments contained herein address the technical and legal insufficiency of the Draft EIR, including DWR's analysis of Project impacts on SCWA's water supplies and to water users in Sacramento County.	
610-5	II. Purpose and Project Objectives (Chapter 2) The Purpose and Project Objectives (Draft EIR, ch. 2) are too narrowly drawn, focusing only on benefits to State Water Project (SWP) operations and south of Delta water deliveries. The objectives reference providing "operational flexibility to improve aquatic conditions in the Delta," but the Project does not commit to improving aquatic conditions, nor does it	The project objectives are not too narrow. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the discretion CEQA affords lead agencies in defining the project purpose and objectives and the scope of the purpose and objectives statements for the purposes of CEQA. Please refer to Common Response 3, Alternatives Development and Description, regarding the alternatives screening process, and

Letter-Comment Number	Comment	Response
	include any objectives that would protect water supplies for water users in and upstream of the Delta.	development of the reasonable range of feasible alternatives evaluated in the EIR, as well as information regarding comment-suggested alternatives that are not evaluated in the Draft EIR. Common Response 3 also discusses potential operation of the Delta Conveyance Project which does not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. The analyses provided in the EIR Chapters 5 - 32 evaluate the potential impacts of the proposed operations in Chapters 7–32, as described in Chapter 3, Description of Proposed Project and Alternatives, and accurately represented by the CalSim 3 model for all alternatives.
610-6	Framing Project objectives so narrowly discourages consideration of alternatives to the Project that would protect and restore the Delta environment and thus is inconsistent with the California Environmental Quality Act (CEQA) as well as with the Delta Reform Act's coequal goals of improving water supply reliability and protecting, restoring, and enhancing the Delta ecosystem, as well as the Legislature's directive that "coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." (Water Code, section 85054.)	Please see response to comment 610-5 regarding the project objectives and the reasonable range of feasible alternatives evaluated in the EIR. Please refer to Appendix 3E, Delta Reform Act Considerations, and Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for a discussion of the relationship of the Delta Conveyance Project with the Delta Reform Act and coequal goals.
610-7	The Project objectives should be expanded to include prevention of water quality degradation in the Delta and avoidance of adverse impacts to water users in and north of the Delta, including impacts to Delta public facilities (which would include the FRWP [Freeport Regional Water Project]), consistent with the Delta Plan.	Please see response to comment 610-5 regarding the project objectives and the development of the reasonable range of feasible alternatives evaluated in the EIR. The Delta Conveyance Project would comply with applicable water quality objectives and regulations as described in Chapter 3, Description of Proposed Project and Alternatives, section titled Intake Operations and Maintenance (e.g., D-1641 and the Bay-Delta WQCP) and as analyzed in Chapter 9, Water Quality, and throughout the EIR. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of the purpose and objectives statements for the purposes of CEQA. Chapter 9,

Letter-Comment Number	Comment	Response
		Water Quality, fully evaluates potential operational impacts on multiple water quality constituents using existing standards that include water quality objectives and criteria required by various state agencies (e.g., State Water Resources Control Board, Regional Water Quality Control Boards), as described in the Methods of Analyses section of Chapter 9. Chapter 21, Public Services and Utilities, evaluates potential impacts including potential impacts on the Freeport Regional Water Facility (see Impact UT-2). Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship between the Delta Conveyance Project and the Delta Plan.
610-8	III. Proposed Project and Alternatives (Chapter 3) The Draft EIR examines the Dual Conveyance Bethany Reservoir Alignment as the proposed Project (Alternative 5). Alternative 5 is analyzed in the Draft EIR at 6,000 cubic feet per second (cfs) capacity, but the Draft EIR states without justification that DWR is not precluded "from approving [the Project] with another operational capacity, should DWR choose to do so." (Draft EIR, p. 3A-46:7-8.) DWR does not have unfettered discretion to adopt a Project alternative that has not been considered in sufficient detail to allow reviewers to evaluate its comparative merits. (Cal. Code Regs., tit. 14, §§ 15151, 15126.6(d).) Approval of Alternative 5 at, for example, an operational capacity above 6,000 cfs is not supported by findings or evidence in the record. (See Neighbors for Smart Rail v. Exposition Metro Line Construction Authority (2013) 57 Cal.4th 439, 470 [citing Pub. Resources Code, § 211698.5].) Importantly, flow in the Sacramento River measured at Freeport is as little as 9,000 cfs and averages 11,000 cfs in the late summer/early fall months. The Draft EIR contains no evidence regarding environmental consequences of the proposed Project operated at a capacity other than 6,000 cfs,	The commenter is incorrect in saying that the DEIR fails to analyze alternatives other than the 6,000 cfs alternative. DWR has fully described the reasonable range of alternatives evaluated within the EIR in the analyses contained in Chapters 5 through 32 and the supporting appendices, disclosed potentially significant environmental impacts in Chapters 7 through 32 and proposed mitigation to reduce, minimize, or avoid potentially significant environmental effects. For example, operation of Alternatives 2a (7,500 cfs) and 4a (7,500 cfs) are modeled and results disclosing the potential environmental effects are presented throughout the EIR. Chapter 5, Surface Water, section titled Project Alternatives, Changes to Sacramento River Basin Flows, describes the limited frequency and duration of reverse flows in the Sacramento River in proximity of the intakes. In addition, Chapter 8, Groundwater, Impacts GW-1 through GW-7, evaluates the operation of all alternatives. If DWR exercises its discretion to certify the EIR, because the environmental impacts for the range of intake diversion capacities from 3,000 to 7,500 cfs are fully disclosed in the EIR, DWR as CEQA lead agency has the discretion to adopt any of the project alternatives analyzed in the EIR as the approved project.

Letter-Comment Number	Comment	Response
	including effects to reverse flows, and groundwater resources. (Pub. Resources Code, § 21081.5; Cal. Code Regs., tit. 14, § 15384.)	
610-9	Moreover, there is no evidence supporting DWR's two-level filtering criteria for the consideration of feasible alternatives to the proposed Project. (Pub. Resources Code, § 21081.5; Cal. Code Regs., tit. 14, § 15384.) DWR's filtering criteria improperly eliminate alternative configurations of "through-Delta conveyance with no new diversion facilities" for failing to meet two or more resiliency criteria. (Draft EIR, pp. 3-5 – 3-6.) However, the Draft EIR alternative filtering criteria fail to take into consideration whether or how improving levees to existing standards for flood protection could achieve resiliency objectives without the need for north Delta intake structures. (Ibid.; Pub. Resources Code, § 21091(d)(1); Cal. Code Regs., tit. 14, § 15126.6(c) [a reasonable range of potential alternatives includes "those that could feasibly accomplish most of basic objectives of the Project and could avoid or substantially lessen one or more of the significant effects"].)	Please refer to Common Response 3, Alternatives Development and Description, which addresses why non-tunnel alternatives such as levee improvements were eliminated from consideration in the EIR. Consistent with CEQA Guidelines section 15126.6, the screening criteria are designed to identify potentially feasible alternatives that could feasibly accomplish most of basic objectives of the project and could avoid or substantially lessen one or more of the significant impacts. Specifically, Criteria 1 evaluated alternatives against the project objectives and Criteria 2 evaluated whether alternatives that made it through Criteria 1 had the potential to avoid or substantially lessen one or more of the project's significant impacts.
610-10	The County of Sacramento prepared a flood risk reduction study [Footnote 1: Attached hereto as Exhibit 1. Available at https://waterresources.saccounty.gov/DeltaSmallCommunities/Pages/Hood-Feasibility-Study.aspx (last visited Dec. 9, 2022).] for the town of Hood describing the fragility of the existing levee system and providing flood-risk management and implementation recommendations. The County's study demonstrates that conveying water within the Sacramento River with appropriate levee improvements could eliminate the need for a tunnel intake upriver of Walnut Grove and could reduce the proposed Project tunnel length by approximately 10 miles, thus reducing or avoiding many of the Project's significant impacts, including those associated with reverse	The assertion that the EIR does not contain a reasonable range of alternatives is not supported by the EIR and CEQA guidelines. The EIR fully evaluates and discloses the type and magnitude of the potentially significant environmental impacts associated with the location of the intakes, including impacts associated with land use in Chapter 14, Land Use, and impacts on sensitive receptors (e.g., residences) related to noise, air quality, and transportation in their respective resource chapters (Chapters 24, 23, and 20, respectively). In addition, through location studies, DWR located the intakes to avoid impacts (see below). Please refer to Common Response 3, Alternatives Development and Description, regarding the appropriateness of the range of alternatives under CEQA and how they were selected. Common Response 3 also

Letter-Comment Number	Comment	Response
	flows, impacts to the town of Hood municipal wells, effects to historic Delta towns and cultural resources, the Stone Lakes National Wildlife Refuge, and Cosumnes River Preserve. In Appendix 3A to the Draft EIR, "Identification of Water Conveyance Alternatives," DWR concludes the proposed Project intake locations "require the shortest intake structures" and so "minimize conflicts with existing land uses and residential structures." (Draft EIR, p. 3A-4.) The proposed intake locations present massive unavoidable conflicts with existing land uses and residences, including quality of life for Delta residents, and the statement that conflicts would be "minimized" is clearly fallacious. Levee improvements on the Sacramento River could be far more effective in minimizing impacts to existing land uses and structures compared to the proposed Project, including through shorter construction time and no permanent impacts. (See id., p. 3A-26.) Because the current range of alternatives does not adequately address any of the Project's significant impacts in Sacramento County, DWR must conduct further review of alternative categories—including through-Delta conveyances with no new diversion facilities—with consideration of Sacramento River levee improvements.	addresses why non-tunnel alternatives such as levee improvements were eliminated from further consideration as alternatives. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of the appropriateness of the project purpose and objectives. The range of alternatives considered for detailed analysis in the EIR and the alternatives screening process is presented in Appendix 3A, Identification of Water Conveyance Alternatives. The purpose of the Hood Feasibility Study was to develop, evaluate, and prioritize structural and non-structural flood risk reduction measures for the Hood study area. The report identifies system deficiencies for each segment of the levees within the study area (i.e., the community of Hood and the 725-acre agricultural area surrounding Hood) and discusses the necessary actions to achieve 100-year flood protection. Completing these levee improvements/repairs would not eliminate flood risk completely. Moreover, the Delta Conveyance Project provides an equivalent level of flood protection to the actions proposed in the Hood Feasibility Study (Pang pers. comm.). As described in Chapter 7, Flood Protection, Impact FP-1, the Delta Conveyance project would provide an equivalent or higher level of protection than the existing levees near the intakes. Moving the intakes downstream would not provide the flood risk reduction benefits provided by the project. Intake locations were previously intensively analyzed for the BDCP/California WaterFix Project and re-evaluated for the analysis of the Delta Conveyance Project. For the Delta Conveyance Project, a new independent analysis was completed of alternative intake locations upstream and downstream, and it found that these alternate locations did not meet the majority of basic project objectives and did not have the potential to lessen the proposed project's significant environmental impacts, which are the screening criteria for whether alternatives should

Letter-Comment Number	Comment	Response
		move forward for further evaluation in the EIR. Screening criteria for assessing intake site suitability included proximity to existing development (including the legacy towns), number of structures and residences within the permanent footprint, and potential impacts from construction traffic and new roads and road improvements. Please refer to the Intake Site Identification and Evaluation technical memorandum (Delta Conveyance Design and Construction Authority 2022b) for detailed information on site selection criteria. A through Delta conveyance alternative was screened from further consideration in Appendix 3A, Identification of Water Conveyance Alternatives, because it did not meet screening criteria for seismic, climate change and water supply resiliency and would not offer additional facility operations flexibility because of its reliance on one south Delta water diversion location. Please also refer to Common Response 3, Alternatives Development and Description, for a discussion of why alternative intake locations and through-Delta alternatives did not meet most of the basic project objectives or did not have the potential to lessen the proposed project's significant environmental impacts due, for example, to conflicts with existing facilities and land uses.
610-11	IV. Environmental Impacts As described below, the Draft EIR is legally inadequate in its analysis and determinations regarding the proposed Project's significant environmental impacts and so fails as an informational document. [Footnote 2: The Draft EIR is deficient in numerous areas. SCWA's comments focus on impacts directly related to water supply and groundwater resources.] The EIR must be revised and recirculated to correct the identified deficiencies.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the evaluation of water-dependent resources throughout the EIR. As described in this Common Response, changes to surface water resources and water supply disclosed in Chapter 5, Surface Water, and Chapter 6, Water Supply, are used to evaluate potentially significant impacts throughout the EIR (e.g., Chapter 12, Fish and Aquatic Resources, and Chapter 8, Groundwater). The EIR has fully evaluated and disclosed potentially significant environmental impacts on a wide range of resources pursuant to CEQA requirements. Please also see Common Response 1 for a discussion of the recirculation requirements of CEQA; none of which are met by the EIR.
610-12	A. Surface Water (Chapter 5) 1. Reduction in Upstream Sacramento River Flows	The Comment asserts that the EIR analysis of potentially significant impacts on water supply, water quality, and surface water was not appropriately disclosed and analyzed. This comment is not consistent with the extensive

Letter-Comment Number	Comment	Response
	The Draft EIR inappropriately concludes that changes to surface water resources "by themselves, are not considered an impact under CEQA and thus are not evaluated as impacts" in the Draft EIR. (Draft EIR, pp. 5-1:4-6, 5-2:31.) Under CEQA, "[t]he purpose of an environmental impact report is to identify the significant effects on the environment of a project . . . ." (Pub. Resources Code, § 21002.1; Cal. Code Regs., tit. 14, § 15064(d) [a lead agency must consider "physical changes in the environment which may be caused by the project"].) A "project-specific effect" is any direct or indirect environmental effect of a project other than cumulative effects and growth inducing effects. (Pub. Resources Code, § 21065.3; Cal. Code Regs., tit. 14, § 15191(j).) "Direct" and "indirect" effects "are caused by the project . . . ." (Cal. Code Regs., tit. 14, § 15358(a)(1)-(2).)	impact analyses contained in the EIR for water supply, water quality, and surface water. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding a discussion of Chapter 5, Surface Water, and Chapter 6, Water Supply, and the evaluation of water-dependent resources throughout the EIR. See Chapters 7–32 regarding an analysis of environmental impacts and proposed mitigation measures on multiple environmental resources related to surface water and water supply changes, including Chapter 7, Flood Protection, Chapter 8, Groundwater, Chapter 9, Water Quality, Chapter 12, Fish and Aquatic Resources, and Chapter 16, Recreation.
610-13	The Draft EIR provides only "[a] description of potential changes to surface water resources," despite acknowledging that such changes "could occur to surface waters as a result of the operation of new diversion and conveyance facilities for the SWP and, potentially, the CVP identified in the project alternatives." (Draft EIR, p. 5-1:24-25, emphasis added.) In fact, the Draft EIR concedes that there are direct changes on the physical environment resulting from Project operations: [T]here are consistent decreases among project alternatives in long-term average flows for all months on the Sacramento River north of Courtland (i.e., downstream of the proposed north Delta intakes) due to the diversions of available excess water at the proposed north Delta intakes beyond the needs to satisfy downstream regulatory requirements in the Delta, including Delta outflows and south-of-Delta exports.	The analysis contained in the EIR is not consistent with the assertion by the commenter that the environmental effects of the project have not been appropriately analyzed. Unlike in Cnty. of Inyo v. City of Los Angeles (1981) 124 Cal. App. 3d 1, the Delta Conveyance Project EIR provides a consistent and detailed analysis of potential environmental impacts associated with potential changes to surface water resources. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding a discussion of Chapter 5, Surface Water, and Chapter 6, Water Supply, and the evaluation of water-dependent resources throughout the EIR. See Chapters 7–32 regarding an analysis of environmental impacts and proposed mitigation measures on multiple environmental resources related to surface water and water supply changes.

Letter-Comment Number	Comment	Response
	(Draft EIR, p. 5-2:2-6; see Tables 5C-36-5C-42.) Impacts to surface water resources directly resulting from operation of the proposed Project and alternatives must be analyzed in the Draft EIR. (Cal. Code. Regs., tit. 14, § 15121; County of Inyo v. City of Los Angeles (1981) 124 Cal.App.3d 1, 9 [holding that an EIR inappropriately "remove[d] from consideration those matters necessary to the assessment of whether the [Project] purpose can be achieved"].) DWR must adequately analyze the potential environmental effects of the proposed Project to inform public agency decisionmakers and the public generally of the potential effects of lower water levels on the environment.	
610-14	Reverse Flows The Draft EIR does not adequately identify, analyze, and avoid or mitigate the Project's potential impact on the FRWP [Freeport Regional Water Project] intake facility and SCWA [Sacramento County Water Authority] water supply as a result of increased reverse flow events. An increase in the frequency of reverse flow events would result in an increase in the frequency of controlled shutdowns of the FRWP on the Sacramento River. Shutdowns of the FRWP intakes critically impact SCWA's ability to supply water to its customers during drought periods.	Chapter 5, Surface Water, discusses reverse flows in the Draft EIR. As noted in the comment, SCWA is required to implement controlled shutdowns of FRWP when certain reverse flow conditions occur on the Sacramento River. SCWA is required to implement a controlled shutdown of FRWP if effluent being discharged from Sacramento Regional Wastewater Treatment Plant moves 0.9 miles upstream of their outfall. Diversions at FRWP may only restart when the reverse flow event recedes to a point 0.7 miles upstream of the Sacramento Regional Wastewater Treatment Plant outfall. Figures included in Chapter 5 of the Final EIR demonstrate the limited duration and frequency of reverse flows on the Sacramento River, as well as the extent (measured in miles) of reverse flows when they occur. The total number of reverse flow events were analyzed using DSM2, and for each event the total flow and distance was analyzed. As shown in the Chapter 5 figure titled Frequency of Reverse Flow Distances, there is no increase in frequency of stronger reverse flow events between existing conditions and project alternatives. For example, this figure identifies that there is no change in the frequency and duration of reverse flow events at a distance of 0.8 miles from the Sacramento Regional Wastewater Treatment Plant

Letter-Comment Number	Comment	Response
		outfall. The inclusion of this information in Chapter 5 of the Final EIR does not result in a new significant environmental impact or substantially increase the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Please also refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding surface water quality modeling and the use of DSM2. Furthermore, as described in Chapter 3, Description of the Proposed Project and Alternatives, operation of the project includes sweeping velocity requirements which limit the diversions to times when velocity at the north Delta intakes is in the downstream direction at 0.4 feet per second. This sweeping velocity requirement would minimize changes in reverse flows.
610-15	The Draft EIR includes that operation of the DCP has the potential to increase the frequency of reverse flows in the Sacramento River upstream of the proposed intakes. (Draft EIR, p. 5-25:10-15.) However, the Draft EIR has no meaningful discussion of the Project's potential to impact reverse flow events in the Delta, nor does it describe its analysis of these Project impacts. The Draft EIR in several locations recognizes the Project's potential to increase the frequency of reverse flows upstream of the SRWTP [Sacramento Regional Wastewater Treatment Plant] intakes but offers only a cursory explanation of its conclusion that effects would not be significant: [DWR] determined the frequency of reverse flows in the Sacramento River upstream of the proposed intakes, near the Sacramento Regional Wastewater Treatment Plant, would increase slightly when the intakes were operating. The reverse	The analysis contained in the EIR is not consistent with the assertion by the comment that impacts on reverse flows was not meaningfully analyzed. Please see response to comment 610-14 regarding figures in Chapter 5, Surface Water. These figures provide a quantitative assessment of the number and duration of reverse flow events for each of the model simulations for existing conditions and project alternatives. These figures identified the number and duration of reverse flow events would be similar between existing conditions and the project alternatives. Please see Common Response 9, Hydrologic Modeling and Approach, regarding best available tools. As described in Common Response 9, the modeling tools available were not developed to perform hourly or sub-hourly modeling. Please see Common Response 10, Surface Water Quality and Ground Water Resources, regarding the use of DSM2 for surface water quality impact analysis, as the best available tool.

Letter-Comment Number	Comment	Response
	flows attributable to these operations are very small in both duration and reverse flow distance. According to DSM2 results, there is no increase in frequency of stronger reverse flow events (reverse flow distance greater than 0.8 miles). [Footnote 3: It should be noted that this brief discussion is found in Chapter 5, Surface Water, under a section labeled "No Project Alternative," which purportedly assesses future conditions if the Project does not proceed. Instead, however, this section discusses effects resulting from Project operations.] (Draft EIR, p. 5-25:9-18.) Later, the Draft EIR similarly states: "[o]peration of the intakes could result in reverse flows in the Sacramento River." (Id. at p. 21-40.) The Draft EIR provides no report or information by which to evaluate the basis for these statements nor the adequacy of its analysis of reverse flow events resulting from the Project. SCWA [Sacramento County Water Authority] could not identify any information that would support the conclusion quoted above. Because DWR has not provided any information about the number or duration of reverse flow events for the no-action alternative and for each of the modeled alternatives, nor has it presented its analysis in the form of figures that would allow a quantitative assessment of the number and duration of reverse flow events for each of the model simulations, it is not possible for SCWA to discern the effect on the FRWP [Freeport Regional Water Project]. Further, because DWR has not presented details of its analyses for the Project alternatives, it is not possible for SCWA to ascertain whether the number and duration of reverse flow events would be similar for each of the Project alternatives.	The Chapter 5 section titled Changes to Sacramento River Basin Flows specifically describes the existing condition of reverse flows and the operational changes of project alternatives on reverse flows. The figure titled Frequency of Duration of Reverse Flow Events and the figure titled Frequency of Reverse Flow Distances illustrate the relative changes in the frequency and distance of reverse flow for the proposed project and alternatives, relative to that under existing conditions.

Letter-Comment Number	Comment	Response
610-16	CEQA requires that an EIR "be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." (Cal. Code Regs., tit. 14, § 15151.) An EIR that does not provide information that would allow those not involved in its preparation to evaluate the adequacy of its conclusions violates CEQA. Conclusory comments in support of environmental conclusions are generally inappropriate. (Laurel Heights Improvement Assn. v. Regents of Univ. of Cal. (1988) 47 Cal.3d 376, 404.) "To facilitate CEQA's informational role, the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." (Id. at p. 405, quoting Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn. (1986) 42 Cal.3d 929, 935.) SCWA could identify no evidence in the Draft EIR that DWR evaluated the frequency and duration of reverse flow events for the future (2040) climate change condition. The Draft EIR presents no analysis of the number of reverse flow events in the 2040 no-project scenario, or whether the DCP project operations would increase the frequency or duration of reverse flow events in future conditions. (Draft EIR, p. 4.) Furthermore, though the Draft EIR concluded that the DCP's potential to increase the frequency of reverse flow events will not result in any significant impacts, it states that tidal restoration efforts will be undertaken as mitigation to offset effects of reverse flows caused by Project diversions. (Draft EIR, p. 3-158:33-34, fn. 11 [measures are designed to address fish impacts at Georgiana Slough].) Coupled with the lack of substantial evidence supporting its conclusion that reverse flow impacts will not be significant, this statement—which	Chapter 5, Surface Water, discusses reverse flows. New figures have been added to Chapter 5, in the FEIR. The figure titled Frequency of Duration of Reverse Flow Events and the figure titled Frequency of Reverse Flow Distances depict the limited duration and frequency of reverse flows on the Sacramento River, as well as the extent (measured in miles) of reverse flows when they occur. The total number of reverse flow events were analyzed using DSM2, and for each event the total flow and distance was analyzed. As shown in the figure titled Frequency of Reverse Flow Distances, there is no increase in frequency of stronger reverse flow events between existing conditions and project alternatives. For example, this figure identifies that there is no change in the frequency and duration of reverse flow events at a distance of 0.8 mile from the Sacramento Regional Wastewater Treatment Plant outfall. Furthermore, as described in Chapter 3, Description of the Proposed Project and Alternatives, operation of the project includes sweeping velocity requirements which limit the diversions to times when velocity at the north Delta intakes is in the downstream direction at 0.4 feet per second. This sweeping velocity requirement would minimize changes in reverse flows. The inclusion of the information in Chapter 5 of the Final EIR does not result in a new significant environmental impact or substantially increase the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Modeling of Old River and Middle River reverse flows is documented in Appendix 5A, Section B, in the Hydrology section. Results of this modeling effort is provided in Appendix 5A, Modeling Technical Appendix, Section F, Sea Level Rise and Delta Water Quality Modeling. The comment suggests that information presented in Chapter 3 section titled Real-Time Operational Decision-Making Process, including footnote 11, should be considered mitigation for potential impacts for reverse flows. However, in this discussion in Chapter 3, the reference to tidal restoration

Letter-Comment Number	Comment	Response
	acknowledges the DCP's potential to cause an increase in reverse flow events—appears to recognize that the Project's effects on reverse flows will be significant enough to require mitigation. The Draft EIR must be revised to include a robust, cohesive analysis of the DCP's potential to increase the frequency of reverse flow events in the Sacramento River and the effects of such flows on the FRWA's [Freeport Regional Water Authority's] ability to divert water (both the time and quantity of any reductions in water supply availability), including the evidence supporting the analysis, and must include adequate and enforceable mitigation measures that will reduce impacts to levels less than significant.	to offset potential hydrodynamic changes, would be evaluated in conjunction with adaptive management, not as mitigation. Furthermore, potential reverse flows at Georgiana Slough as a result of operations and potential effects on fish are not the same as potential reverse flows farther upstream by the north Delta intakes around Freeport.
610-17	DWR must revise the Draft EIR to address potentially significant impacts on the FRWP [Freeport Regional Water Project] intake facility and SCWA's [Sacramento County Water Agency's] water supply as a result of increased reverse flow events. In doing so, DWR should consider expert evidence submitted in the WaterFix water rights change petition hearing by SCWA, EBMUD [East Bay Municipal Utility District], and other stakeholders. [Footnote 4: Specifically, SCWA refers DWR to the testimony of Dr. Benjamin S. Bray contained in EBMUD-152 (attached hereto as Exhibit 2 [ATT 2]) and the testimony of Forest Williams contained in SCWA-3 (attached hereto as Exhibit 3 [ATT 3]).] SCWA also refers DWR to the comments of EBMUD on the Draft EIR. This information is essential to understand and draw meaningful conclusions about the Project's effects on the environment and water supplies in the Sacramento Valley and American River watershed. Currently, the Draft EIR improperly declines to acknowledge the practical effect of water supply changes that will have real impacts on municipal, agricultural, domestic, and commercial users. CEQA requires that the Draft EIR properly evaluate and disclose these	As described in response to comment 610-14, there was information in the Draft EIR documenting the limited duration and extent of reverse flows under project alternatives in the Draft EIR. Additional clarifying figures about reverse flows have been added to Chapter 5, Surface Water. Impacts on FRWP would not occur as a result of reverse flows under project alternative conditions. The inclusion of the information in Chapter 5 does not result in a change to an impact determination or require DWR to implement additional mitigation measures. Additionally, evidence that was submitted on the WaterFix water rights change petition does not directly address the Delta Conveyance Project Draft EIR and DWR is not required to respond. However, DWR has reviewed the evidence to determine whether it is applicable to the Delta Conveyance Project. Here, the evidence is not applicable to the Draft EIR.

Letter-Comment Number	Comment	Response
	impacts.	
610-18	3. Project Description and Operations Modeling The Draft EIR relies on hydrologic modeling to support its determinations about numerous impacts. However, the modeled parameters are not discussed in the Draft EIR and, importantly, the Draft EIR Project description does not limit DCP operations to what was modeled. The Draft EIR does not provide an actual operations plan that establishes concrete, stable parameters for use of the proposed north Delta intakes. Specifically, Alternative 5 does not describe how much water will be diverted at the north Delta diversion (NDD) and south Delta intakes and the timing of such diversions. As described in detail in the attached technical memorandum by MBK Engineers (attached hereto as Exhibit 4 [See ATT 4]), who have specific expertise in the coordinated SWP and CVP operations, there is insufficient information in the Draft EIR to understand the full range of potential Project operations and, thus, the effects on surface water, and water supplies for water users in and north of the Delta, including water quality, of the Project's use of NDD facilities. These inadequacies in the Draft EIR are of particular concern to SCWA [Sacramento County Water Authority], as a holder of a CVP contract, because the manner in which DWR operates the Project may affect storage in upstream reservoirs, as well as water supplies and the environment north of the Delta.	The language in Chapter 3, Description of the Proposed Project and Alternatives, regarding operational criteria and the integration of north Delta intakes with south Delta facilities has been revised to clarify that the assumptions used in the hydrologic modeling of SWP operations with the Delta Conveyance Project in place are an accurate depiction of actual project operations. DWR would operate the project as described (and consistent with criteria modeled in the EIR), consistent with all applicable existing and future regulatory requirements. Please also refer to Common Response 3, Alternatives Development and Description, regarding the adequacy of the level of details in operations descriptions and how they are accurately reflected in the modeling supporting the impact analyses. Please refer to Common Response 3 regarding how operations are modeled and limitations to the modeling results versus real time operations. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, Common Response 3, and Common Response 9, Hydrologic Modeling and Approach, regarding the EIR approach to upstream operations and reservoir storage. Operation of the proposed project and alternatives does not involve changes to upstream reservoir operational criteria although integration of the new facilities into the SWP could result in small changes to reservoir storage and stream flow. Please refer to Common Response 1 regarding the selection of the study areas for analysis in the EIR. As explained in Chapter 12, Fish and Aquatic Resources, Methods for Analysis section, a screening summary of upstream of Delta potential effects was conducted to confirm only minor differences in rivers and reservoirs would occur under the alternatives' operations, compared to existing conditions. A similar summary screening was conducted for

Letter-Comment Number	Comment	Response
		Chapter 9, Water Quality. In addition, EIR Appendix 5A, Modeling Technical Appendix, details all the methods and results of the hydrologic modeling conducted for the Delta Conveyance Project. Specifically, see Appendix 5A Section B, Hydrology and Systems Operations Modeling. An Operations Adaptive Management and Monitoring Plan would be adopted to consider potential refinements in operations based on conditions at the time of operations and new information gathered during monitoring. In addition, real-time monitoring is described in Chapter 3.
610-19	According to MBK [MBK Engineers], problems with the Draft EIR relevant to upstream water supply impacts and Delta salinity impacts, relate to three main areas: (1) modeling constraints on Delta exports; (2) model assumptions on shared benefits and the obligations of the SWP and CVP; and (3) the modeling limits on release and re-diversion of stored water. As discussed further below, MBK made the following key observations: (1) The proposed north Delta diversion ("NDD") facilities increase the capacity to release stored water for exports.	As described in Chapter 2, Purpose and Project Objectives, the basic purpose of the Delta Conveyance Project is to restore and protect the reliability of SWP water deliveries, not to create additional water transfer or export capacity. DWR proposes to operate the Delta Conveyance Project consistent with the operational criteria described in Chapter 2 in the sections titled Delta Conveyance Project Preliminary Proposed Operations Criteria and Real-Time Operational Decision-Making Process, as well as within the operational constraints as required by the permitting processes, including federal and state endangered species act requirements. Appendix 3H, Non-Project Water Transfer Analysis for Delta Conveyance, provides an analysis of the available export capacity for water transfers with current facilities to determine if current facilities limit the export of transfer water. The analysis concluded that, even though the project may add additional export capacity, it is unlikely to increase the amount of water transfers, since the current capacity is not even fully utilized. In addition, this comment raises similar project operation and hydrologic modeling topics to those raised in letter 545. Please refer to Letter 545 (see, e.g., comment 545-14) for detailed responses on those similar topics.

Letter-Comment Number	Comment	Response
		Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate responses to letter 545 contained in Chapter 4, Response to Comments Tables.
610-20	According to MBK [MBK Engineers], problems with the Draft EIR relevant to upstream water supply impacts and Delta salinity impacts, relate to three main areas: (1) modeling constraints on Delta exports; (2) model assumptions on shared benefits and the obligations of the SWP and CVP; and (3) the modeling limits on release and re-diversion of stored water. As discussed further below, MBK made the following key observations: (2) The modeling artificially limits the export capacity of the Project by including operational rules that result in months when simulated diversions through the proposed north Delta intakes are not used in their potential in combination with the existing south Delta pumps, even when the bypass flow requirements included in the project description would allow greater diversion.	The CalSim 3 and other modeling is an accurate representation of proposed Delta Conveyance Project operations. Please refer to Common Response 3, Alternatives Development and Description, for an explanation of the identified modeling assumptions and approach. In addition, this comment raises similar project operation and hydrologic modeling topics to those raised in letter 545. Please refer to letter 545 (see, e.g., comment 545-14) for detailed responses on those similar topics.
610-21	According to MBK [MBK Engineers], problems with the Draft EIR relevant to upstream water supply impacts and Delta salinity impacts, relate to three main areas: (1) modeling constraints on Delta exports; (2) model assumptions on shared benefits and the obligations of the SWP and CVP; and (3) the modeling limits on release and re-diversion of stored water. As discussed further below, MBK made the following key observations: (3) Nothing in the Draft EIR project description would prevent DWR from using the NDD [north Delta diversion] facilities to move additional stored water from the SWP and CVP.	All diversions at the north Delta intakes would be subject to existing water rights and contracts. Please refer to Common Response 3, Alternatives Development and Description, regarding upstream operations and storage and Common Response 9, Hydrologic Modeling and Approach, regarding the modeling approach. Please also refer to Common Response 3, Alternatives Development and Description, for clarifications regarding the use of the north Delta diversions, integration with south Delta facilities, and the amount of stored water available for export. Please also refer to response to comment 610-18 regarding the use of the north Delta diversions to move stored water. In addition, this comment raises similar project operation and hydrologic

Letter-Comment Number	Comment	Response
		modeling topics to those raised in letter 545. Please refer to letter 545 (see, e.g., comment 545-11) for detailed responses on those similar topics.
610-22	According to MBK [MBK Engineers], problems with the Draft EIR relevant to upstream water supply impacts and Delta salinity impacts, relate to three main areas: (1) modeling constraints on Delta exports; (2) model assumptions on shared benefits and the obligations of the SWP and CVP; and (3) the modeling limits on release and re-diversion of stored water. As discussed further below, MBK made the following key observations: (4) The Draft EIR does not explicitly evaluate the additional water cost for complying with D-1641 standards that are shared by the CVP and SWP through the Coordinated Operations Agreement between Reclamation and DWR (COA), caused by increases in Delta export.	As described in Chapter 5, Surface Water, the CVP/SWP shared responsibilities are modeled in CalSim 3. Changes in CVP/SWP storage and releases due to MRDO and X2 shift with Delta Conveyance Project is also included. While modeling results presented in the section titled Delta Inflow in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives at 2020, indicate that salinity does increase and X2 does move eastward slightly, all existing standards will continue to be met for X2, and salinity standards would not be violated. Any upstream storage and water supply risks from increased salinity and eastward movement of salinity would be reduced by the storage benefits of the carriage water savings from the Delta Conveyance Project. This is why model results show slight increases in storage in upstream reservoirs. Please also see Common Response 9, Hydrologic Modeling and Approach, for additional information on use of the CalSim 3 model and representation of net Delta outflow. Please also see response to comment 610-28 for information regarding “additional water cost” as stated by the commenter.
610-23	Modeling Constraints on Delta Exports The preferred alternative (Alternative 5) does not maximize the use of the NDD [North Delta Diversions] when the Delta is in an excess but constrained condition. Excess but constrained conditions occur under current operations when regulatory requirements restrict the CVP’s and SWP’s ability to export water from the Delta, resulting in Delta outflow in excess of what is required to meet outflow and water quality requirements. Regulatory requirements, such as limits on reverse flows in Old and Middle River (OMR), are a common cause of excess but constrained conditions because the requirements limit exports at existing pumping facilities in the	This comment is identical to comments in other letters based on the report prepared by MBK Engineers titled “Delta Conveyance Project Modeling Review” dated December 16, 2022, and submitted as attachment by multiple commenters. Rather than duplicate content, this report and associated comments are included and responded to in letter 545. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate responses to letter 545 contained in Chapter 4, Response to Comments Tables. Specifically, please refer to response to comment 545-9 regarding excess but constrained conditions.

Letter-Comment Number	Comment	Response
	South Delta. The DCP is intended to divert Delta outflow in excess of the minimum required Delta outflow (MRDO) by diverting water at the NDD. Using the NDD rather than the existing south Delta diversion (SDD) when the Delta is in an excess but constrained condition could increase exports for both the CVP and SWP because NDD are not always constrained by excess but constrained conditions.	
610-24	Draft EIR Appendix 05A, section B, page B-63 states that "[t]he operation rules could result in months when simulated diversions through the proposed north Delta intakes are not maximized, even when the bypass flow requirements would allow greater diversions." The Draft EIR does not describe or demonstrate when these conditions occur in the modeling, how frequently use of NDD [north Delta diversions] facilities are limited, nor why NDD operations are not maximized. The Draft EIR does not identify whether the modeled operational rules are intended to become actual operational requirements if the DCP is constructed. This issue must be clarified so that the public and decision-makers can understand the Project proposed for approval and whether the Draft EIR has adequately addressed the full range of potential operations and Project effects.	Please see response to comment 610-24 regarding identical comments in letter 545 prepared by MBK Engineers; please also refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate responses to letter 545 contained in Chapter 4, Response to Comments Tables. Please refer to response to comment 545-9 in letter 545 regarding operation criteria for the north Delta diversion limiting diversions and accurately modeled by CalSim3.
610-25	In an appendix, the Draft EIR states "[s]hifting of exports from the south Delta intakes to the proposed north Delta intakes only occurs when there is an operational advantage to doing so in terms of carriage water savings." (See Draft EIR, Appendix 5A, section B, at B-63.) The Draft EIR does not describe the operational criteria for this shift, the volume of this shift, or when it occurs. The Draft EIR does not state if this criterion would be discretionary; if it is discretionary, DWR has not modeled an alternative that would demonstrate the maximum use of the NDD [north Delta diversions]. Therefore, benefits	The analysis contained in the EIR is not consistent with the assertion by the comment that sufficient detail regarding operations has not been adequately addressed. Refer to the response to comment 610-24 regarding operations. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, North Delta Diversion Operational Criteria section addresses the commenters question regarding carriage water benefits, which are split between the SWP and CVP according to the Coordinated Operating Agreement. With respect to the question of intent, the model is built as a planning tool and simply responds to the rules and limitations documented in the Appendix 5A,

Letter-Comment Number	Comment	Response
	and impacts of the NDD may be understated in the Draft EIR. Indeed, carriage water savings would provide an incentive to prioritize use of the NDD, with further impacts to salinity and the requirement for additional releases from upstream CVP reservoirs.	Section B, CalSim 3 Model Components section. Furthermore, the Delta Conveyance Project Preliminary Proposed Operations Criteria table in Chapter 3, Description of the Proposed Project and Alternatives, describes the criteria under which the north Delta diversions would operate and identifies specific flows the Sacramento River must meet before the diversions can occur. The Appendix 5A, Section B, section titled Wheeling and Sharing of North Delta Diversion Capacity defines the term Carriage Water, and footnote 19 to this appendix explains that Carriage Water costs (or savings) occur when compliance with D-1641 water quality objectives is controlling Delta operations. Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, includes more shifting than would be reasonably foreseeable, by prioritizing diversions at the proposed north Delta intakes over the existing south Delta intakes during certain times of the year. The analysis was performed to see how sensitive the system is to a specific change, not the specific magnitude. As identified in Appendix 4B, prioritizing use of north Delta intakes would not substantively change results or impacts, including impacts on fish and wildlife species analyzed in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, compared to the proposed project or have the potential to reduce the significant and unavoidable impacts identified in other chapters within the EIR. The analysis contained in the EIR does not support the assertion by the comment that the use of the north Delta intakes will contribute to significant increases in salinity. Chapter 9, Water Quality, provides a complete analysis of the project impacts on Delta salinity. The water quality impact analysis concludes that there could be some increases in bromide (Impact WQ-3), chloride (Impact WQ-4), and EC (Impact WQ-5) at

Letter-Comment Number	Comment	Response
		western and Delta locations in some months, but increases would not adversely affect beneficial uses, including water supply, and impacts on these constituents would be less than significant. In addition, this comment raises similar project operation and hydrologic modeling topics to those raised in letter 545. Please refer to letter 545 (specifically comment 545-10) for detailed responses on those similar topics.
610-26	Alternative 5 prioritizes SDD [south Delta diversions]. DWR prepared a sensitivity analysis that prioritizes NDD [north Delta diversions]; however, there is no alternative that maximizes combined NDD and SDD use allowable under current regulatory requirements, operating agreements, and proposed DCP operations. It is reasonable to assume that DWR would prioritize use of the NDD to convey as much water as possible through the proposed facilities when carryover storage is high. As a result, the potential effects of maximum allowed exports with the DCP have not been analyzed. Operating the DCP to maximize releases of stored water in wetter years would impact upstream water supplies, water users, and the environment, particularly in subsequent dry years, such as was experienced in 2022.	As described in Chapter 2, Purpose and Project Objectives, the basic purpose of the proposed project is to restore and protect the reliability of SWP water deliveries. The proposed project is not proposing changes to operations or amount of water supply, including storage, provided by upstream facilities. The proposed project also does not preclude future changes to the state's water supply either through modifications of the operation of existing facilities or increasing water storage. Please see response to Comment 610-24 as it relates to operations and content of Common Response 3, Alternatives Development and Description, specifically the sections that discuss comment-suggested facility operations alternatives and upstream reservoir operations and storage, regarding the suggestion to analyze maximum allowed exports. Please see response to comment 610-25 regarding Appendix 4B, North Delta Diversion Priority Sensitivity Analysis. As described in that response, more shifting than would be reasonably foreseeable is analyzed in the appendix. The north Delta diversion priority scenario described in Appendix 4B is not a foreseeable action (CEQA Guidelines § 15126.6(f)(3) ["An EIR need not consider an alternative … whose implementation is remote and speculative"]). Moreover, as identified in Appendix 4B, prioritizing use of north Delta intakes would not substantively change results or impacts, including impacts on fish and wildlife species analyzed in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources,

Letter-Comment Number	Comment	Response
		compared to the proposed project or have the potential to reduce the significant and unavoidable impacts identified in other chapters within the EIR. For these reasons, it is not considered an alternative in the EIR (CEQA Guidelines § 15126.6(f) ["The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project"]). While this analysis is not required by CEQA and not intended to support CEQA findings, it does provide a basis for comparison with scenarios described in Chapter 3, Description of the Proposed Project and Alternatives, and analyzed in the respective resource chapters of the EIR.
610-27	b. Model Assumptions on Shared Benefits and the Obligations of the SWP and CVP The DCP and NDD increase total SWP/CVP diversions from the Delta. Increases in total diversions from the Delta, and the corresponding decreases in Delta outflow, will increase Delta salinity and may result in greater Delta outflow required to meet salinity requirements in future months. CalSim 3 modeling of the preferred alternative shows MRDO [minimum required Delta outflow] needed to meet standards contained in SWRCB [State Water Resources Control Board] Decision 1641 (D-1641) [Footnote 5: D-1641 is the implementation plan for the 1995 Bay-Delta Water Quality Control Plan, with respect to the operation of water projects within the Delta watershed. D-1641 includes water right permit terms and conditions to implement water quality objectives to protect Municipal and Industrial (M&I) beneficial uses in the Delta, as well as water quality objectives to protect Fish and Wildlife beneficial uses. D-1641 contains flow and water quality objectives that must be measured at various compliance monitoring stations throughout the Delta.] increases an average of 40 thousand acre-feet (TAF) per year in DCP Alternative 5 when compared to existing conditions. MRDO is a shared obligation of the SWP	The information provided in Chapter 3, Description of the Proposed Project and Alternatives, regarding the operation of the Delta Conveyance Project intakes is an accurate description of the criteria under which the project will operate. As discussed in Common Response 3, Alternatives Development and Description, the purpose of the project is not to change the existing operational criteria of upstream reservoirs. The hydrologic modeling conducted for each alternative is an accurate depiction of how each alternative would operate and the resulting changes in hydrologic conditions, including river flows, reservoir storage, and water deliveries. Those changes are summarized in Chapter 5, Surface Water, which provides information that was used to support the environmental assessment and allow an accurate comparison of impacts between alternatives. The commenter has provided a statement of opinion regarding modeling assumptions associated with shared benefits and obligations of the SWP/CVP diversions. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, in the section titled Water Demands, provides an explanation of the SWP/CVP delivery obligations. The EIR analyzes all of the effects that are described in this comment using the best available tools, as discussed on Common Response 9, Hydrologic Modeling and Approach.

Letter-Comment Number	Comment	Response
	and CVP under the COA [coordinated operations agreement] for the projects. [Footnote 6: Agreement Between the United States of America and the State of California for Coordinated Operation of the Central Valley Project and the State Water Project.] An increase in MRDO increases the obligation on both projects and can be a risk to water users of both the SWP and CVP as increased obligations would be met either by reductions in water deliveries or increased releases from SWP and CVP reservoirs.	While modeling results presented in Appendix 5A, Section B, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives, in the section titled Delta Inflow indicate that salinity does increase and X2 does move eastward slightly, all existing standards will continue to be met for X2, and salinity standards would not be violated. Any upstream storage and water supply risks from increased salinity and eastward movement of salinity will be reduced by the storage benefits of the carriage water savings from the Delta Conveyance Project. This is why model results show slight increases in storage in upstream reservoirs.
610-28	Modeling results show migration of X2 [Footnote 7: X2 is the location of the 2 parts per thousand salinity contour (isohaline), one meter off the bottom of the estuary, as measured in kilometers upstream from the Golden Gate Bridge. The abundance of several estuarine species has been correlated with X2.] inland in almost every month of the CalSim 3 simulation; this eastward movement of X2, due to increases in Delta exports, demonstrates that the project is causing the salinity field to move eastward and increasing salinity in the Delta. Any resulting changes in MRDO [Minimum Required Delta Outflow] associated with the Project-induced increased salinity in the Delta would be shared by the SWP and CVP under COA and result in additional water supply risk to water users of both projects. Conversely, the use of the NDD can also reduce carriage water, or the water needed for Delta outflow to maintain Delta salinity standards for a given rate of Delta exports. DCP modeling shows a reduction in carriage water costs and shares this water savings between both the SWP and CVP. The Draft EIR states in appendix 05A, section B, page B-63 that	As noted in the comment, the carriage water benefits are split between the SWP and CVP according to the Coordinated Operating Agreement (COA). The "water costs" to meet X2 and Delta salinity-related objectives for chloride and electrical conductivity, as well as other regulatory requirements, are reflected in the CalSim 3 modeling results, including the reservoir storage changes described in Chapter 5, Surface Water, and water supply deliveries described in Chapter 6, Water Supply. As described in Chapter 5, the CVP/SWP shared responsibilities are modeled in CalSim 3. Changes in CVP/SWP storage and releases due to MRDO and X2 shift with Delta Conveyance Project are also included. This comment suggests that increased COA obligations due to eastward movement of X2 will increase water supply risk to CVP and SWP. Viewed in isolation this may be true but there are also COA benefits to both SWP and CVP due to carriage water savings which counterbalance these effects. More importantly, the modeling shows increases in upstream reservoir end-of-month storages in May, June, July, and August, and annual Delta exports for both CVP and SWP, so even if releases for X2 are increasing, minor increases in in-basin use when the Delta is in a balanced condition are typically not large enough to trigger Term 91 conditions. While

Letter-Comment Number	Comment	Response
	"[c]arriage water benefits of these operations are split between the SWP and CVP according to COA, with priority placed on exporting this water. Any carriage water savings that cannot be exported are backed up into north of Delta storage." The Draft EIR does not describe if this is an intended or incidental benefit that is shared with the CVP. The modeling shows a carriage water savings and an increase in the water cost of meeting X2 and salinity requirements that are shared with the CVP. But the Draft EIR does not adequately evaluate the additional water costs associated with increases in X2, salinity requirements, and the carriage water savings, including the frequency and conditions when each effect could occur.	modeling results presented in Appendix 5A, Section B, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives, Section B, titled Delta Inflow, indicate that salinity does increase and X2 does move eastward slightly, all existing standards will continue to be met for X2, and salinity standards would not be violated. Any upstream storage and water supply risks from increased salinity and eastward movement of salinity would be reduced by the storage benefits of the carriage water savings from the Delta Conveyance Project. This is why model results show slight increases in storage in upstream reservoirs. Please also see Common Response 9, Hydrologic Modeling and Approach, for additional information on use of the CalSim 3 model and representation of net Delta outflow.
610-29	Additionally, the increased MRDO [minimum required Delta outflow] may lead to increased instances of Term 91 by increasing presence of supplemental water as defined in SWRCB [State Water Resources Control Board] Water Right Order 81-15, which would result in loss of access to water supply for water users whose water right permits contain this restriction.	DWR currently operates the SWP pursuant to State Water Resources Control Board Water Right Decision 1641 (D-1641), among other requirements. In D-1641, the State Water Board amended the water right license and permits for the SWP and the CVP to meet certain water quality objectives in the Bay-Delta WQCP. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for information on the SWRCB authorities and planning efforts, including designated beneficial uses, water rights, and flow criteria for the Sacramento–San Joaquin Delta Ecosystem. Please see response to comment 610-28 regarding the description of the project, operations under COA and Term 91. The comment speculates that the triggering of Term 91 would increase with the Delta Conveyance Project without any supporting analysis. As described in Common Response 9, Hydrologic Modeling and Approach, the frequency of when Term 91 is in effect under the project alternatives is similar to that under existing conditions, with no significant changes. Furthermore, even assuming a potential for increase in the instances of Term 91 triggering with Delta Conveyance Project, that in itself is not an impact, since SWP has senior water rights. Common Response 9, Hydrologic Modeling and Approach, provides a discussion of COA and Term 91, as well.

Letter-Comment Number	Comment	Response
610-30	c. Modeling Limits on Release and Re-diversion of Stored Water Release and conveyance of SWP stored water from Oroville reservoir is constrained in the Draft EIR's modeling of the preferred alternative by criteria that are inconsistent with existing SWP operations. Current SWP operational objectives allocate and move stored water with available SDD [South Delta Diversion] capacity until Oroville carryover storage is 1.6 million acre-feet (MAF). This operation is simulated as part of the existing conditions in the Draft EIR modeling. The DCP provides additional capacity for the SWP to export water from the Delta, and when combined with current SWP operations, could result in more frequently drawing carryover storage in Oroville down to 1.6 MAF. However, modeling of the preferred alternative does not fully utilize the additional capacity provided by the DCP to move stored water when Oroville carryover is greater than 1.6 MAF. Although there is additional release and conveyance of stored water from Oroville in modeling of the preferred alternative, it is limited in the modeling to a greater extent than described in the Draft EIR Project description. There are no operating criteria described in the Draft EIR that prevent exports of stored water through NDD, and the effects of utilizing the additional capacity provided by the DCP to convey additional stored water were not evaluated. Increases in release of stored water from Oroville may result in lower storage in dry and critical years and be a risk to the CVP storage in Shasta and Folsom reservoirs if Oroville storage is not adequate to meet the shared obligations of both projects.	Please refer to response to comment 610-20 regarding Delta Conveyance Project operations.

Letter-Comment Number	Comment	Response
610-31	Further, the Draft EIR in Appendix 05A, section B, page B-63 states that “for the SWP only, releases of up to 100 TAF/year [thousand acre-feet per year] can be made from Lake Oroville in wetter years for diversion at the north Delta intakes from July through September.” This operating criterion is not a component of the Project description, but rather an assumption used for modeling purposes. It is unclear whether the modeled operational rule is intended to become actual operational requirements if the DCP is constructed. Revisions to the Draft EIR are necessary to inform the public and decision-makers whether the description of DCP alternatives fully covers the full range of foreseeable operations. In sum, the Draft EIR does not describe in sufficient detail how much water will be diverted at the NDD [north Delta diversion] and SDD [south Delta diversion] and the timing of such diversions. As a result, the full effects of the proposed Project cannot be ascertained.	The analysis contained in the EIR is not c3onsistent with the assertion by the comment that sufficient detail regarding operations has not been adequately described. Please see response to comment 610-24 regarding operational rules. In addition, this comment raises similar project operation and hydrologic modeling topics to those raised in letter 545. Please refer to letter 545 (specifically comment 545-14) for detailed responses on those similar topics.
610-32	The Draft EIR is also vague and inconsistent in its description of DCP operations. The Project description states "shifting from south Delta intakes to proposed north Delta intakes has trade-offs and is not expected unless there is an operational advantage to do so at DWR’s discretion under limited circumstances (e.g., to provide additional real-time south Delta fish protections, to reduce salinity at Jersey Point)." (Draft EIR, p. 3-145.) The set of "limited circumstances" is not defined or enumerated to clarify when and how the NDD [north delta diversion] intakes might be operated. Moreover, the description of circumstances appears inconsistent with the Draft EIR’s description of how operations were modeled for purposes of environmental review. (See Draft EIR, Appendix 05A, § B, p. B-63 ["Shifting of exports from the south Delta	Regarding Delta Conveyance Project operations, please refer to responses to comments 610-20 and 610-25 and Common Response 3, Alternatives Development and Description, which includes information on circumstances when shifting from the south Delta intakes to the proposed north Delta intakes could occur. The EIR is not vague and inconsistent in operations description and, as detailed in Common Response 3, has provided sufficient information to conduct impact analyses.

Letter-Comment Number	Comment	Response
	intakes to the proposed north Delta intakes only occurs when there is an operational advantage to doing so in terms of carriage water savings."].) Thus, it is unclear whether the Draft EIR modeling supports the description of Project operations.	
610-33	There are several reasonably foreseeable situations in which exports might be shifted from the south Delta to the north Delta, in addition to the benefits of additional carriage water savings that the Draft EIR modeling appendix describes as the only situation evaluated in the Draft EIR modeling. Most notably, DCP creates the ability to move available additional stored water for which there will be a strong demand south of the Delta, including for municipal and agricultural use, as well as potential groundwater recharge projects to achieve sustainability pursuant to the Sustainable Groundwater Management Act. Although the Draft EIR shows that modeled total exports increase by an annual average of 588 TAF in Alternative 5 relative to the existing conditions, the Draft EIR does not disclose that there is still significant unused modeled export capacity in Alternative 5. It is reasonable to assume that with the DCP, DWR would convey as much water as possible given regulatory restrictions when carryover over storage is high enough. Impacts to upstream water supplies, water users and the environment can occur when more water is conveyed with the DCP in wetter years and results in lower storage going into following dry years. This may happen in 10 percent of years with the DCP. Since the Project description contains no criteria limiting movement of stored water in wetter years, and based on SWP operating guidelines and pressure from Project investors seeking to maximize their return on investment, DWR is likely to do so, the Draft EIR should assess the effects of the movement of that additional stored water.	Please refer to Common Response 3, Alternatives Development and Description, concerning water rights, contracts, and use of water and Common Response 9, Hydrologic Modeling and Approach, regarding the modeling approach. The commenter's assertions that there is significant unused modeled export capacity undisclosed in the EIR and that it is reasonably foreseeable that DWR would use it are inaccurate and inconsistent with the analyses and results presented throughout the EIR. Common Response 3, Alternatives Development and Description, further discusses such topics and demonstrates that DWR would operate the proposed north Delta intakes according to the operational criteria accurately represented by CalSim 3. Please also refer to Chapter 6, Water Supply, for a discussion of water transfers and use of export capacity now and into the future. In addition, this comment raises similar project operation and hydrologic modeling topics to those raised in letter 545. Please refer to letter 545 (specifically comments 545-46 through 545-56) for detailed responses on those similar topics, including modeled export capacity and potential impacts on upstream storage.

Letter-Comment Number	Comment	Response
610-34	Because the Draft EIR does not disclose the potential use of that additional capacity to maximize release of stored water under the DCP, it fails to identify and inform the public and decision-makers of potential redirected impacts to CVP water supply that in turn could impact groundwater supplies, salinity, subsidence, aquatic resources, terrestrial species, and agricultural resources in the Delta and upstream of the NDD [North Delta Diversions]. For example, low water levels in CVP reservoirs may need to be replenished by smaller, upstream reservoirs. [Footnote 8: See Rachel Ramirez, The Two Largest Reservoirs in California Are Already at 'Critically Low Levels' and the Dry Season Is Just Starting, CNN, May 7, 2022, https://www.cnn.com/2022/05/07/us/california-water-shastaoroville-climate/index.html (last visited Dec. 15, 2022).] Moreover, scientific and factual data support the conclusion that reduced water supplies will impact wildlife and north of Delta water users. (Cal. Code Regs., tit. 14, § 15064(b)(1).) Diminishing wetlands and fallow rice farms along the Sacramento River eliminate necessary bird habitat, which results in poor breading seasons and mortality during migration. [Footnote 9: See Dennis Shanahan, Shrinking Wetlands Have an Impact on Migratory Birds in the Sacramento Valley, Biologists Say, Fox40, Dec. 7, 2022, https://fox40.com/news/fox40-focus/shrinking-wetlands-have-an-impacton- migratory-birds-in-the-sacramento-valley-biologists-say/?utm_medium=email&utm_source=govdelivery (last visited Dec. 11, 2022).] Diminished reservoir flows also affect the viability of endangered Chinook salmon in the Sacramento River. [Footnote 10: See Dennis Shanahan, Shasta Lake Level Causing Far-Reaching Ripple Effects, Fox40, Sept. 30, 2022, https://fox40.com/news/fox40-focus/shasta-lake-level-causing-far-reaching-ripple-effects/?ipid=promo-linkblock2	The Delta Conveyance Project is not proposing changes to operations or amount of storage provided by upstream facilities. The Delta Conveyance Project also does not preclude future changes to the state's water supply either through modifications of the operation of existing facilities or increasing water storage. As discussed in Chapter 4, Framework for the Environmental Analysis, section titled, U.S. Bureau of Reclamation or Central Valley Project Contractor(s), Reclamation has not expressed interest in participating in the Delta Conveyance Project. However, the EIR includes Alternatives 2a and 4a, which assumed CVP participation with a potential to divert up to an additional 1,500 cfs for conveyance to the C. W. "Bill" Jones Pumping Plant. As such, modeled changes to CVP deliveries are relatively small compared to existing conditions and are primarily attributed to Alternatives 2a and 4a, which are the 7,500 cfs capacity alternatives. The EIR discloses all potential changes associated with the SWP and CVP as a result of project operations. As demonstrated in Chapter 6, Water Supply, the CVP would not experience changes to water supply that would adversely affect the CVP. The tables in Chapter 3, Description of the Proposed Project and Alternatives, titled Delta Conveyance Project Preliminary Proposed Operations Criteria, Delta Diversion Bypass Flow and Pulse Protection Requirements, and North Delta Diversion Bypass Flow Criteria (sub-table) describe the circumstances under which the project can divert water from the Sacramento River. In addition, the figure in Chapter 3 titled Seasonal Diversions graphically depicts how the project would operate. As described in Common Response 3, Alternatives Development and Description, proposed intakes would only be permitted to operate with regulatory protections of existing standards and as prescribed by the federal and state environmental permitting process.

Letter-Comment Number	Comment	Response
	(last visited Dec. 11, 2022).] The Project could exacerbate these impacts if, as stated, it results in reduced water supplies on the Sacramento River. DWR failed to analyze these potential impacts as required pursuant to CEQA.	
610-35	B. Water Supply (Chapter 6) The Draft EIR inappropriately concludes that changes to water supply are also, "by themselves, . . . not considered an impact under CEQA and thus are not evaluated as impacts" in the Draft EIR. (Draft EIR, pp. 6-1:5-6, 6-2:7-8.) Importantly, "[a]n EIR may not define a purpose for a project then remove from consideration those matters necessary to the assessment whether the purpose can be achieved." (County of Inyo v. City of Los Angeles (1981) 124 Cal.App.3d 1, 9.) The stated purpose of the DCP is "to help achieve the State's coequal goals of 'providing a more reliable water supply for California.' " (Draft EIR, p. 2-2:7-8.) By omitting water supply from examination of potentially significant environmental effects of the Project, the Draft EIR "fails the legal duty and the mandate of [the appellate courts] to provide an informed and accurate analysis of the project and its impacts." (Ibid; see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412, 428-436 [concluding that an EIR must include "a reasoned analysis" of the adequacy of water supplies to support the project]; Cal. Oak Foundation v. City of Santa Clarita (2005) 133 Cal.App.4th 1219, 1240 [holding that an EIR that does not contain a proper analysis of water supplies "fails in its function as an informational document on the water issues"].) The Draft EIR must contain "a forthright discussion of a significant factor that could affect water supplies." (Cal. Oak Foundation, supra, at p. 1237.) To satisfy the requirement of	Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, provides a discussion of the surface water and water supply assessments and how that information was reported and used within the Draft EIR. As described in that Common Response, information contained in Chapter 5, Surface Water, and Chapter 6, Water Supply, is used to inform the discussion and analysis in the other resource chapters. As described in Chapter 2, Purpose and Project Objectives, the basic objective of the Delta Conveyance Project is to restore and protect the reliability of SWP water deliveries. The Delta Conveyance Project helps meet this by constructing and operating new water supply facilities within the Delta.

Letter-Comment Number	Comment	Response
	analyzing water supply issues, the Draft EIR must "contain facts and analysis, not just bare conclusions and opinions" to "enable those who did not participate in its preparation to understand and meaningfully consider the issues raised by the proposed project." (Ibid., internal quotes omitted.) The Draft EIR improperly omits a complete analysis of Project impacts on water supplies. (Draft EIR, p. 6-1:9-10.)	
610-36	C. Groundwater (Chapter 8) The Draft EIR fails to adequately analyze or mitigate impacts to groundwater resources, including impacts to groundwater levels and related effects on municipal and domestic wells. More specifically, the Draft EIR's analysis and mitigation is insufficient in regard to impacts on South American Subbasin (SASb), which the Sustainable Groundwater Management Act (SGMA) requires local agencies to manage. In this regard, the Draft EIR's analysis fails to adequately assess potential conflicts with implementation of the SASb Groundwater Sustainability Plan (GSP).	Impacts to groundwater levels and related effects on municipal and domestic wells are fully and adequately analyzed in Chapter 8, Groundwater, under Impact GW-2 and Impact GW-3, respectively. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding consideration of groundwater sustainability plans. As described in Common Response 8, the groundwater analysis contained in Chapter 8 found groundwater impacts to be less than significant and therefore would not interfere with the South American subbasin's ability to maintain sustainability.
610-37	1. Interconnected Surface Water and Groundwater Storage Proposed intake locations identified in the Draft EIR are located along the Sacramento River upstream of the Mokelumne Confluence in the southern portion of the SASb [south American sub-basin]. According to the SASb GSP [Groundwater Sustainability Plan], this reach of the Sacramento River is identified as an interconnected surface water (ISW). Furthermore, the Cosumnes South American North American groundwater model, which was used in the development of the GSP for the North American, South American and Cosumnes subbasins, shows that this reach persistently loses water to groundwater in the SASb. The Project's proposed diversion of	The DeltaGW model uses simulated stream stage to calculate stream gains and losses to the aquifer. In Chapter 8, Groundwater, Impact GW-1 was assessed using the simulated volumes of stream gains and losses under project alternatives. Recharge from the rivers to the neighboring subbasins is assessed under Impact GW-1. On average, the difference in stream-aquifer interaction between existing conditions and project alternatives is 0.62% or less. The greatest difference is 1.69%. The volumetric change in stream-aquifer interaction for each alternative is presented in Appendix 8B, Impact Analysis: Groundwater Model Results. The impact of reduced recharge to underlying groundwater basins is further addressed under Impact GW-4. Under all project alternatives, the groundwater model results show that, in Delta subregion 4, there is a very

Letter-Comment Number	Comment	Response
	surface water in this reach will reduce river stage and change hydraulic gradients between surface water and groundwater. A lower hydraulic gradient between the river and the underlying aquifer with the Project implies that leakage to groundwater—from the currently losing Sacramento River—will decrease, thus reducing groundwater recharge along this reach.	small increase in change in groundwater storage relative to existing conditions (CEQA baseline). CalSim 3 model results shows no substantial changes under the project compared to existing conditions for simulated diversions from Lake Folsom, Lake Natoma, the lower American River, and the lower Sacramento River above the north Delta intakes. In 2 months out of the 94-year period of simulation, the model shows minor changes in diversions from Lake Folsom. In 10 months out of the 94-year period of simulation, the model switches diversions by the City of Sacramento between its Fairbairn and Sacramento River intakes. The maximum change in diversion is 46 cfs. There are minor changes in simulated diversions by Sacramento County Water Agency at its Freeport intake. For all diversions, the average change in the monthly diversion is less than 0.1 cfs or less than 0.1 TAF/year. These modeled changes are so small that they would have no noticeable effect on the South American subbasin. Therefore, model simulation supports the understanding that the project will not adversely affect surface water deliveries within the region of the South American Subbasin.
610-38	To the contrary, however, the Draft EIR states that "[u]nder project alternatives, the region would see an increase in groundwater storage due to increased surface water supplies, as simulated in the surface water analysis. The increase in surface water supply reduces groundwater use and thus reduces the decline in groundwater storage." (Draft EIR, p. 8-47:39-42.) Details (e.g., locations, volumes, and timing) of how this purported increased surface water supply was incorporated into the Delta groundwater model are not provided. These details are necessary to enable SCWA [Sacramento County Water Agency] to better understand how the Project could result in an increased surface water supply, and how this additional supply of surface water affects the simulated results.	Surface water supply analysis was conducted as part of Chapter 5, Surface Water, and Chapter 6, Water Supply. Details pertaining to changes in future surface water supplies are described in the Water Supply Changes section of Chapter 6 and further analyzed, as appropriate, in the relevant resource chapters. Please see response to comment 610-37 regarding the use of the models. Changes in surface water deliveries between existing conditions and project alternatives as simulated by the CalSim 3 model for surface water analyses are reflected in the DeltaGW Model. As described in the Delivery Data section of Appendix 8B, Impact Analysis: Groundwater Model Results, water demands and water use in CalSim 3 are designated by demand units, which generally correspond to water districts, water agencies, Central Valley Project (CVP) and State Water Project (SWP) contractors, and non-

Letter-Comment Number	Comment	Response
		district water users. Surface water delivery areas within the DeltaGW Model were assigned to match the CalSim 3 demand units. Chapter 8, Groundwater, of the EIR has been updated to clarify statements regarding changes in groundwater storage under project operations. As discussed in Impact GW-4, modeling indicates a slight increase in groundwater storage compared to existing conditions. These modeled changes are so small that they would have no noticeable effect. Therefore, model simulation supports the understanding that the project will not affect surface water deliveries within the region. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit.
610-39	Moreover, because the change in modeled seepage has so much variability (showing both increases and decreases), a more localized and refined analysis (in space and time) is required to ensure that no acute, local impacts are missed. The Draft EIR analyzed seepage over a long stretch of the Sacramento River from the mouth of the Bear River to confluence with the San Joaquin River (Draft EIR, p. 8B-11:28), and accumulated seepage over an annual period, potentially masking significant changes to sections of the river where the ISW [interconnected surface water] impacts to the SASb [South American subbasin] are more acute.	During the analysis, stream-aquifer interaction was assessed both at the stream reach scale as well as by individual stream nodes. The behavior at individual stream nodes were consistent with the stream-aquifer interaction changes at the stream reach scale. Results are presented at the stream-reach scale for clarity. The results are presented in Chapter 8, Groundwater, under Impact GW-1 and further detailed in the Groundwater Impact Analysis section of Appendix 8B, Impact Analysis: Groundwater Model Results. Please also see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is discussed in Common Response 10.
610-40	Draft EIR Tables 8B-3 and 8B-4 show reduced seepage, which seems reasonable with a lower water level in the Sacramento River due to exported streamflow. From the Sacramento County perspective, considering that the stream appears to currently be losing (i.e., recharging the aquifer), a reduction in seepage is of concern as this will reduce the supply of ISW [interconnected surface water] that recharges the SASb [South	Please see responses to comments 610-37 and 610-38 regarding the use of the DeltaGW model to disclose impacts and Calsim 3 model results relating to the south American subbasin. Impact GW-2, which evaluates the changes groundwater elevations across the region, did not find any changes to groundwater flow gradients to the neighboring subbasins. The impact of reduced recharge to underlying groundwater basins is further addressed under Impact GW-4. Under all project alternatives, the

Letter-Comment Number	Comment	Response
	American subbasin] groundwater system. The potential impacts to the SASb associated with reduced seepage is not discussed.	groundwater model results show that there are minimal changes in groundwater storage relative to existing conditions (CEQA baseline). Detailed tables documenting changes in groundwater storage across model subregions is presented in Appendix 8B, Impact Analysis: Groundwater Model Results.
610-41	The Draft EIR should clearly demonstrate that the effects of changes in river flow and stage do not create undesirable results or exceed minimum thresholds for the ISW [interconnected surface water] system, as identified in the SASb [South American subbasin] GSP [Groundwater Sustainability Plan]. Specifically, the GSP identifies unreasonable impacts as: (i) percentage decrease in ISW reach length exceeds 5%, and (ii) percentage decrease in the 50th percentile of ISW streamflow exceedance during October-December spawning months exceeds 10% of historical conditions. The Draft EIR defines a significant impact to ISW (Draft EIR § 8.3.2.2 and appen. 8B.4.1) as changes in stream losses or stream gains that exceed 5 percent with respect to the annual average baseline. The Draft EIR uses various aggregate statistics of numerical model output to summarize regional-scale impacts to surface water and groundwater nodes across the simulation's spatial domain and temporal range. However, these aggregate statistics do not address the localized spatial and temporal scale of significant and unreasonable impacts to ISW as defined in the SASb GSP (defining impacts by effects to individual reach lengths). Specifically, it is unclear which nodes or reach lengths are impacted and at what times during the year, thus results should be presented on an individual reach basis, ideally with lengths on the scale of 500 meters rather	Please refer to responses to comments 610-37 through 610-40 regarding the change in river flow and groundwater. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's Sustainable Groundwater Management Act (SGMA) and how groundwater sustainability plans (GSPs) were considered, which states that there are no conflicts with the GSPs related to SGMA-related undesirable effects on groundwater. Please also see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is also discussed in Common Response 10.

Letter-Comment Number	Comment	Response
	than tens of kilometers.	
610-42	2. Groundwater Level Impacts—Municipal and Domestic Wells The Draft EIR addressed the Project impact on municipal (i.e., public supply) wells but did not directly address potential effects to the numerous private shallow domestic wells in the Project area (Figure 5A) [see Exhibit 6 of ATT 1 of ATT 5]. Specifically, the Draft EIR does not identify the domestic wells by location or depth and does not present results for these wells. Rather, the Draft EIR combines domestic wells with other production wells and only evaluates impacts by depth range—and only uses average water level declines computed by the model. An analysis to identify the exact locations and depths of the shallow domestic wells and municipal wells in the Project area is necessary to accurately characterize the Project's impact on nearby drinking water wells. With minimal effort, SCWA's [Sacramento County Water Agency] consultant, Larry Walker Associates (LWA) compiled a set of well locations within one mile of the tunnel alignments and drilled within the past forty years. LWA determined that there are twenty-three domestic wells and four public supply wells that meet these criteria. At a minimum, DWR should individually evaluate these wells so that potentially affected Delta residents and decision-makers are aware of the scope of potential Project impacts.	Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts, which includes a discussion on the inclusion of local wells in the modeling analysis. As described in Chapter 8, Groundwater, the exact location of wells in the OSWCR database are not known and only the Public Land Survey System (PLSS) section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the existing conditions. The figure titled PLSS Sections with Supply Wells Within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. Potential impacts on any wells in the project area are described under Impact GW-3 and summarized in the table titled Number of Supply Wells with Decline in Groundwater Elevations Relative to Existing Conditions. The section titled Alternatives Impacts in Appendix 8B, Impact Analysis: Groundwater Model Results, details the groundwater changes expected at supply wells under each alternative. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2-3 feet at any well in the region.
610-43	3. Groundwater Level Impacts—Model Fidelity DWR's groundwater model, Delta GW [groundwater] Model, uses a grid cell size that is coarser than the grid cell size of a model that DWR has recognized as insufficient to capture project impacts. (Draft EIR, pp. 8-14:15-17, 8A-6:7-8.) LWA	The fine grid version of C2VSim has an average element size of 0.47 square mile in the Delta region, with a minimum element size of 0.04 square mile and maximum element size of 2.35 square miles. Average element size alone cannot be used as the basis for determining the suitability of a model to assess local impacts. As described in the Central Valley Hydrologic Model - Based Options section of Appendix 8A, Delta Groundwater Model:

Letter-Comment Number	Comment	Response
	[Larry Walker Associates] concluded that the model computed heads are too coarse to be representative of actual conditions at the points of interest. To address this issue, LWA suggests that DWR evaluate the potential limitations of using the C2VSim-FG grid structure. A refined grid model, like the proposed C2VSim-D, should be used to conduct a new analysis to improve on computed impacts due to Project construction and operation. The Draft EIR states every node of the model was compared between the baseline and each Project alternative, but then states the simulated groundwater elevations were averaged over the top three layers. (Draft EIR 8B4.2.1, p. 17:7-13). DWR should justify why its analysis averaged heads over the upper three layers (potentially masking larger declines in the shallow groundwater system) when the Delta GW Model was refined in the upper layers. This additional refinement should allow for better representation of shallow groundwater heads, and thus provide relevant information about impacts to both local wells and groundwater dependent ecosystems, but this is lost through averaging. Instead, the groundwater elevations should be presented for each of the first three layers individually.	Development and Calibration, a finite difference model, such as CVHM or CVHM-D, provides a cell average value of simulated groundwater elevations - a single value is calculated for a grid cell (0.25 mile by 0.25 mile for CVHM-D cell) and considered to be uniform over the entire area of the cell. As a result, a site-specific cone of depression cannot be estimated at a finer scale than the grid cell length (0.25 mile for CVHM-D). In contrast, a finite element model, such as C2VSim-CG or C2VSim-FG, provides point values at element nodes; there is no single value that is considered averaged over the entire element. Rather, simulated values could be calculated at any site-specific location (such as a well at locations other than a model node) through a bilinear interpolation scheme that is part of the finite element formulation. This process provides an advantage over the finite difference models that the finite element grid does not have to be refined to the smallest geographical scale of analysis. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, for additional information regarding the suitability of the model for analysis of local impacts and the basis for averaging groundwater heads for the assessment of changes in groundwater elevations for Impact GW-2. Groundwater heads in each individual layer were used in the assessment of potential impacts on wells for Impact GW-3.
610-44	4. Groundwater Level Impacts—Thresholds of Significance The Draft EIR fails to substantiate the thresholds of significance for identified effects on groundwater. (Draft EIR, pp. 8-18 – 8-20.) For example, under Impact GW-2, the Draft EIR includes only the bare conclusion that changes in groundwater elevations are considered significant if there is a difference of greater than five feet in simulated groundwater elevations more than five percent of the time, compared to simulated groundwater elevations under existing conditions. (Draft EIR, p.	The section in Chapter 8, Groundwater, titled Approach for Analysis provides an overview of the tools used and steps followed in the analysis of the project's impacts on groundwater. The subsection titled Thresholds of Significance provides the justification as to why the specific thresholds were selected. The thresholds for impacts GW-1 through Impact GW-7 are all based on historical data as follows: - Impact GW-1: Threshold is based on historical variations in annual stream gains/losses, which ranges from 62% to 124% of average annual stream gains/losses over the historical period from 1974 to 2015 in stream reaches

Letter-Comment Number	Comment	Response
	8-36.) The Draft EIR bases the threshold of significance for Impact GW-2 on fluctuations in historical groundwater elevations but contains no explanation nor supporting evidence that the selection of this threshold is appropriately conservative or reasonably predictive of a significant change in groundwater levels. (Sierra Watch v. County of Placer (2021) 69 Cal.App.5th 86, 101-102 [stating an EIR must include "the analytic route" showing the agency's connection between the evidence and conclusion].) Without providing the explanation of the selection of these thresholds, the Draft EIR effectively fails as an informational document. (Cal. Code. Regs., tit. 14, § 15121.) The statements of all other thresholds of significance, for Impact GW-1 and Impacts GW-3 through GW-7, are similarly deficient. To assess the true extent of Project impacts, a threshold of significance should be added specifically addressing impacts to shallow groundwater zones and GDEs [groundwater dependent ecosystems].	in the Delta region. - Impact GW-2: Threshold based on historical groundwater elevation changes measured at 132 wells in the Delta region. - Impact GW-3: Threshold is based on construction information from 3,565 production wells in the Delta region. - Impact GW-4: Threshold is based on historical changes in storage as simulated by the calibrated DeltaGW historical model. - Impact GW-5: Threshold is based on variations in agricultural drainage simulated by the calibrated DeltaGW historical model. - Impact GW-6 and Impact GW-7: Thresholds are based on historical conditions that have previously led to subsidence and degradation of groundwater quality respectively.
610-45	5. Groundwater Level Impacts—Failure to Quantitatively Assess Localized Impacts SCWA [Sacramento County Water Agency] owns and operates municipal and industrial water wells in the town of Hood for the purpose of supplying the town with potable water. The Draft EIR states, "localized impacts [during project construction and maintenance] could affect water wells near the project sites." (Draft EIR, p. 8-1:26-31.) Impact GW-2, for example, describes how Project construction under all Project alternatives may result in changes to groundwater levels in the immediate area of the constructed facilities, including the town of Hood. (Id., p. 8-36.) However, the Draft EIR does not quantitatively assess the localized water level and quality impacts. (Id., p. 8-1:26-31.)	DWR fully evaluates the construction-related groundwater impacts of the Delta Conveyance Project in the EIR. Common Response 10, Surface Water Quality and Groundwater Resources, provides additional clarifying information regarding the methodology and information used to adequately and appropriately evaluate construction-related impacts described in Chapter 8, Groundwater. As described in Common Response 10 and Chapter 8 (in the section titled Methods for Analysis), the Delta Conveyance Project construction-related impacts are evaluated using existing groundwater conditions and hydrogeology, standard design and construction methods (Delta Conveyance Design and Construction Authority 2022c, 2022d), and anticipated changes in groundwater elevations, storage, and quality during construction. As described in Common Response 10, cutoff walls would be designed to applicable standards depending on the unique site-specific conditions and the location of the facility being constructed. Cutoff walls are designed and

Letter-Comment Number	Comment	Response
		used to minimize need for dewatering and the movement of groundwater outside of the cutoff walls. Given this, and the other information provided in Common Response 10, construction would not result in substantial changes to groundwater levels or groundwater water quality. Furthermore, the analysis in Impact GW-1 and Impact GW-2 shows that under construction groundwater levels would generally be maintained at the level of existing conditions during the use of cutoff walls or dewatering. As the proposed project and project alternatives would not result in a substantial change in groundwater levels, they would also not result in a substantial change in groundwater salinity associated with a decline in groundwater levels. And, if unanticipated changes to groundwater levels occurred during construction, the changes would be localized and in the immediate area of the construction. The EIR also includes Mitigation Measure GW-1, which requires monitoring during construction and adjustments to construction activities as needed, depending on the groundwater level monitoring results. Although it is determined that the project would not impact groundwater quality, Mitigation Measure GW-1 has been revised to include monitoring of electroconductivity at select locations during construction to provide data confirming the conclusions in the EIR. Impact GW-1 and Impact GW-2 remain less than significant prior to the implementation of the revised mitigation measure, as described in Chapter 8. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit. In addition, the potential for project construction activities to result in groundwater contamination is addressed in Chapter 25, Hazards, Hazardous Materials, and Wildfire, under Impact HAZ-1. Additionally, groundwater removed with the dewatering system would be treated as necessary, stored, and reused for water supply on-site (see Chapter 3, Description of the Proposed Project and Alternatives). Use of slurry cutoff walls to minimize dewatering flows, as described above, would minimize the volume of water to be removed from the groundwater. As such, there would be no adverse effect

Letter-Comment Number	Comment	Response
		and impacts would be less than significant.
610-46	6. Groundwater Level Impacts—Mitigation As mitigation for localized impacts, DWR only points to post-impact mitigation measures as a solution rather than identifying water wells of concern and preventative measures. (See Draft EIR, p. 8-1:26-31.) The groundwater impact analysis does not consider—and thus does not mitigate—impacts specific to shallow groundwater zones and related impacts to groundwater-dependent ecosystems or Project-related impacts. The Draft EIR should provide the necessary analysis and should expand mitigation and monitoring efforts aimed at avoiding potential decrease in shallow groundwater elevations that could have impacts on regional recharge programs and projects.	During the design phase of the project, the locations of existing wells that would require monitoring would be determined. The information would be used to determine the need and location for construction of new monitoring wells. If existing wells are not suitable for monitoring purposes, due to their depth or landowner approval, additional monitoring wells would be constructed. Suitable locations would be identified based on facility locations. Information regarding testing/monitoring is described in Chapter 3, Description of Proposed Project and Alternatives, in the section titled Field Investigations (under the subtitle Groundwater Testing and Monitoring). This section describes the data collection efforts that will occur prior to and during construction. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding a description and discussion of GDEs in the context of SGMA. GDEs are not discussed in Chapter 8, Groundwater, because substantial changes in interconnected surface waters and groundwater elevation would not occur. The EIR addresses temporary and permanent impacts on GDEs as a result of other potential impact mechanisms by identifying and evaluating potential impacts on all natural systems and habitat supported by groundwater that could be impacted by the project in Chapter 13, Terrestrial Biological Resources. For example, groundwater dependent ecosystems including tidal and nontidal perennial aquatic, tidal and nontidal freshwater emergent wetland, tidal brackish emergent marsh, valley/foothill riparian, alkaline seasonal wetland and vernal pool complex are evaluated in Impact BIO-1 through Impact BIO-8 in Chapter 13. Thresholds of significance for these and other sensitive resources are listed in the section titled Thresholds of Significance. Mitigation and Avoidance and Minimization Measures are allocated in the following sections: Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources, and describes the mitigation that would be implemented to offset impacts on these land cover types.

Letter-Comment Number	Comment	Response
		Attachment 3F.1, Compensatory Mitigation Design Parameters, provides the design commitments and guidelines for compensatory mitigation of impacts. Avoidance and minimization measures that would apply during construction of the project (including but not limited to construction of the compensatory mitigation sites themselves) are contained in Appendix 3B, Environmental Commitments and Best Management Practices.
610-47	Also, Mitigation Measure GW-1, Maintain Groundwater Supplies in Affected Areas, which proposes the installation of monitoring wells within 0.5 mile of Project sites at which dewatering could occur during construction or maintenance (Draft EIR, p. 8-34:2-8.), should—at a minimum—be expanded to include monitoring and mitigation of the shallow aquifer system with depths within the upper 30 feet of the ground surface that supports GDEs [groundwater dependent ecosystems]. Notably, however, Mitigation Measure GW-1 is insufficient as written to feasibly offer any reductions in Project impacts to groundwater. Its provisions are vague and unenforceable and lack the performance standards strictly required by CEQA when an agency defers formulation of specific mitigation details until after a project is approved. When mitigation specifics are deferred because it is infeasible to develop them during environmental review, CEQA demands that an agency adopt specific performance standards that the agency commits to achieving through the deferred mitigation, as well as identification of steps that can be reasonably expected to achieve the performance standards. (Cal. Code Regs., tit. 14, § 15126.4(a)(1)(B).) Mitigation Measure GW-1 meets none of these criteria. Its "weekly or monthly" monitoring at monitoring wells installed within 0.5 mile of Project sites at which dewatering could occur during construction or maintenance, provides no guidance on what monitoring frequency will be used at which locations, nor does	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding CEQA requirements related to mitigation measures and the inclusion of feasible and appropriate mitigation measures within the EIR. Mitigation Measure GW-1 has been revised in the Final EIR to clarify that monitoring wells will be selected or installed based on location, type, and depth to ensure monitoring is appropriate for the area. The revisions to Mitigation Measure GW-1 do not result in a change to an impact determination or require additional mitigation measures that DWR is unwilling to commit to. Mitigation Measure GW-1 meets the CEQA requirement for mitigation because it first describes the outcome expected to be avoided by groundwater monitoring (i.e., if the results of groundwater monitoring described above indicate that the difference between average groundwater elevation declines in monitoring wells inside the area of influence of dewatering and control [background] monitoring well outside the area of influence is more than 10% of the depth of the shallowest known well inside the area, which approximates the natural variability that can occur across an area) and then it describes the type of actions that would be required if that outcome to be avoided occurs (i.e., change construction practices by reinjecting groundwater; deepen or modify wells; secure temporary water supply). The monitoring frequency described in the mitigation measure was selected based on common groundwater level monitoring frequencies and to be sufficient to detect appreciable changes in groundwater levels in a manner that is timely enough to implement mitigation measures. Mitigation Measure GW-1 uses the depth of the shallowest known well to facilitate monitoring and identify potential

Letter-Comment Number	Comment	Response
	it specify who will conduct the monitoring and reporting activities. Monthly monitoring is inadequate to properly characterize impacts to groundwater and to distinguish those impacts from non-Project factors. Support for the selection of a 0.5-mile radius, furthermore, is not provided. Performance standards are vague and confusing and steps to achieve them lack any detail required to evaluate their effectiveness. In the absence of information specifying what this mitigation measure is meant to achieve or who will implement it, the public is unable to assess whether it is effective, or indeed whether it will be carried out at all.	unforeseen changes at multiple depths, including the shallow aquifer system.
610-48	7. Groundwater Quality In the Draft EIR, water quality impacts are assessed using groundwater levels as a proxy to measure impacts. (Draft EIR 8B4.7.1, p. 29.) However, groundwater level is a poor surrogate for water quality as small changes in groundwater levels can change gradients influencing vertical and horizontal flow path directions over time and space. (LWA Report, p. 12.) [see ATT1 of ATT 5]	Common Response 10, Surface Water Quality and Groundwater Resources, includes a detailed discussion on the analysis of groundwater quality, which provides additional information regarding the adequacy of the groundwater quality analysis in the Draft EIR. Hydraulic gradients are calculated using groundwater levels and therefore the numerical flow model indirectly calculates changes in hydraulic gradient. In evaluating contaminant movement, advection is the primary process by which plume migration occurs (with dispersion and diffusion being secondary processes). As advection is the movement of contaminants driven by hydraulic gradients, and hydraulic gradients are calculated from groundwater levels, the use of groundwater levels as a proxy is an appropriate methodology. In the Draft EIR, construction impacts on water quality were evaluated in Chapter 9, Water Quality. Operational impacts on groundwater quality would be plume migration and/or introduction of saline waters, both of which can be evaluated using hydraulic gradients and groundwater levels.
610-49	Moreover, in order to understand the extent of potential groundwater contamination caused by the Project, transport simulations on the Geotracker sites identified in Draft EIR Figures 8B.3-8.B.11 should be performed.	Please refer to response to comment 610-48 for a discussion on the use of hydraulic gradients and groundwater levels as a proxy to transport simulations. Common Response 10, Surface Water Quality and Groundwater Resources, includes a detailed discussion on the analysis of groundwater quality, which provides additional information regarding the

Letter-Comment Number	Comment	Response
		adequacy of the groundwater quality analysis in the Draft EIR. Impact GW-7 considers GeoTracker sites within a 0.25 mile radius of the project features.
610-50	An in-depth quantitative analysis of all groundwater impacts, including local, acute impacts on groundwater wells and ISW [interconnected surface water], must be included in the Draft EIR. In order to adequately apprise the public and decision-makers of the potential impacts, the Draft EIR must be revised to include more specific analysis of local groundwater impacts, which requires a survey of domestic and municipal wells in the Project area and modeling of Project impacts on these wells, and employing appropriate methods. The revised Draft EIR also must address the Project's potential to obstruct implementation of the SASb [South American Subbasin] GSP[Groundwater Sustainability Plan]. SCWA [Sacramento County Water Agency] refers DWR to the review of the Draft EIR prepared by LWA [Larry Walker Associates], attached hereto as Exhibit 5, regarding specific technical deficiencies DWR must address to ensure protection of groundwater supplies potentially impacted by the Project.	This information summarizes comments made in letter 610. Comments on interconnected surface water and impacts on the South American Subbasin are provided in the response to comment 610-37.
610-51	D. Public Services and Utilities (Chapter 21) 1. Impacts to the Town of Hood's Water Service As stated in the Draft EIR, "[c]onflicts with existing infrastructure could occur if project construction crosses an existing water line or other water conveyance infrastructure. A small portion of the Hood Well and Treatment facility lies above the proposed tunnel alignment for Alternatives 1, 2a, 2c, 3, 4a, 4c, and 5." More specifically, the proposed Project's Intakes B and C lie within eyesight of the town of Hood on two sides. A new pipeline would connect these intakes and run just outside of the town of Hood from the north, around the east,	CEQA allows for the evaluation of impacts at a level of conceptual design. Regarding the scope of the EIR analysis, please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please refer to responses to comments 610-45 to 610-49 regarding how groundwater impacts, including groundwater supply, during construction were analyzed in Chapter 8, Groundwater, and impacts on groundwater, which are less than significant. As described in that response, there would be no substantial changes to local groundwater elevations during construction. In addition, local changes in groundwater elevations or

Letter-Comment Number	Comment	Response
	and to the south. (Draft EIR, p. 21-32.) The effects to water supply for the town of Hood of constructing these facilities and their permanent placement are not adequately analyzed in the Draft EIR.	effects on local infrastructure, such as the Hood Well and Treatment facility, would be monitored during construction dewatering as described by Mitigation Measure GW-1 and, if necessary, DWR would be required to take actions, such as using injection wells temporarily to recharge the groundwater basin. DWR will continue to consult with utility operators, including SCWA, prior to finalization of design regarding any proposed uses within SCWA's right-of-way to avoid conflicts between the project and SCWA facilities.
610-52	Impact UT-2 (construction of new infrastructure causing significant impact on water service system) concludes that the impact to water supply would be less than significant. (Draft EIR, p. 21-32.) Regarding construction activities, the Draft EIR asserts that "the potential for water service providers . . . To be affected by a substantial increase in demand for water services . . . Was analyzed" but there is no supporting information. (Id., p. 21-22.) The analysis beginning at Draft EIR page 21-32 looks only at the proximity of the utilities to existing utilities, and does not analyze the groundwater supply impacts associated with an increase in demand for construction water or supply impacts associated with permanent barriers presented by the pipeline and Project infrastructure. And although the Draft EIR lists water providers potentially affected by the Project-including SCWA-it does not include any analysis of such impacts or mitigation of any such impacts to less than significant levels. (See id., pp. 21-21, 21-32.) SCWA [Sacramento County Water Agency] was never contacted for information on its water supply for the town of Hood and has no information on how the analysis regarding impacts to service providers was completed.	The use of different water sources during construction is evaluated in Impact UT-2. As noted in that impact evaluation and in Chapter 3, construction water could come from various sources. As described in section titled Water Supply, Drainage, and Utilities, in Chapter 3, Description of the Proposed Project and Alternatives, the majority of construction water supplies would be provided by on-site supplies, including stormwater runoff and dewatering flows with additional flows, as needed, from on-site water supplies equivalent to historical water use on the construction site parcels. All of the stormwater runoff and dewatering flows within the construction sites would be collected, treated, and tested and diverted to on-site storage facilities for subsequent reuse for dust control, ground improvement, and tunnel boring machine operations. This would reduce the need for additional water supplies and avoid increasing peak runoff flows in adjacent drainage facilities and streams. The construction-related impacts of dewatering were analyzed in Chapter 8, Groundwater. Please see responses to comments 610-45 to 610-49 and 610-51 regarding a discussion of the groundwater analysis. Those responses describe the analysis of potential dewatering impacts on groundwater supplies during construction, the use of slurry cutoff walls to reduce the amount of groundwater in the construction site, and the use of Mitigation Measure GW-1. There would be no changes in stream flows, available water supplies for adjacent or nearby land uses, or use of adjacent or nearby public services water or wastewater utilities.

Letter-Comment Number	Comment	Response
		During construction or operation, the Delta Conveyance Project is not proposing to increase the total quantity of water permitted for diversion under existing DWR water rights. DWR is required to, and will continue to comply with, the State of California water rights priority system and area of origin laws during construction and operation. Water supply during construction is described in Chapter 3 in the section titled Local Water Supply, Drainage, and Utilities. The project description is evaluated throughout the EIR. Construction water supplies for all locations would be provided by re-use of treated dewatering and stormwater flows and on-site supplies except for the Bethany Reservoir Complex for Alternative 5. At the Bethany Reservoir Complex during some months, on-site flows, especially in drier years, would not be adequate. Therefore, as described in Chapter 3, a portion of the water supply in drier years would be conveyed from the SWP contract flows in the California Aqueduct from a location upstream of the Banks Pumping Plant in a new pipeline constructed parallel to Byron Highway. The amount of flow from the SWP California Aqueduct would be negligible as a portion contract deliveries. Much of the water demands during construction would be related to dust control; and during drier years, non-water methods could be considered to control on-site dust during construction, as allowed and described in Environmental Commitment EC-11 in Appendix 3B, Environmental Commitments and Best Management Practices. Finally, construction is not a permanent activity and water use would ultimately be constrained by the overall timeframe for construction, as well as the different phases of activities that may require water and their individual durations. Construction timing and durations for all alternatives is described in Chapter 3.
610-53	Any increase in water demand for construction or disruption of water supply facilities resulting from Project construction and operations and affecting the residents of the town of Hood, a small water supply system, must be analyzed and considered.	DWR understands that the water supply for the Town of Hood is limited and maintaining water quality is crucial. The proposed project would not induce demand in water from Delta water providers including the Town of Hood. As described in response to comment 610-52 and Chapter 3,

Letter-Comment Number	Comment	Response
	DWR must consider potential disruptions to water service, including affecting the quality of the water supply and lowering of the water table as a result of drilling in close proximity to the town's domestic water supply wells or other Project-related construction or operation activities. [Footnote 11: See discussion of impacts to groundwater, herein.] Loss of water supply would be devastating to the residents of the town. There is no existing surface water treatment plant in Hood so groundwater is the only water source and would be very expensive to replace. [Footnote 12: Note that the State of California has declared that every person has a right to clean, safe, and affordable drinking water. (See https://water.ca.gov/Programs/All-Programs/Human-Right-to-Water.) Any disruption or contamination of the water supply to the town of Hood could violate this law.] As the water supplier in the Hood area, SCWA's [Sacramento County Water Agency] current water system in that area cannot meet a substantial increase in demand if relied upon for construction activities or longer-term Project operation. [Footnote 13: As discussed herein, the Draft EIR does not clearly state the intended or expected sources of water for the Project.] Since there is little customer growth assumed in the area, SCWA has not anticipated increased demand, and the water supply system capacity cannot handle a substantial increase in demand due to the introduction of the DCP.	Description of the Proposed Project and Alternatives, the majority of the water supply at all construction sites would be provided by on-site sources, including collection, on-site treatment, storage, and reuse of stormwater flows and dewatering flows. At the intake construction sites near Hood, groundwater elevations would be monitored during construction and methods would be used to avoid significant declines in groundwater elevations due to construction, as described in Mitigation Measure GW-1. Impact GW-7 evaluates potential degradation of groundwater quality in the study area, including local wells. This analysis concludes that because of the temporary and localized nature of construction dewatering, the potential for the inducement of the migration of poor-quality groundwater into areas of higher quality groundwater would be low and, similarly, the likelihood of the inducement of the migration of existing contaminant plumes in groundwater would be low. Furthermore, planned treatment of water would prevent potential contamination, as would implementation of Mitigation Measure HAZ-2. Please see response to comment 610-51 regarding the scope of analysis allowed under CEQA.
610-54	Inadequate Analysis of Project Water Sources The Draft EIR violates CEQA by failing to provide information that would allow those not involved in its preparation to evaluate the adequacy of its conclusions. "Decision makers must, under the law, be presented with sufficient facts to 'evaluate the pros and cons of supplying the amount of water	Please see response to comment 61-52 regarding the source of water for construction. Re-use of water from on-site sources during construction would reduce the need for additional water supplies and avoid increasing peak runoff flows in adjacent drainage facilities and streams. As described in Impact UT-2 in Chapter 21, Public Services and Utilities, operation of the project would require limited water supply for the purposes of restrooms, basic cleaning, and other uses to be provided by on-site wells.

Letter-Comment Number	Comment	Response
	that the [project] will need.' " (Vineyard Area Citizens for Responsible Growth, Inc., supra, 40 Cal.4th at p. 431, quoting Santiago County Water Dist. v. County of Orange (1981) 118 Cal.App.3d 818, 829.) The Draft EIR does not specify the amount of water for construction and operations, and there is no discussion of the sufficiency of identified supplies, especially considering drought and other constraints on water supply availability, or the impacts associated with using any of the identified supplies.	
610-55	Impact UT-2 states: Construction activities may require various amounts of water depending on the activity and location. The water supply needed for construction will be satisfied through a combination of the following: import from local sources, exchanges, use of existing riparian diversions, new temporary appropriations, or existing SWP appropriations. Any use of diversions will be screened, as appropriate, and additional authorizations addressed following development of detailed engineering design. (Draft EIR, p. 21-32.) The reference to "various amounts" of construction water provides no meaningful information about potential to assess Project demand or determine sufficiency of supplies. This vague statement of construction water supplies raises additional questions: What are the likely or available "local sources?"	Water needs for project construction are variable since different construction activities will require various amounts of water. Please see response to comment 610-51 regarding the CEQA scope of analysis and responses to comments 610-52 and 610-53 regarding the methodology and analysis used to assess local water supply impacts, including groundwater-related impacts. Please see responses to comments 610-52 and 610-53 and Chapter 3, Description of the Proposed Project and Alternatives, the section titled, Local Water Supply, Drainage, and Utilities, for details regarding how water would be used and preserved through on-site storage during construction. The level of detail described in Chapter 21, Public Services and Utilities, is appropriate for the identification of the type and magnitude of construction-related impacts on public services and utilities pursuant to CEQA because the chapter discloses details of potential changes due construction, operations, and facility maintenance specific to public services and utilities to assess potential impacts. Except for water from the California Aqueduct to be used at the Bethany Complex, no water from Public Services or Utilities would be used for construction at the intakes, tunnel shafts, Southern Complex, or Bethany Complex. There would be no changes in stream flows, available water supplies for adjacent or nearby land uses, or use of adjacent or nearby public services water or wastewater utilities. Specific water balances would be developed for each site during final design.

Letter-Comment Number	Comment	Response
610-56	Impact UT-2 states: Construction activities may require various amounts of water depending on the activity and location. The water supply needed for construction will be satisfied through a combination of the following: import from local sources, exchanges, use of existing riparian diversions, new temporary appropriations, or existing SWP appropriations. Any use of diversions will be screened, as appropriate, and additional authorizations addressed following development of detailed engineering design. (Draft EIR, p. 21-32.) The reference to "various amounts" of construction water provides no meaningful information about potential to assess Project demand or determine sufficiency of supplies. This vague statement of construction water supplies raises additional questions: If an exchange is proposed, what water would be exchanged, and where would the water be diverted?	Please see responses to comments 610-51 to 610-55 regarding the CEQA scope of analysis, the methodology and analysis used to assess construction water supply impacts and groundwater-related impacts and the water supplies to be used during construction. As described in these responses, water needs for project construction are variable. Regarding water diversions, please see Existing Surface Water Diversions—Intakes technical memorandum (Delta Conveyance Design and Construction Authority 2022a) regarding identification and review of permitted surface water diversions at intake sites that could be temporarily affected by the project during construction. This information was used in the analysis contained in Chapter 21, Public Services and Utilities. As described in Chapter 21 and the technical memorandum, the primary construction water supplies would be developed from stormwater flows and dewatering flows that would be collected, treated, stored, and reused on-site to minimize or eliminate the need for offsite water supplies except at the Bethany Complex where water would be conveyed in a new pipe from the California Aqueduct.
610-57	Impact UT-2 states: Construction activities may require various amounts of water depending on the activity and location. The water supply needed for construction will be satisfied through a combination of the following: import from local sources, exchanges, use of existing riparian diversions, new temporary appropriations, or existing SWP appropriations. Any use of diversions will be screened, as appropriate, and additional authorizations addressed following development of detailed engineering design. (Draft EIR, p. 21-32.) The reference to "various amounts" of construction water provides no meaningful information about	Water needs for project construction are variable since different construction activities will require various amounts of water. Please see response to comment 610-51 regarding the scope of analysis allowed under CEQA and response to comment 610-52 regarding the methodology and analysis used to assess water supply impacts. Please see responses to comments 610-52 and 610-53 and the Chapter 3, Description of the Proposed Project and Alternatives, section titled Local Water Supply, Drainage, and Utilities for details regarding how water would be used and preserved through on-site storage during construction. Please see responses to comments 610-52 and 610-56 regarding temporary

Letter-Comment Number	Comment	Response
	potential to assess Project demand or determine sufficiency of supplies. This vague statement of construction water supplies raises additional questions: What existing riparian diversions are available?	diversions. Riparian water rights, which could be used for construction, are associated with the intake sites, the Lower Roberts Island tunnel launch shaft site, and the Byron Tract portion of the Southern Complex.
610-58	Impact UT-2 states: Construction activities may require various amounts of water depending on the activity and location. The water supply needed for construction will be satisfied through a combination of the following: import from local sources, exchanges, use of existing riparian diversions, new temporary appropriations, or existing SWP appropriations. Any use of diversions will be screened, as appropriate, and additional authorizations addressed following development of detailed engineering design. (Draft EIR, p. 21-32.) The reference to "various amounts" of construction water provides no meaningful information about potential to assess Project demand or determine sufficiency of supplies. This vague statement of construction water supplies raises additional questions: What is the feasibility of obtaining "new temporary appropriations" given the already oversubscribed water conditions in the Delta, including Term 91 limitations on new appropriations?	Please see response to comment 610-51 regarding the scope of analysis allowed under CEQA and response to comment 610-52 regarding the methodology and analysis used to assess water supply impacts. Please see response to comment 610-53 and Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Local Water Supply, Drainage, and Utilities for details regarding how water would be used and preserved through on-site storage during construction. No additional water rights appropriations would be required for any of the construction sites. Water demands would be met with on-site water supplies, including collecting, treating, storing, and reusing on-site stormwater flows and dewatering flows. Only the Bethany Complex would require off-site water supplies, and those flows would be conveyed from the SWP California Aqueduct to the Bethany Complex.
610-59	These questions [comments 53 through 56] must be addressed in a revised Draft EIR to provide necessary information for the evaluation of supplying the Project with water.	Please see responses to comments 610-52 through 610-58 for responses to these specific questions.
610-60	DWR must also clarify conflicting information in the Draft EIR regarding potential sources of Project water for construction. In contrast to the statement of water supplies under Impact	As described in the section titled Local Water Supply, Drainage, and Utilities in Chapter 3, Description of the Proposed Project and Alternatives, water use during construction includes on-site water supplies. Primary

Letter-Comment Number	Comment	Response
	UT-2, the "CEQA Conclusion" of the Public Services and Utilities chapter defines construction water needs and sources as follows: Water use during construction would come from on-site water supplies. During operations, on-site water supply would be used at the intakes and Southern Complex for the central and eastern alignments. At the Bethany Complex, water from the California Aqueduct would be used. No on-site water supplies are needed at the tunnel shafts. Diversions of surface water and groundwater would be limited to historical diversions, and other methods such as capturing and treating water, and reusing stormwater runoff, would reduce construction water usage to the extent feasible. It is anticipated that construction of all alternatives would have water supply met by nonmunicipal sources without any new water supply entitlements. (Draft EIR, p. 21-41, emphasis added.) None of the sources listed in the description of Impact UT-2 is an "on-site" supply, at least within Sacramento County.	water supplies will be developed from stormwater flows and dewatering flows that will be collected, treated, stored, and reused on-site to minimize or eliminate the need for off-site water supplies except at the Bethany Complex, where water will be conveyed in a new pipe from the California Aqueduct.
610-61	There is also no discussion in the Draft EIR of the feasibility of any proposed water source needed to support the Project construction - which would occur over a ten-year period. "The water sources . . . And the impacts of exploiting those sources are not the type of information that can be deferred for future analysis," and thus, the EIR "must analyze . . . The impacts of providing water to the entire project." (Vineyard Area Citizens for Responsible Growth, Inc., supra, 40 Cal.4th at p. 431.)	CEQA allows for the evaluation of impacts at a level of conceptual design. Regarding the scope of the EIR analysis, please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues.. Please refer to response to comment 610-58 regarding water demands and on-site water supplies.
610-62	Moreover, no information about the amount of water needed for Project operations water use is provided. Rather than describe the amount of water needed for Project operations,	Please refer to Chapter 3, Description of the Proposed Project and Alternatives, for a discussion of construction water supply, drainage, and utilities. This discussion indicates that construction water supply will be

Letter-Comment Number	Comment	Response
	the Draft EIR merely refers the reader to engineering reports, without even so much as a page reference: "Water needed for project operations is described in the Volume 1: Delta Conveyance Final Draft Engineering Project Report - Central and Eastern Options (Delta Conveyance Design and Construction Authority 2022i) and the Volume 1: Delta Conveyance Draft Engineering Project Report - Bethany Reservoir Alternative (Delta Conveyance Design and Construction Authority 2022j)" (Draft EIR, p. 21-39.) The Draft EIR must be revised to include an adequate analysis of the water supply needed for the Project, including impacts associated with providing that supply. The information must be provided in the relevant chapters of the EIR: "The seriousness of water supply issues . . . merits discussion in the text of the EIR, where it is most readily accessible." (Cal. Oak Foundation, supra, 133 Cal.App.4th at p. 1239.) Readers cannot be expected to "ferret out" information to make such an evaluation. The California Supreme Court has held that "information 'scattered here and there in EIR appendices' or a report 'buried in an appendix,' is not a substitute for 'a good faith reasoned analysis.' " (Vineyard Area Citizens for Responsible Growth, Inc., supra, 40 Cal.4th at p. 442.) Without any information as to the required amount of water or available sources, it is not possible to conclude there will be an adequate water supply for the Project, or that use of these other sources for Project construction would not result in significant impacts from the construction of new facilities, or result in significant impacts to groundwater (including creating a cone of depression, or impacts to groundwater dependent	primarily from dewatering flows and stormwater flows collected, treated, and stored on the construction site, and continued use of water supplies for the acquired parcels used for construction. For the Bethany Reservoir Pumping Plant in Alternative 5, water would be conveyed from the California Aqueduct. Please refer to Chapter 21, Public Services and Utilities, for analysis of potential impacts of project construction and operations on water and wastewater service and capacity. As discussed under Impact UT-2, water use under operations includes landscaping, permanent restroom facilities, or basic maintenance at certain locations with facilities, which would be a relatively small amount. Impacts on public services and utilities for all alternatives were found to be less than significant.

Letter-Comment Number	Comment	Response
	ecosystems) or reduction in applied water in other locations.	
610-63	Much of the last decade has been a period of extended drought, with curtailments of existing diversions in the Delta and severe cutbacks in SWP supplies. DWR this year already has notified SWP contractors of a potential fourth year of drought, and that municipal water supplies may be as low as 5 percent of contract amounts, with potential supplies limited to that necessary to satisfy public health and safety demands. [Footnote 14: See https://mavensnotebook.com/2022/12/01/this-just-in-dwr-announces-initial-state-water-project-allocationoutlines-actions-for-a-possible-fourth-dry-year/.] In August, Governor Newsom announced that, "[h]otter and drier weather conditions spurred by climate change could reduce California's water supply by up to 10% by the year 2040." [Footnote 15: See "Governor Newsome Announces Water Strategy for a Hotter, Drier California," Aug. 11, 2022, available at https://www.gov.ca.gov/2022/08/11/governor-newsom-announces-water-strategy-for-a-hotter-driercalifornia/.] Given the ongoing water shortages, what evidence supports the Draft EIR's implicit conclusion that adequate water supplies will be available to meet Project construction and operation needs, or that such supplies could be available to the Project without substantial adverse effects on other water users or the environment?	Please see responses to comments 610-45 to 610-56 regarding the evaluation of groundwater, including groundwater supply, during construction and operation of the projects and the water to be used during construction. As identified in response 610-53, DWR understands that the water supply for the Town of Hood is limited and maintaining water quality is crucial. The proposed project would not induce demand in water from Delta water providers including the Town of Hood. As Chapter 8 concludes, impacts on groundwater would be less than significant. In addition, Mitigation Measure GW-1 will be implemented to further reduce impacts that are identified as less than significant. Response to comment 610-52 acknowledges that construction could occur in drier conditions and discusses the approach. As described in Chapter 3, Description of Proposed Project and Alternatives, section titled Intake Operations and Maintenance, the project is seeking a new point of diversion and is not seeking to expand water right quantity. The water supplied for operations of the project would come from DWR's existing water right with a change to the point of diversion. As described in Chapter 5, Surface Water, and Chapter 6, Water Supply, there is sufficient water to supply the project.
610-64	Conclusion There is hardly an issue of more significant public concern in California than water supply availability. Indeed, water supply reliability for Delta exporters is the stated purpose of the DCP. Whether the Project is capable of achieving that purpose is not clear. It is definitely not clear to SCWA [Sacramento County	Please see detailed responses to letter 610 contained herein regarding water supplies and groundwater resources. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding performance of the objectives and CEQA requirements. Please also see Common Response 1 regarding the evaluation of water-

Letter-Comment Number	Comment	Response
	Water Agency] that the Project could achieve its purposes without significant adverse impacts to SCWA facilities and operations, to domestic and municipal surface and groundwater resources, including water supplies and the environment in and above the Delta.	dependent resources throughout the EIR. See also Chapter 5, Surface Water, which discloses potential changes in surface water based on hydrologic modeled simulations of proposed operations. Chapters 7–32 evaluate and disclose potentially significant physical environmental impacts that could affect Sacramento County Water Agency. The Executive Summary table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures provides a list of impacts, and the CEQA impact conclusions before and after the application of mitigation measures.
610-65	SCWA [Sacramento County Water Agency] encourages DWR to modify the Project to meaningfully address impacts to the FRWP [Freeport Regional Water Project] and Hood wells, and the SASb [South American Subbasin], including moving the proposed intakes outside of an area that may adversely influence FRWP operations or the Hood wells. DWR should coordinate and consult with SCWA as it revises the Project and Draft EIR to ensure that all impacts, including those identified in these comments, are accurately and adequately evaluated and fully avoided or mitigated. These changes necessarily will constitute significant new information and are of critical interest and concern to SCWA and residents of the affected communities, and thus a revised Draft EIR addressing these issues must be recirculated for public review and comment.	Please refer to Chapter 5, Surface Water, which discusses changes to Sacramento River basin flows and describes naturally occurring reverse flows within the Sacramento River upstream of the project intakes and that reverse flows during operations under all alternatives would be very small in both duration and reverse flow distance. Based on this, it is anticipated impacts on Freeport Regional Water Project would not occur. Hood is outside the area of operational/ dewatering influence and effects on the wells is not anticipated. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Environmental Review Issues, regarding the use of mitigation to reduce potentially significant environmental impacts in accordance with CEQA Guidelines. Please refer to response to comment 610-11 regarding recirculation; the EIR does not need to be recirculated.
610-66	[ATT 1: Report titled "Flood Risk Reduction Feasibility Study for Delta Legacy Community of Hood, CA", dated January 2022]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. See response to comment 610-10 regarding the flood risk study.
610-67	[ATT 2:] BEFORE THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD HEARING IN THE MATTER OF CALIFORNIA DEPARTMENT OF WATER RESOURCES AND UNITED STATES BUREAU OF	This comment was submitted on the Bay Delta Conservation Plan/California WaterFix project. Thus, the comment does not directly address the Delta Conveyance Project Draft EIR, and DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comment's content to determine whether the comment may be applicable to the proposed Delta

Letter-Comment Number	Comment	Response
	RECLAMATION REQUEST FOR A CHANGE IN POINT OF DIVERSION FOR CALIFORNIA WATER FIX TESTIMONY OF DR. BENJAMIN S. BRAY, Ph.D., P.E.	Conveyance Project. Here, the comment is not applicable to the Delta Conveyance Project Draft EIR; therefore, no further response is provided.
610-68	[ATT 2:] I. INTRODUCTION AND OVERVIEW OF TESTIMONY I am a Senior Civil Engineer employed by the East Bay Municipal Utility District ("EBMUD"). I hold a Bachelor of Science in Environmental Resource Engineering from Humboldt State University (2000) and a Masters of Science (2002) and Doctor of Philosophy in Civil Engineering with an emphasis in water resources and minors in operations research and linear statistical models (2006) from the University of California at Los Angeles. I am a registered Civil Engineer in the State of California (C78883), and I have over nine years of experience with EBMUD. A true and correct copy of my statement of qualifications is submitted as EBMUD-127.	This comment was submitted on the Bay Delta Conservation Plan/California WaterFix project. Thus, the comment does not directly address the Delta Conveyance Project Draft EIR and DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comment's content to determine whether the comment may be applicable to the proposed Delta Conveyance Project. Here, the comment is not applicable to the Delta Conveyance Project Draft EIR; therefore, no further response is provided.
610-69	[ATT 2:] In this testimony, I present my analysis and findings regarding potential impacts of the California WaterFix Project ("WaterFix Project") on the operation of the Freeport Regional Water Project ("Freeport Project"). The Freeport Project is owned and operated by the Freeport Regional Water Authority, a joint powers authority of EBMUD and the Sacramento County Water Agency ("SCWA"). Based on my review and analysis of the modeling results provided for this proceeding by the California Department of Water Resources ("DWR") and the United States Bureau of Reclamation ("USBR") (collectively, "Petitioners"), I conclude that, under certain circumstances, the WaterFix Project is likely to increase the frequency and duration of reverse flow events in the Sacramento River that	This is a comment submitted on the Bay Delta Conservation Plan/California WaterFix project RDEIR/SDEIS. Thus, the comment does not directly address the Delta Conveyance Project or the Draft EIR and DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comments provided by the commenter and provided responses where comments may still be applicable to the proposed Delta Conveyance Project. Many comments in this letter do not apply to the proposed Delta Conveyance Project because they are related to the operational scenarios and modeling, including the modeling tools that were used (CalSim II and DSM2), for the Bay Delta Conservation Plan/California WaterFix EIR/EIS analysis. The operational scenario and modeling tools used for Bay Delta Conservation Plan/California WaterFix are different from those used in the

Letter-Comment Number	Comment	Response
	exceed threshold criteria that require the Freeport Project intake facility to temporarily stop diverting water.	Delta Conveyance Project Draft EIR. Therefore, comments regarding operational scenarios and modeling tools no longer used, are not applicable. While DSM2 is used in the Delta Conveyance Project EIR, the operational scenario assumed is different than that considered for Bay Delta Conservation Plan/California WaterFix, therefore, comments related to the DSM2 analysis are not applicable. A complete description of the hydrologic modeling undertaken for the Delta Conveyance Project environmental analysis is provided in Appendix 5A, Modeling Technical Appendix, which describes the use of CalSim 3 to model alternatives. Chapter 5, Surface Water, of the Final EIR, includes an assessment of the limited duration and frequency of reverse flows on the Sacramento River, as well as the extent (measured in miles) of reverse flows when they are expected to occur. The total number of reverse flow events were analyzed using DSM2, and for each event the total flow and distance was analyzed. New figures have been added to the EIR, Chapter 5, Figure: Frequency of Duration of Reverse Flow Events and Frequency of Reverse Flow Distances and Figure: Frequency of Reverse Flow Distances, which show that there is no increase in frequency of stronger reverse flow events between existing conditions and project alternatives. These figures demonstrate that there is no change in the frequency and duration of reverse flow events at a distance of 0.8 miles from the Sacramento Regional Wastewater Treatment Plant outfall. The inclusion of the information in Chapter 5 does not result in a change to an impact determination or require DWR to implement additional mitigation measures. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which

Letter-Comment Number	Comment	Response
		DWR was unwilling to commit. Furthermore, as described in Chapter 3, Description of the Proposed Project and Alternatives, operation of the project includes sweeping velocity requirements which limit the diversions to times when velocity at the north Delta intakes is in the downstream to direction at 0.4 feet per second. This sweeping velocity requirement would minimize changes in reverse flows. As discussed in Chapter 21, Public Services and Utilities, no impacts on water supply or wastewater treatment attributable to reverse flows would occur under the Delta Conveyance Project.
610-70	[ATT 2:] The Joint Change Petition ("Change Petition") filed by Petitioners on August 26, 2015 contains no analysis of the WaterFix Project's potential impacts on the Freeport Project. Nor did Petitioners present any such analysis in their written testimony and exhibits filed in support of the Change Petition. Therefore, to determine whether the WaterFix Project may impede the Freeport Project's operation, I performed a technical analysis of the modeling results generated by Petitioners for this hearing from the CalSim-II and Delta Simulation Model II ("DSM2") models.[Footnote 1: Petitioners' May 16, 2016 letter to the hearing officers notified the parties of the public availability of "updated modeling relating to the proposed project and modeling on an adaptive operational range." EBMUD subsequently requested that modeling from Petitioners, and I have relied on the modeling Petitioners provided in response to EBMUD's request to prepare this testimony.] Specifically, I analyzed Petitioners' CalSim-II modeling results for output of monthly average flows near the Freeport Project intake for Water Years 1922 through 2003	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. This comment does not apply to the proposed Delta Conveyance Project because the comment is regarding operations and modeling, including the type of model that was used for the Bay Delta Conservation Plan/California WaterFix EIR/EIS, that are different than the proposed operations and modeling used in the Delta Conveyance Project Draft EIR. A complete description of the hydrologic modeling undertaken for the Delta Conveyance Project environmental analysis is provided in Appendix 5A, Modeling Technical Appendix, which describes the use of CalSim 3 to model alternatives. Please refer to Common Response 3, Alternatives Development and Description, regarding Delta Conveyance Project's operations, which do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Please also refer to Common Response 3 regarding how the project would be operated to shift diversions from the south Delta to the north Delta (during the summer and fall) or divert water in the north Delta during excess flow conditions while meeting regulatory requirements (during the winter and spring).

Letter-Comment Number	Comment	Response
	under each of the five modeling alternatives Petitioners presented. The five alternatives are the No Action Alternative and four project alternatives: H3, H4, Boundary 1, and Boundary 2.[Footnote 2: For a description of the CalSim-II and DSM2 models as well as additional information on the five alternatives modeled for the Change Petition, refer to testimonies of Jennifer Pierre (Exhibit DWR-51), Parviz Nader-Tehrani (Exhibit DWR-66), and Armin Munévar (Exhibit DWR-71), and the exhibits referenced in each.] I also analyzed Petitioners' DSM2 15-minute velocity output for Water Years 1976 through 1991 to assess the potential project impact on the frequency of reverse flow events that meet or exceed specified shutdown criteria for the Freeport Project intake.[Footnote 3: Although Petitioners also provided DSM2 modeling results for Water Year 1975, I excluded the Water Year 1975 output data from my analysis to allow a "warm up" period. This approach is consistent with Petitioners' decision not to use Water Year 1975 data, as explained by Petitioners' DSM2 expert, Dr. Parviz Nader-Tehrani, during cross-examination.]	Please refer to response to comment 610-69 regarding potential reverse flow events north of the proposed intakes.
610-71	[ATT 2:] Based on my analysis of the CalSim-II modeling results developed by Petitioners for this Change Petition, I conclude that the implementation of the WaterFix Project will likely cause further Sacramento River flow reductions during seasonally dry conditions. These incremental flow reductions, as compared to the No Action Alternative, result in more frequent reverse flow events that meet or exceed Freeport Project intake shutdown criteria. Increased Freeport Project shutdowns will cause operational disturbances and may result in a loss of water supply to EBMUD and SCWA in critical months during droughts when existing supplies are already	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and potential reverse flow events north of the proposed intakes and proposed operations.

Letter-Comment Number	Comment	Response
	deficient to meet existing needs. DSM2 modeling also indicates that the proposed WaterFix Project has the potential to cause Freeport Project shutdowns that would not otherwise have occurred. DSM2 analysis identified 29 months during dry years within Water Years 1976 through 1991 when at least one of the four project alternatives will increase the frequency of reverse flow events that meet or exceed the Freeport Project intake shutdown criteria, as compared to the No Action Alternative.	
610-72	[ATT 2:] Taken together, the CalSim-II and DSM2 models demonstrate the potential for Petitioners to shift existing operations upon implementation of the WaterFix Project to alter the timing of their north-to-south exports within a given year. This change may periodically reduce freshwater flows at Freeport, causing more reverse flow events that meet or exceed the Freeport Project intake shutdown criteria.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-73	[ATT 2:] Section I of this testimony presents this overview of my conclusions. Section II describes how tidal influences affect the Freeport Project intake by causing reverse flows and explains how the Freeport Project must shut down during certain reverse flow events. In Section III, I outline the technical approach I used to analyze the WaterFix Project's impact on reverse flows at Freeport, utilizing results from two models, CalSim-II and DSM2. Section IV presents the findings from my analysis of the modeling performed by Petitioners in connection with the Change Petition. Section V discusses uncertainties and model limitations of this analysis. Finally, Section VI presents several conceptual permit terms that would remedy the injury to EBMUD [East Bay Municipal Utility District] and SCWA [Sacramento County Water Agency].	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
610-74	[ATT 2;] II. BACKGROUND A. Tidal Cycle Influence on Reverse Flows at Freeport. The Freeport Project intake is located on the Sacramento River near the town of Freeport. The Sacramento River is a major tributary to the Sacramento-San Joaquin Delta ("Delta"). The Delta is subject to natural tidal cycles because it is connected to the San Francisco Bay and, ultimately, the Pacific Ocean. Tidal cycles that drive the rise and fall of large water bodies are a function of the combined gravitational forces exerted by the Moon, the Sun, and the rotation of the Earth. The Delta is a "mixed tide" system, meaning that two uneven tidal cycles typically occur each day with characteristic higher high water, lower high water, higher low water, and lower low water. This tidal cycle is illustrated in Figure 1. [See Exhibit 1 of ATT 2]	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR..
610-75	[ATT 2;] The extent to which tidal cycles affect the Sacramento River at Freeport depends in part on the volume of freshwater flows traveling downstream at Freeport. When Sacramento River freshwater flows are relatively high, tidal influence is more pronounced in downstream reaches, and tidal influence on discharge measurements at Freeport are small or virtually non-existent. However, when Sacramento River freshwater flows are relatively low, tidal influence will extend further up the Sacramento River and up into other Delta tributaries. The tidal influence can even reverse the flow of the river at Freeport for a period of time when Sacramento River freshwater flows are relatively low. Figure 1 [See Exhibit 1 of ATT 2] shows an example of tidal influence resulting in reverse flows during low tide over a period of three days in April 2015.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR..
610-76	[ATT 2;] B. The Freeport Project Intake Must Shut Down Whenever	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability

Letter-Comment Number	Comment	Response
	Reverse Flow Events Exceed Pre-Determined Threshold Criteria. Reverse flows can require temporary Freeport Project shutdowns. The Freeport Project intake is located near a major wastewater discharge point. The Sacramento Regional County Sanitation District ("Regional San") discharges treated wastewater into the Sacramento River through a wastewater outflow diffuser 1.3 miles downstream from the Freeport Project intake. The discharged wastewater remains downstream of the Freeport Project intake during normal flow conditions, but it can become a concern during reverse flow conditions.[Footnote 4: The proposed WaterFix Project's diversion point nearest the Freeport Project intake is about four miles downstream of the Regional San wastewater discharge point, between the towns of Courtland and Clarksburg, as depicted on Figure 2. [See Exhibit 2 of ATT 2]] When reverse flows occur on the Sacramento River near Freeport, discharged wastewater from Regional San flows upstream towards the Freeport Project intake. To prevent wastewater effluent from entering the Freeport Project intake, the Freeport Project must stop diverting water immediately when Regional San's wastewater effluent has traveled an average distance of 0.9 miles upstream from its discharge point. This distance of upstream travel is referred to as the "advective transport distance." The Freeport Project intake may not resume operation until the Sacramento River's flow returns to a normal downstream flow and the wastewater effluent zone has retreated downstream to a location not more than 0.7 miles upstream from Regional San's discharge point. These criteria are contained in a coordinated operations	of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	agreement between the Freeport Regional Water Authority and Regional San, and they are enforceable conditions of the domestic water supply permit issued to EBMUD by the State Water Resources Control Board ("SWRCB") Division of Drinking Water.[footnote 5: For a detailed discussion of these restrictions, see Exhibit EBMUD-151 (Testimony of Eileen M. White, P.E.) at page 10.] Figure 3 [See Exhibit 3 of ATT 2] contains a graphical representation of the criteria for shut down and resumption of Freeport Project intake operations during reverse flow events. To meet those criteria, the Freeport Project operators must identify tidal influence on the Sacramento River by monitoring velocities at the Freeport gage around the clock. The Freeport gage is about 1.3 miles downstream of the Freeport Project intake near the Freeport Bridge. The gage has operated since at least 1948 and is a semi-continuous monitoring station of river stage, river discharge, battery voltage, water velocity, water temperature, electrical conductivity, and water turbidity.	
610-77	[ATT 2:] C. Reverse Flow Events that Exceed the Freeport Project's Mandatory Shutdown Criteria Have Historically Occurred in Low-Flow Conditions. To understand the conditions under which SRFEs may occur, I analyzed publicly available data from the Freeport gage.[Footnote 6: I downloaded the historic Freeport gage data (USGS 11447650) from the California Data Exchange Center ("CDEC"), http://cdec.water.ca.gov/queryCSV.html.] As used in this testimony, a "significant reverse flow event" ("SRFE") is a reverse flow event that would cause wastewater effluent from Regional San [Sacramento Regional County Sanitation District] to travel an average of 0.9 miles or more upstream from its	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and potential reverse flow events north of the proposed intakes and proposed operations.

Letter-Comment Number	Comment	Response
	discharge point, which is the threshold at which the Freeport Project must stop diverting water. I applied the Freeport Project shutdown criteria to Freeport gage velocity data between 0100 hours on January 1, 1987 through 2400 hours on January 14, 2016. The gage data indicates that SRFEs corresponded to months with significantly low flows on the Sacramento River, which typically occurred in critically dry years. The monthly distribution is shown on Figure 4 [See Exhibit 4 of ATT 2]. Figure 5 [See Exhibit 5 of ATT 2] illustrates the relationship between monthly average flows and the frequency of SRFE occurrences in the corresponding month. While the sample size is not large, this historical analysis shows an increasing incidence of SRFEs as monthly average flow decreases below 8,000 cubic feet per second ("cfs").	
610-78	[ATT 2:] III. ANALYSIS METHODS My analysis of the potential impacts of the WaterFix Project on the operation of the Freeport Project and associated facilities focused on Petitioners' CalSim-II and DSM2 modeling and the modeling I performed utilizing Petitioners' models. Petitioners' CalSim-II modeling included a longer 82-year period of hydrology (Water Years 1922 through 2003), as compared to the shorter 16-year DSM2 simulation performed for this proceeding (Water Years 1976 through 1991). The longer period simulated with CalSim-II allows assessment of a wider range of hydrology and associated operations. A key advantage of DSM2, as compared with CalSim-II, is its 15-minute velocity output. The modeled velocity at a 15-minute time step is necessary and sufficient to directly identify short-term, tidally-influenced SRFEs [significant reverse flow event]. I describe my	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	CalSim-II and DSM2 analysis in the remaining portion of this Section III.	
610-79	[ATT 2:] A. Petitioners' CalSim-II Results Were Screened to Identify Months in Which WaterFix Project Operations Increase the Risk of Significant Reverse Flow Events at Freeport. Petitioners used CalSim-II, a water resources planning model, to evaluate the WaterFix Project and the associated operations of the State Water Project ("SWP") and the Central Valley Project ("CVP"). CalSim-II is a monthly model that quantifies river flows, reservoir storage levels, diversions, return flows, as well as Delta inflows and outflows under various SWP/CVP operating scenarios.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-80	[ATT 2:] To determine if the WaterFix Project has the potential to change river flow in a manner that may increase the frequency and severity of SRFEs [significant reverse flow event], I compared CalSim-II model results for the Sacramento River immediately downstream of Freeport for the No Action Alternative and each of the four project alternatives. Specifically, I developed and applied a set of Monthly Flow Criteria, which is comprised of three logic statements that I applied as a filter to compare CalSim-II results for the various project alternatives with the No Action Alternative: For each project alternative (H3, H4, Boundary 1, and Boundary 2): 1. the monthly average flow below the Freeport Project intake for the project alternative is less than the No Action Alternative, and 2. the monthly average flow for the project alternative is less	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding frequency of duration of reverse flow events north of the proposed intakes.

Letter-Comment Number	Comment	Response
	than the threshold value of 8,000 cfs, and 3. the relative change in monthly average flow between the project alternative and the No Action Alternative is greater than a tolerance of 20 cfs. The first logic statement above is intended to flag months in which modeled Freeport flows in one of several project alternatives are less than modeled flows in the No Action Alternative. The second logic statement applies an 8,000 cfs low-flow threshold adopted from my analysis of historical flows recorded by the Freeport gage station. I described that historical data analysis in Section II. That analysis indicates that SRFEs historically occur most frequently when flows drop below 8,000 cfs. On that basis, I applied a criterion of monthly average flow less than or equal to 8,000 cfs as a reasonable threshold indicator variable for assessing the potential for the WaterFix Project to increase the risk of SRFEs. The third logic statement is simply a tolerance to avoid small changes in monthly average flow that are not expected to impact reverse flow events. Sensitivity on the magnitude of this tolerance is also included in my analysis of results below to indicate how it could affect the risk assessment outcome.	
610-81	[ATT 2:] By applying the three Monthly Flow Criteria to screen Petitioners' CalSim-II monthly flow output data, I identified specific months in which Petitioners' WaterFix modeling results indicate that at least one WaterFix Project alternative would reduce flows at Freeport by more than a nominal amount during the type of low-flow conditions historically associated with SRFEs [significant reverse flow event].	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding frequency of duration of reverse flow events north of the proposed intakes.

Letter-Comment Number	Comment	Response
	To be clear, the months flagged by the Monthly Flow Criteria do not necessarily equate to SRFEs. SRFEs cannot be directly identified from the CalSim-II model output. The strength of a given reverse flow event is a function of several factors, including Sacramento River flow, the specific characteristics of the natural tidal cycle, and operation of key downstream facilities such as the Delta Cross Channel. Detailed modeling of these parameters is not available through CalSim-II. One readily available CalSim-II model output, however, is the monthly average flow immediately downstream of the Freeport Project intake. I used that flow information to identify the relative change in risk of increased reverse flow events due to the WaterFix Project significantly lowering Sacramento River flows relative to the No Action Alternative. This approach is an appropriate comparative analysis that utilizes the CalSim-II monthly output to assess the project effect on the risk of incurring SRFEs that would impact Freeport Project intake operations.	
610-82	[ATT 2:] B. Petitioners' DSM2 Results Were Analyzed With and Without Bias Correction to Identify Discrete Significant Reverse Flow Events Resulting from WaterFix Project Operations that Impact the Freeport Project. 1. Overview of DSM2 Methodology Petitioners used DSM2 to simulate the No Action Alternative and the four WaterFix Project alternatives. DSM2 simulates flow, velocity, stage, and electric conductivity. Petitioners included certain analysis of stage and electric conductivity in their exhibits and written testimony. Petitioners did not provide an analysis of velocity data but did make available the	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding potential reverse flow events north of the proposed intakes and proposed operations. Please also see Common Response 9, Hydrologic Modeling and Approach, regarding use of best available tools. Additionally, please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the use of DSM2 modeling for the water quality impact analysis.

Letter-Comment Number	Comment	Response
	DSM2 15-minute velocity output for Water Years 1976 through 1991. That velocity data can be used to directly assess the effect of the WaterFix Project on Freeport Project intake operations. I compared simulated DSM2 velocity data from Petitioners' historical simulation with actual velocity data from the Freeport gage station data. That comparison revealed that Petitioners' DSM2 results systematically under-predicted peak velocity magnitudes at high and low tide.	
610-83	[ATT 2:] To correct that under-prediction bias, I calculated an appropriate velocity offset to apply to Petitioners' DSM2 velocity output to match minimum reverse flow velocities. I calculated the optimal offset by minimizing the sum-of-square error between model simulation and historical Freeport gage data over 15 months of historical low-flow periods in which reverse flow events occurred.[Footnote 7: These were the months of October and November 1990, February 1991, May 1991, May through August 1992, October and November 1992, April through June 1994, December 2008, and November 2009.] I applied the optimal offset to the simulated output to align as closely as possible with the actual velocities recorded by the Freeport gage. Applying that offset produced a set of bias-corrected velocity output for assessing reverse-flow impacts derived from the DSM2 output provided by Petitioners. This offset is key because the negative 15-minute velocity output is the basis for calculating the shutdown criteria triggered by the Freeport gage station. If the simulated peak minimum reverse flow velocity is underestimated, then the modeling results will systematically underestimate SRFEs [significant reverse flow event]. I analyzed both the non-bias-corrected output and the bias-	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	corrected output to identify discrete SRFEs in each data set. I describe my methodology in greater detail in the remainder of this portion of my testimony.	
610-84	[ATT 2:] 2. Method of Analysis of Non Bias-Corrected Velocity Output I first analyzed Petitioners' DSM2 velocity output data without bias correction. For each reverse flow event (i.e. when velocity is negative), I computed the advective transport distance by multiplying the velocity (feet per second) by the time step (seconds). Whenever the accumulated advective transport distance for the reverse flow event met or exceeded 0.9 miles (4,752 feet), I identified that event as a SRFE [significant reverse flow event] that would cause a shutdown of the Freeport Project intake. I screened from the results all "non-significant" reverse flow events: those in which the accumulated advective transport distance did not meet the 0.9 mile threshold, because such reverse flow events would not trigger a shutdown of the Freeport Project intake. I then compared SRFEs identified for each of the four project alternatives to the No Action Alternative to determine whether the WaterFix Project would negatively impact EBMUD [East Bay Municipal Utility District] and SCWA's [Sacramento County Water Agency] ability to take diversions through the Freeport Project. I describe the results of that analysis in Section IV of my testimony.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-85	[ATT 2:] 3. Bias Correction of DSM2 Velocity Output Because the DSM2 model consistently underrepresents peak reverse flows at Freeport, I developed and applied a bias correction offset to the raw DSM2 velocity output data. This	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding potential reverse flow events north of the proposed intakes and proposed operations.

Letter-Comment Number	Comment	Response
	offset adjusted the simulated velocities to more closely match expected minimum velocities during reverse flow events based on actual Freeport gage station records. The DSM2 model does not accurately simulate velocity at Freeport at peak high tide or at peak low tide. In both cases, DSM2 tends to understate the peak amplitude. For example, during reverse flow events, DSM2 simulates a reverse flow that is weaker than would realistically occur under the simulated conditions. I identified this bias by plotting Freeport velocity output data generated by Petitioners' DSM2 calibration run against actual velocity data recorded in the same location by the Freeport gage during the simulated period. Two examples from May 1991 and November 1992 are depicted in Figure 6. These graphs show the DSM2 model's continuous under-prediction of river velocities at peak tides. Of direct relevance to reverse flow analysis, the graphs included in Figure 6 [See Exhibit 6 of ATT 2] specifically show that this under-prediction occurs during reverse flow conditions. In other words, actual measured velocities are consistently more strongly negative than DSM2 has simulated. This means that SRFEs [significant reverse flow event] are actually more frequent, and more severe, than estimated from uncorrected DSM2 output. For that reason, I believe that Petitioners' uncorrected DSM2 output data should not be relied upon to determine the impact of the WaterFix Project on the Freeport Project intake.	Please see response to comment 610-82 regarding the hydrologic and water quality modeling tools used in the Delta Conveyance Draft EIR.
610-86	[ATT 2:] Instead, a bias correction offset should be applied to match the low-amplitude peak reverse flow velocities with the velocities actually observed at Freeport. I developed a bias offset of -0.230 feet per second by minimizing the sum-of-square error between simulated and recorded peak minimum velocities for	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding potential reverse flow events north of the proposed intakes and proposed operations.

Letter-Comment Number	Comment	Response
	the Freeport gage over a 15-month period of historical records in which flows were low enough to contain reverse flow events at the gaging station. I then applied the offset to the 16-year set of velocity output data at the Freeport Project intake. Figure 7 [See Exhibit 7 of ATT 2] illustrates how applying the offset caused the simulated velocity data to more closely match observed actual reverse flow conditions at Freeport during the reverse flow period when velocity is negative. In my opinion, that bias-corrected data provides a significantly more accurate representation of the Sacramento River's velocity at Freeport under the simulated conditions, and therefore it should be relied upon to analyze the WaterFix Project's impact on shutdown events at the Freeport Project intake.	
610-87	[ATT 2:] The uncorrected DSM2 velocity data is not reliable for SRFE [significant reverse flow event] analysis. DSM2 is calibrated with the "big picture" of the Delta and all its complexity in mind; it is calibrated to simulate a broad range of criteria under a wide array of conditions. With limitations inherent to any modeling application, model calibration involves tradeoffs in criteria, especially for large and complex systems. By calibrating with the "big picture" in mind, criteria-specific or localized biases are inevitably introduced. When using the model for a specific purpose – in this case, to identify SRFEs – it is both appropriate and necessary to calculate and apply bias correction to maximize the simulation's accuracy in representing reverse flow events for the Freeport gage station. Bias-corrected data derived for reverse-flow analysis purposes should not be used for other purposes (for example, it should not be used to identify peak positive flows), but it is the best available dataset to comparatively analyze reverse flows.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. Additionally, please see response to comment 610-85 regarding reverse flows and use of best available tools.

Letter-Comment Number	Comment	Response
610-88	[ATT 2:] After applying the bias correction to velocity data for the full 16-year simulated period to both the No Action Alternatives and the four project alternatives, I identified additional SRFEs [significant reverse flow event] not discerned from the uncorrected velocity data. Section IV provides the results of that analysis.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-89	[ATT 2:] IV. IMPACT ANALYSIS RESULTS AND DISCUSSION Through my analysis of the WaterFix Project CalSim-II and DSM2 modeling prepared by Petitioners for this hearing, I conclude that the WaterFix Project will likely cause an increase in the frequency and duration of SRFEs [significant reverse flow event] that will result in an increase in the frequency and duration of shutdowns of the Freeport Project intake. These impacts are most likely to occur in critically dry years, during the periods in which EBMUD [East Bay Municipal Utility District] relies on Freeport Project water. This conclusion is based on my analysis of Petitioners' CalSim-II modeling, applying the Monthly Flow Criteria as described above, together with the results of my analysis of Petitioners' DSM2 modeling. My conclusion is consistent with the results of prior independent modeling analysis efforts described below in Section IV.D.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding potential reverse flow events north of the proposed intakes and proposed operations.
610-90	[ATT 2:] A. CalSim-II Simulations of WaterFix Project Operations Indicate An Increased Risk of Significant Reverse Flow Events During Low-Flow Periods. I applied the Monthly Flow Criteria over the 82-year period of record as described in Section III.A. As indicated in Table 1 [See	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding potential reverse flow events north of the proposed intakes and proposed operations.

Letter-Comment Number	Comment	Response
	Exhibit 15 of ATT 2], I determined from that analysis that 34 months meet all Monthly Flow Criteria for the H3 project simulation, 22 months meet all Monthly Flow Criteria for the H4 project simulation; 22 months meet all Monthly Flow Criteria for the Boundary 1 simulation; and 20 months meet all Monthly Flow Criteria for the Boundary 2 simulation. These are months in which the WaterFix Project increases the risk of Freeport Project intake shutdowns. As shown in Table 1, such months tend to occur during drought periods. Table 1 provides the total number of months that meet the Monthly Flow Criteria during each of the three major drought periods over the modeled 82-year period: 1929-1934, 1976-1977, and 1987-1992.[Footnote 8: For purposes of my analysis, the identified major drought periods commence with the first month of the first dry water year and continue through the month in which the Sacramento River monthly average flow begins to increase with the onset of winter storms at the beginning of the subsequent wet year. The terminal months for these three droughts were October 1934, November 1977, and November 1992.] Depending on which project alternative is analyzed, the WaterFix Project increases the risk of SRFEs relative to the No Action Alternative in 7% to 16% of months during the three identified drought periods.	
610-91	[ATT 2:] I also analyzed the sensitivity on the 20 cfs tolerance parameter incorporated into the Monthly Flow Criteria by varying this parameter from a minimum of 0 cfs to a maximum of 150 cfs. Sensitivity results showed that any tolerance parameter between 0 cfs and 150 cfs results in at least a 5% increase in the number of months that meet the Monthly Flow Criteria during the three drought periods identified in Table 1 [See Exhibit 15 of ATT 2] under all project alternatives relative	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	to the No Action Alternative. This sensitivity analysis demonstrates that the result obtained from application of the Monthly Flow Criteria is relatively insensitive to the choice of the monthly flow tolerance parameter. Among the project alternatives, the H3 simulation was most sensitive to the choice of tolerance parameter, decreasing from 15% to 8.7% as the tolerance parameter increases from 0 cfs to 150 cfs. In contrast, the Boundary 1 alternative was least sensitive to the choice of tolerance parameter, decreasing from 8.1% to 6.9% over the same range.	
610-92	[ATT 2:] B. DSM2 Simulations Show that WaterFix Project Operations Will Impact the Timing and Frequency of Significant Reverse Flow Events. I analyzed the DSM2 modeling studies to assess SRFEs [significant reverse flow event] directly for the 16-year period simulated by Petitioners (Water Years 1976 through 1991). I did this analysis twice: without bias correction and with bias correction. In both cases, I found the WaterFix Project would alter the pattern of SRFE occurrences, as compared with the No Action Alternative.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-93	[ATT 2:] 1. Analysis of Uncorrected DSM2 Velocity Output Data Table 2 [See Exhibit 16 of ATT 2] identifies the total number of modeled SRFEs during the 16-year DSM2 simulation period for the No Action Alternative and each modeled WaterFix Project alternative. Table 2 is based on an analysis of uncorrected raw output data exactly as provided by Petitioners. As shown in that table, the large majority of SRFEs during that period occurred during the droughts in 1976-1977 and 1987-1992.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	Because dry, low-flow conditions continued into Water Year 1992 – the final year of the latter drought – it is likely that additional SRFEs occurred that year. However, my analysis does not include SRFEs during that water year because Petitioners did not model this sixth year of the drought with DSM2.	
610-94	[ATT 2:] Without bias correction applied, the DSM2 analysis reveals a modest overall decrease in SRFEs in each of the four project alternatives in relation to the No Action Alternative. During the 1976-1977 drought, all project alternatives remain within ±4 SRFEs relative to the No Action Alternative. The H4 alternative shows an increase of two SRFEs during that drought. During the simulated portion of the 1987-1992 drought (i.e., excluding Water Year 1992), all project alternatives show a decrease relative to the No Action Alternative.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-95	[ATT 2:] 2. Analysis of Bias-Corrected DSM2 Velocity Output Data Following my analysis of uncorrected velocity data, I then applied the -0.230 feet per second (ft/sec) offset to correct the model's reverse flow under-prediction bias, and analyzed the corrected data to identify SRFEs [significant reverse flow event] under the No Action Alternative and each project alternative. Table 3 [See Exhibit 17 of ATT 2] presents the results of the analysis of the corrected data. A comparison of Table 3 with Table 2 [See Exhibit 16 of ATT 2] reveals the significance of the DSM2 bias. Table 3 shows a much greater incidence of SRFEs under all five modeled alternatives than Table 2. Although the No Action Alternative and the project alternatives all reflect this increase, the corrected modeling results show that SRFEs have the potential for a greater impact on the Freeport Project	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	than the uncorrected modeling results would suggest. It also shows that the WaterFix Project operation will require a greater number of shutdowns of the Freeport Project intake than previously understood, and, therefore, a commensurately greater degree of impact to EBMUD [East Bay Municipal Utility District] and SCWA [Sacramento County Water Agency]. Table 3 shows a moderate overall decrease in SRFEs under the project alternatives during drought periods relative to the No Action Alternative. Note that Table 3, unlike Table 2, shows increased SRFEs during the 1976-1977 drought in three of four project alternatives simulated.	
610-96	[ATT 2:] Comparing overall SRFE totals alone does not adequately convey the totality of the WaterFix Project's impact on the Freeport Project. Because impacts may depend upon not only how many SRFEs occur, but also upon when they occur, I analyzed patterns in the distribution of SRFEs [significant reverse flow event] throughout the year, comparing the No Action Alternative with the project alternatives. Aggregating SRFEs by month, as I present in Figure 8 [See Exhibit 8 of ATT 2], reveals how WaterFix Project operations could lead to a disproportionate share of SRFE impacts in some months. The DSM2 analysis shows a tendency for SRFEs to increase relative to the No Action Alternative in a few different ways. There are small changes among the project scenarios in January through April. There tends to be a small decrease in May and June with Boundary 2 showing the smallest change relative to the No Action Alternative. There is not much change in July, and SRFEs would decrease significantly under all project alternatives in August due to increases in Sacramento River flows. September through December show a higher potential for increased SRFEs	This is a comment on the Bay Delta Conservation Plan /California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	over various project alternatives. In September, the H3, H4, and Boundary 1 project alternatives all increase SRFEs significantly relative to the No Action Alternative, while September SRFEs would decrease under Boundary 2. A comparison of project alternatives with the No Action Alternative also shows increases for H3 in October and Boundary 2 in December. Figure 8 shows that operation of the WaterFix Project will likely impact the timing of SRFEs – most prominently in fall and winter months before storm events occur.	
610-97	[ATT 2:] C. A Comparative Analysis of the CalSim-II and DSM2 Modeling Shows How Shifted Export Patterns Will Change Flows and Thereby Increase Significant Reverse Flow Events, Especially During Drought Periods. After I analyzed Petitioners' CalSim-II and DSM2 modeling separately, I analyzed the results from both models together to understand how changes in flows simulated in CalSim-II translate to changes in SRFE [significant reverse flow event] impacts on the Freeport Project intake simulated in DSM2.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-98	[ATT 2:] 1. Comparison of Flow Data and SRFEs [significant reverse flow event] My comparative analysis revealed 29 separate months during the 1976-1991 period simulated by Petitioners in which one or more of the four project alternatives would increase SRFEs relative to the No Action Alternative, listed in Table 4 [See Exhibit 18 of ATT 2]. These 29 months are the months during the DSM2 modeling period when the WaterFix Project could cause additional shutdowns of the Freeport Project intake. The	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	impacts tend to become more frequent as drought periods progress. For example, 1977 has a higher proportion of SRFEs than 1976. Similarly, 1990 and 1991 had more SRFEs than 1987 and 1988. These impacts are clearly concentrated in droughts when the Sacramento River freshwater flows are lowest. Table 4 also shows that at least one project alternative increases SRFEs in every month between December 1990 and August 1991, except May 1991.	
610-99	[ATT 2:] Table 4 directly compares the DSM2 and CalSim-II analysis for each modeled alternative. The -0.230 ft/sec offset was applied to the DSM2 output data for the No Action Alternative and all project alternatives. Table 4 [See Exhibit 18 of ATT 2] includes all months in which DSM2 analysis, after application of the offset, indicates that at least one project alternative would increase the number of SRFEs [significant reverse flow event] relative to the No Action Alternative. The left portion of the table indicates the number of SRFEs under the DSM2 modeling for each modeled alternative. The portion of the table on the right provides corresponding monthly average flow information from CalSim-II, including flows in the No Action Alternative, each project alternative, and the difference relative to the No Action Alternative.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-100	[ATT 2:] The data provided in Table 4 [See Exhibit 18 of ATT 2] supports the incorporation into the Monthly Flow Criteria of 8,000 cfs monthly average flow below Freeport as a reasonable threshold indicator of SRFE [significant reverse flow event] potential for time periods when DSM2 data is not available. During the months included in Table 4 – all months when SRFEs would occur – flows at Freeport ranged from a high of 31,355 cfs in November 1981 under Boundary 1 (a flow that	This is a comment on the Bay Delta Conservation Plan /California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	corresponds to one modeled SRFE) to a low of 5,826 cfs in October 1977 under the H3 alternative (a flow that corresponds to 43 SRFEs). Table 4 also shows the lack of a perfect correlation between flows and the number of SRFEs. For example, under the Boundary 1 simulation, 18 SRFEs occurred in October 1990, corresponding to a flow of 6,870 cfs, but 28 SRFEs occurred in September 1990 despite slightly lower flows of 6,842 cfs. While flows are an important factor in determining SRFEs' number and severity, tidal and operational characteristics also play a key role.	
610-101	[ATT 2:] 2. Connection between WaterFix Project SRFE [significant reverse flow event] Impacts and Shifts in the Timing of Exports Petitioners assert that the WaterFix Project's purpose is to enhance operational flexibility for the SWP and CVP through the use of three new points of diversion in the north Delta. The CalSim-II and DSM2 results, when considered together, show how WaterFix Project operators could use that new flexibility to shift the timing of north-to-south Delta export patterns. Such shifts will, at times, result in lower Sacramento River flows, with an accompanying increase in SRFEs. I present two months as examples to illustrate this impact: September 1977 and June 1991. I chose these months because they represent two examples where the Delta is in "excess" and "balanced" conditions, respectively.[Footnote 9: Excess conditions are periods when releases from upstream reservoirs plus unregulated flow exceed Sacramento Valley inbasin uses, plus exports. Balanced conditions are periods when releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet Sacramento Valley	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	inbasin uses, plus exports.] First, I compared the DSM2 modeling under the No Action Alternative to the H3 project alternative for September 1977. As shown in Table 4 [See Exhibit 18 of ATT 2] and Figure 9 [See Exhibit 9 of ATT 2], DSM2 results for that month indicate that SRFEs increase from 17 under the No Action Alternative to 37 under H3. CalSim-II indicates that, under H3, the timing of total water exports "shifts" to earlier in 1977 than under the No Action Alternative. Figure 10 [See Exhibit 10 of ATT 2] shows this shift in total export timing for those two alternatives. Figure 10 shows that exports increase under the H3 alternative in April through August and November and December but are reduced in September and October. The reduction in exports in September and October under the H3 alternative corresponds to decreased Sacramento River flows at Freeport from 6,916 cfs to 6,058 cfs during the same period, as shown on Figure 11 [See Exhibit 10 of ATT 2].	
610-102	[ATT 2:] I also compared the No Action Alternative and Boundary 1 alternative for June 1991. Again, I found that shifting export patterns resulted in periods with lower flows, which were associated with an increase in SRFEs [Significant reverse flow Events]. Figure 12 [See Exhibit 12 of ATT 2] shows the total exports for these two alternatives and indicates a shift in the timing and quantity of exports under the project alternative relative to the No Action Alternative. In this case, the Boundary 1 project alternative shows significantly increased exports in March through May, relative to the No Action Alternative, along with smaller increases in September through December, coupled with corresponding decreases in June, July, and August. This corresponds to a decrease in Sacramento River flows in June, July, and August as shown in Figure 13 [See	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	Exhibit 13 of ATT 2]. The reduced flows associated with shifting export patterns in June 1991 result in increased SRFEs. Figure 14 [See Exhibit 14 of ATT 2] shows the DSM2 velocity output for June 1991 for the No Action Alternative and the Boundary 1 project alternative. Figure 14 shows that operating WaterFix to the Boundary 1 alternative caused SRFEs to increase from 4 to 12 during June 1991, compared to the No Action Alternative. Stated another way, 8 new SRFEs occurred in June 1991 that would not occur in the absence of the WaterFix Project.	
610-103	[ATT 2:] These examples from 1977 and 1991 show how the operational flexibility that Petitioners seek through the WaterFix Project will allow them to shift the timing of exports, which will cause lower Sacramento River flows at certain times, resulting in more SRFEs [significant reverse flow events] at those times than would have occurred without the WaterFix Project. More broadly, the examples show the importance of looking beyond raw SRFE totals aggregated over many years to understand how WaterFix Project will impact the Freeport Project.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR. A complete description of the hydrologic modeling undertaken for the Delta Conveyance Project environmental analysis is provided in Appendix 5A, Modeling Technical Appendix, which describes the use of CalSim 3 to model alternatives.
610-104	[ATT 2:] D. My Results are Consistent with Previous Modeling Efforts by DWR and Independent Modelers that Concluded the North Delta Diversion Will Impact Significant Reverse Flow Events at Freeport. The modeling that Petitioners released in May 2016 for this water rights hearing is not the first time that a project very similar to WaterFix has been modeled. In fact, DWR simulated the operation of three new intakes of the same capacity, in the same location, with the same or similar set of assumed bypass flow criteria and other operational limitations used in the	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	WaterFix Project modeling in 2013 when it performed CalSim-II and DSM2 modeling of the Bay-Delta Conservation Plan ("BDCP"). The key difference between the BDCP and the WaterFix Project is that the former project included a suite of environmental measures including tidal marsh restoration that are not included in the WaterFix Project.	
610-105	[ATT 2:] In 2014, EBMUD [east bay municipal utility district] analyzed DWR's DSM2 modeling of the BDCP [Bay Delta Conservation Plan] to determine whether the BDCP would increase SRFEs [significant reverse flow events].[Footnote 10: See Exhibit EBMUD-176 (July 28, 2014 comment letter on the BDCP Draft EIS/EIR.] That analysis showed that 25,000 acres of tidal marsh restoration would reduce reverse flows at Freeport, even in conjunction with the new north Delta intakes. However, that analysis also showed that building new intake tunnels without tidal marsh restoration – as Petitioners now propose to do through the WaterFix Project – would increase SRFEs at Freeport. The results of EBMUD's analysis of DWR's modeling are presented in Table 5 [See Exhibit 19 of ATT 2].[Footnote 11: This table is taken from Exhibit EBMUD-176, page 176.] Those results show the BDCP, including tidal marsh restoration, would significantly reduce the number of SRFEs at Freeport – from 70 to 14, or from 178 to 21, depending on which planning horizon and associated climate change and sea level rise assumptions were simulated.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-106	[ATT 2:] A related modeling effort was made by MBK Engineers and Daniel B. Steiner. MBK and Steiner removed climate change and sea-level rise assumptions from the BDCP [Bay Delta Conservation Plan] CalSim-II modeling and modeled the new Delta tunnels with and without tidal marsh restoration. EBMUD	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	[east bay municipal utility district] then conducted DSM2 modeling of MBK and Steiner's CalSim-II model results, and analyzed those DSM2 results to identify how SRFEs [Significant reverse flow Events] are affected by the respective effects of tidal marsh restoration and the new Delta tunnels. Table 6 [See Exhibit 20 of ATT 2] shows the results of EBMUD's DSM2 modeling and analysis.[Footnote 12: This table is taken from Exhibit EBMUD-176, page 177.] I draw two conclusions from Table 6. First, the north Delta diversion and the tidal marsh proposed in the BDCP, when constructed together, would result in a net reduction in SRFEs at Freeport. Second, in the absence of tidal marsh restoration, operation of new north Delta intakes would incrementally increase SRFEs from 55 to 64 over a modeled 16-year period. In other words, the BDCP without restoration would cause SRFEs to increase, which is generally consistent with the results of my analysis of the WaterFix Project.	
610-107	[ATT 2:] V. MODEL LIMITATIONS AND UNCERTANTIES My analysis demonstrates that the WaterFix Project will likely cause an increase in the frequency and duration of SRFEs, especially in critical drought months. Although my analysis relies on Petitioners' CalSim-II and DSM2 results, I conclude the WaterFix Project may cause greater SRFE [significant reverse flow events] impacts than Petitioners' modeling predicts - even after correcting for DSM2's systematic under-prediction bias of reverse flows. This section of my testimony explains the basis for my opinion.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR. A complete description of the hydrologic modeling undertaken for the Delta Conveyance Project environmental analysis is provided in Appendix 5A, Modeling Technical Appendix, which describes the use of CalSim 3 to model alternatives.
610-108	[ATT 2:] A. Petitioners' Chosen Modeling Methods Do Not Sufficiently Capture Relatively Rare Events Such as Significant Reverse Flow	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	Events. CalSim-II is a planning model that operates in broad terms of spatial discretization or coarse terms in temporal discretization. Such planning models tend to perform poorly in capturing relatively atypical or rare events. SRFEs [significant reverse flow event] are by definition rare events, and thus, not identified well from CalSim-II modeling. However, CalSim-II is also foundational, meaning that much of the other modeling for the WaterFix Project is tiered from or built upon the CalSim-II results, as is the case for the DSM2 model. DSM2 provides model output of velocity on a 15-minute time step, which allows SRFEs to be directly analyzed where daily averaged results or monthly results would be insufficient. To perform this analysis, however, CalSim-II and temporal downscaling techniques are required to map monthly conditions to the temporal scale required for the DSM2 model simulation. Accordingly, the analysis of 15-minute velocity output from DSM2, even in a comparative sense, is necessarily limited because the CalSim-II monthly results are a significant factor in assigning boundary conditions to the DSM2 model.	A complete description of the hydrologic modeling undertaken for the Delta Conveyance Project environmental analysis is provided in Appendix 5A, Modeling Technical Appendix, which describes the use of CalSim 3 to model alternatives.
610-109	[ATT 2:] B. DSM2 Insufficiently Modeled Reverse Flows Because of Inherent Model Limitations, and the Model Was Inadequately Modified to Properly Represent the Proposed Project Changes. DSM2 is not the best available tool to analyze reverse flow impacts. DSM2 is a one-dimensional hydrodynamic model of flow, velocity, stage, and electric conductivity. The single linear dimension does not accurately represent the complexity of hydrodynamic alterations due to the three proposed north Delta intakes on the Sacramento River. Two- or three-	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR. Please see response to comment 610-82 regarding the hydrologic and water quality modeling tools used in the Delta Conveyance Draft EIR.

Letter-Comment Number	Comment	Response
	dimensional modeling of this region of the Sacramento River would provide a clearer picture of the WaterFix Project's impacts, including effects on hydrodynamics and specifically reverse flows and velocity.	
610-110	[ATT 2:] Petitioners also failed to modify DSM2 cross-sections to represent physical changes to the river channel cross-sections that are proposed as part of the WaterFix Project. For example, Petitioners did not modify DSM2 to account for the modifications to levees and to represent the intake structures. Petitioners also failed to modify roughness coefficients to represent the reduction in roughness expected to result from replacing levees with massive fish screen intakes. Those changes – the physical modifications and the reduced roughness – would tend to increase velocity of reverse flow events. This increase is not captured in Petitioners' modeling.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-111	[ATT 2:] C. The CalSim-II and DSM2 Models Are Unable to Account for the Broad Range of Operational Flexibility Afforded by the WaterFix Project. Petitioners modeled four project alternatives, which they claim represent the full range of reasonably foreseeable operational possibilities. Those four alternatives – H3, H4, Boundary 1, and Boundary 2 – each contain operational assumptions. Essentially, those assumptions define the outer limits of the modeled domain and constrain the results of Petitioners' modeling. That constraint would not be objectionable if the modeled scenarios truly represented the full range of plausible operational scenarios. However, each of Petitioners' modeled alternatives assumes an unwarranted and artificial degree of constraint on the project operators' ability to release water	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	from storage during summer and fall. In fact, Petitioners' modeling does not reflect the full extent of operational flexibility afforded by the WaterFix Project, which would enable operators to move stored water through the Delta while meeting all flow criteria and water quality objectives to an extent that is currently not possible. For a detailed discussion of this issue, see the testimony of Walter Bourez of MBK Engineers, which the Sacramento Valley Water Users have submitted into the record for this water rights hearing. Mr. Bourez's conclusions have important implications for SRFEs [significant reverse flow event] at Freeport. The WaterFix Project can be operated to "shift" the timing of exports to a greater degree than is revealed by Petitioners' modeling. If those shifts are more pronounced, they would be accompanied by periods of lower flows than previously understood. In turn, those lower flows would generally be expected to increase the frequency and duration of SRFEs – as discussed in Section IV.C [comments 96 through 102] of my testimony above.	
610-112	[ATT 2:] Petitioners' modeling also does not account for temporary urgency change petitions and orders. The recent drought showed that Petitioners seek and obtain temporary urgency changes. Temporary urgency changes are not represented in Petitioners' modeling, and if allowed in the future, they could cause lower flows on the Sacramento River than simulated by Petitioners' CalSim-II modeling. Finally, without an operations plan and only the proposed north Delta bypass flow criteria, limited information is available to assess intake impacts during real-time operations when reverse flows will need to be addressed.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and regarding reverse flows. Please refer to Common Response 3, Alternatives Development and Description, regarding dry conditions and temporary urgency change petitions.

Letter-Comment Number	Comment	Response
610-113	[ATT 2:] D. Petitioners' Brief 16-Year Simulation Period Excludes Several Significant Low-Flow Events and Therefore Limits the DSM2 Modeling's Usefulness in Understanding How the WaterFix Project Will Impact Reverse Flows. Petitioners' DSM2 model results are unnecessarily limited by Petitioners' choice of a 16-year simulation period. That 16-year period excludes several significant simulated low-flow months in which SRFEs would be expected to occur, as inferred from the 82-year CalSim-II simulation. My analysis demonstrates that most low-flow instances occur in the fall, before the onset of winter storm events, and typically in months near the end of drought periods. For example, close inspection of the CalSim-II monthly average flow results at Freeport reveals that the lowest monthly average flows – close to or below 6,000 cfs – occurred in September and October 1934 and May 1977, and the lowest monthly average flow at Freeport simulated over all four project alternatives was the Boundary 2 simulation, which identified a flow of only 5,121 cfs in November 1992. However, among the four months highlighted above from 1934, 1977 and 1992, only one of those months – May 1977 – is included in the DSM2 modeled period, and this month shows an increase in flows under the project alternatives.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR. Please see response to comment 610-82 regarding the hydrologic and water quality modeling tools used in the Delta Conveyance Draft EIR.
610-114	[ATT 2;] VI. PROPOSED PERMIT TERMS OR CONDITIONS In this section, I propose a few possible ways to alleviate the WaterFix Project's potential to impact the Freeport Project's intake operations. This section is not intended to be an exhaustive set of options; rather, it is presented merely to demonstrate that there are alternatives not addressed by	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.

Letter-Comment Number	Comment	Response
	Petitioners that could reduce the WaterFix Project's impact on EBMUD [East Bay Municipal Utility District] and SCWA [Sacramento County Water Agency].	
610-115	[ATT 2:] A. Require Adequate Tidal Marsh Restoration to Mitigate the WaterFix Project's Impact on Significant Reverse Flow Events at Freeport. Petitioners' water rights permits could be conditioned on Petitioners' construction of tidal marsh in a quantity and at a location that is demonstrated by modeling to be sufficient to completely prevent the anticipated increase in SRFEs [significant reverse flow event] at the Freeport Project intake. The Bay-Delta Conservation Plan ("BDCP") modeling studies show that construction of a sufficient acreage of tidal marsh will mitigate the potential reverse flow effects on the Sacramento River near Freeport. Petitioners' BDCP Early Long Term ("ELT") simulations analyzed the impact of 25,000 acres of tidal marsh restoration. Restoration on that scale was effective in significantly reducing reverse flows on the Sacramento River. Table 6 [See exhibit 20 of ATT 2] quantifies the dramatic impact of large-scale tidal marsh restoration. A smaller-scale restoration project may be sufficient to prevent the WaterFix Project from causing SRFE impacts. However, additional studies would be needed to optimize the acreage and location of a sufficient tidal marsh restoration project.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-116	[ATT 2:] B. Require New or Enhanced Bypass Flow Criteria to Ensure that Freshwater Flows are Sufficient to Mitigate the WaterFix Project's Impact on Significant Reverse Flow Events at Freeport.	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and reverse flow events north of the proposed intakes.

Letter-Comment Number	Comment	Response
	A minimum flow criterion at Freeport could be placed into Petitioners' water rights permits that is sufficient to prevent an increase in SRFEs [significant reverse flow event] at Freeport. However, a singular flow prescription would likely be too rigid a requirement, as there should be some consideration for environmental conditions such as the natural tidal cycle. Alternatively, Petitioners' proposed north Delta bypass flow criteria could be modified such to ensure that minimum flows downstream of the new north Delta intakes remain sufficient to dampen tidal effects further upstream on the Sacramento River. Additional studies would be needed to develop a Freeport bypass flow requirement that is sufficiently protective to eliminate any increase in SRFEs while maintaining the greatest possible degree of flexibility for the WaterFix Project. Specifically, analysis would be needed to assess which flows are required under different tidal conditions and for different Delta Cross Channel operations.	
610-117	[ATT 2:] C. Require Petitioners to Provide Additional Water to Compensate for Impacts from Significant Reverse Flows Events at Freeport. Petitioners' permits could be conditioned to require Petitioners to provide additional water to EBMUD [East Bay Municipal Utility District] or SCWA [Sacramento County Water Agency], as applicable, when SRFEs [significant reverse flow event] occur. This "make-up" water would then be made available later in the contract year. This would incentivize project operators to adaptively manage the SWP and CVP projects to minimize SRFEs, and when unavoidable, provide for and coordinate the delivery of make-up water to compensate for lost supplies when the Freeport Project intake is shut down. Project	This is a comment on the Bay Delta Conservation Plan/California WaterFix project. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR and reverse flow events north of the proposed intakes.

Letter-Comment Number	Comment	Response
	operators are skilled and experienced in managing the projects under real-time conditions. Project operators would likely be able to adaptively manage the system to minimize SRFEs and consider the tradeoff between shifting diversion patterns against the risk of necessarily providing make-up water supplies if offsets in diversions are necessary at other times of the year.	
610-118	[ATT 2:] VII. CONCLUSION The WaterFix Project, as currently proposed, would increase the frequency and duration, and impact the timing, of SRFEs [significant reverse flow event] at Freeport Project intake, which will require additional shutdowns.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows.
610-119	[ATT 2:] However, protective terms and conditions could be included in Petitioners' water rights to mitigate SRFE [significant reverse flow event]-related impacts	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows.
610-120	[Exhibit 1 of ATT 2: Tidal Characteristics with Freeport Gage Discharge, April 19-21, 2015]	This attachment is used in support of comments submitted by the commenter on the 2015 Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft Environmental Impact Report/Environmental Impact Statement. Thus, the attachment and comments do not directly address the Delta Conveyance Project or the Draft EIR and DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comments provided by the commenter and provided responses where comments may still be applicable to the proposed Delta Conveyance Project. Please also see response to comment 610-69.
610-121	[Exhibit 2 of ATT 2: Map Showing Approximate Locations of Freeport Regional Water Project Intake Facility in Relation to Sacramento Regional County Sanitation District and Proposed Intakes for California water fix]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
610-122	[Exhibit 3 of ATT 2: Graphical representation of reverse water flow event criteria for Freeport Regional Water Project]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-123	[Exhibit 4 of ATT 2: Graph showing historical significant reverse flow events meeting or exceeding advective transport distance criteria, aggregated by month -- January 1, 1987 through January 14, 2016	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-124	[Exhibit 5 of ATT 2: Calculated monthly average flow and corresponding number of reverse flow events that meet or exceed advective transport distance criteria, aggregated by month -- January 1, 1987 through January 14, 2016]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-125	[Exhibit 6 of ATT 2: Freeport Gage Velocity with DSM2 Historical Simulated Velocity at Freeport Project Intake, (a) May 1991 and (b) November 1992.]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-126	[Exhibit 7 of ATT 2: Freeport Gage Velocity with DSM2 Historical Simulated Velocity at Freeport Project Intake and DSM2 Velocity with -0.230 ft/sec Bias Correction Offset, Feb. 9 - 27, 1991.	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-127	[Exhibit 8 of ATT 2: Significant Reverse Flow Events from Petitioner's Bias Corrected DSM2 Simulation of WYs 1976-1991 Aggregated by Month.]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-128	[Exhibit 9 of ATT 2: DSM2 Simulated Velocity at Freeport Intake, September 1977]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-129	[Exhibit 10 of ATT 2: Total Exports for NAA and H3 Project Alternative, October 1976 - December 1977.]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-130	[Exhibit 11 of ATT 2: Sacramento River Flow Downstream of FRWP Intake for NAA and H3 Project Alternative, October 1977 - December 1977.]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
610-131	[Exhibit 12 of ATT 2: Total Exports for NAA and Boundary 1 Project Alternative, October 1990 - December 1991]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-132	[Exhibit 13 of ATT 2: Sacramento River Flow Downstream of FRWP Intake for NAA and Boundary 1 Scenarios, October 1990 - September 1991.]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-133	[Exhibit 14 of ATT 2: DSM2 Simulated Velocity at Freeport Intake, June 1990 for (a) NAA (N=4) and (b) Boundary 1 Project Alternative (N=12).]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-134	[Exhibit 15 of ATT 2: Table titled "Project Effect Frequency Analysis on Low Monthly Flows at Freeport Applying the Monthly Flow Criteria (MFC)".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-135	[Exhibit 16 of ATT 2: Table titled "Significant Reverse Flow Events for California WaterFix Water Rights Hearing Modeling Studies".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-136	[Exhibit 17 of ATT 2: Table titled "Significant Reverse Flow Events for California WaterFix Water Rights Hearing Modeling Studies from Bias Corrected DSM2 Output".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-137	[Exhibit 18 of ATT 2: Table titled "DSM2 Bias Corrected Output Showing Months where Project Cases Increase the Frequency of Reverse Flow Events with Corresponding Monthly Flow Output from CalSim-II, Early Long-Term".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-138	[Exhibit 19 of ATT 2: Table titled "Significant Reverse Flow Analysis of BDCP Project Simulations Excerpted from page 171 of EBMUD's Comment Letter to the BDCP Dated July 28, 2014".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-139	[Exhibit 20 of ATT 2: Table titled "Independent Outside Modeling of NAA and Project Alternative 4A with and without Tidal-Marsh Restoration Excerpted from page 172 of EBMUD's Comment Letter to the BDCP Dated July 28, 2014".]	Please see response to comment 610-120 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
610-140	[ATT 3:] BEFORE THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD HEARING ON THE MATTER OF CALIFORNIA DEPARTMENT OF WATER RESOURCES AND UNITED STATES BUREAU OF RECLAMATION REQUEST FOR A CHANGE IN POINT OF DIVERSION FOR CALIFORNIA WATER FIX. TESTIMONY OF FORREST W. WILLIAMS, JR.	This comment was submitted on the Bay Delta Conservation Plan/California WaterFix project. Thus, the comment does not directly address the Delta Conveyance Project Draft EIR and DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comment's content to determine whether the comment may be applicable to the proposed Delta Conveyance Project. Here, the comment is not applicable to the Delta Conveyance Project Draft EIR; therefore, no further response is provided. Please see response to comment 610-69 regarding the applicability of this comment to the Delta Conveyance Project Draft EIR.
610-141	[ATT 3:] I. INTRODUCTION My name is Forrest W. Williams Jr. , and I currently serve as a Senior Civil Engineer for Sacramento County Department of Water Resources. I am a licensed civil engineer with the State of California, and I have been a Sacramento County Department of Water Resources employee for over twenty (20) years. During that time, I have worked in Drainage Design, Water Supply Planning and Development, Water Supply Regional Projects, and the Water Supply Regulatory Group. As a Senior Civil Engineer for the County for the last eight (8) years, and for twelve (12) years prior to that as an Assistant then Associate Civil Engineer, I have focused on water supply planning, acquisition, permitting, infrastructure, operation and maintenance issues for Sacramento County Water Agency (SCWA). Sacramento County Department of Water Resources employees are the employees for the SCWA, a dependent special district established in 1952 by the Sacramento County Water Agency Act (See Water Code App. Chapter 66, commencing at section 66-1 et seq.) I am responsible for SCWA's groundwater and surface water regulatory programs,	Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	in addition to all water conservation programs, recycled water program administration, and water supply contract reporting to the State Water Resources Control Board. I also serve as an Alternate Board Member for the Sacramento Central Groundwater Authority. Over the course of my career, I have gained a great deal of experience relative to water supply reliability, surface water rights, CVP supplies and groundwater supplies. In addition to my role with SCWA, I serve as the Program Manager for the Freeport Regional Water Authority (FRWA) Joint Powers Authority. FRWA was created in 2002 between SCWA and East Bay Municipal Utility District (EBMUD) to guide the financing, ownership, development, construction, and operation of the Freeport Regional Water Project (FRWP). FRWP is a cooperative effort of SCWA and EBMUD to supply surface water from the Sacramento River to customers in central Sacramento County and the East Bay area of California via a water intake facility and pumping plant on the Sacramento River at the Freeport Bend, approximately ten (10) miles south of downtown Sacramento. In my role as Program Manager for FRWA, I plan and direct all activities of FRWA, authorize expenditures, have charge of and handle any property of FRWA, assign and control activities of employees assigned to FRWA, and report to the FRWA Executive Committee and FRWA Board. In my capacity as Program Manager, I am familiar with the operation of the FRWA Intake and the effect of reverse flows on the operation of the intake on behalf of SCWA. I have also previously served as the Chair of the FRWA Operations and Maintenance Committee. Exhibit SCWA-32 contains a true and correct copy of my resume.	

Letter-Comment Number	Comment	Response
610-142	[ATT 3:] II. PURPOSE AND SUMMARY OF TESTIMONY This testimony relates to the Testimonies of Eileen White, Manager of Water Operations, and Ben Bray, Senior Civil Engineer from EBMUD [East Bay Municipal Utility District] (See Exhibits EBMUD-151, 152 [not included in ATT 3]) and provides evidence illustrating the impacts to SCWA [Sacramento County Water Agency] from reverse flow events exceeding certain operational criteria at the FRWP intake that cause shutdown of that facility. California Water Fix (WaterFix) project-related increases to potential reverse flow events that may require shutdown of the FRWP [Freeport Regional Water Project] intake cause project-related injuries to SCWA, a legal user of water.	Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-143	[ATT 3:] This testimony also provides notice that I contributed to the development of the testimony of Michael E. Peterson, Exhibit SCWA-19.	Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-144	[ATT 3:] Ill. FREEPORT REGIONAL WATER PROJECT SCWA [Sacramento County Water Agency] relies on the FRWP [Freeport Regional Water Project] facilities to divert water from the Sacramento River to provide surface water supplies and fulfill SCWA's conjunctive use program. The FRWP facilities are designed to meet SCWA customer needs on a year-round basis. The FRWP is a critical element in SCWA's water supply portfolio and represents a long-term, significant investment by SCWA for surface supply capabilities and a robust conjunctive use program.	This comment summarizes the purpose of the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
610-145	[ATT 3:] FRWA [Freeport Regional Water Agency] and FRWP [Freeport Regional Water Project] were a project born out of previous litigation regarding the American River and dry year water supply contracts. In 1970, EBMUD [East Bay Municipal Utility District] executed a Central Valley Project (CVP) water service contract with the United States Bureau of Reclamation (USBR) for up to 150,000 acre-feet per year of water from the American River delivered via the Folsom South Canal. A lawsuit filed in 1972 delayed construction of necessary facilities. The litigation continued for almost two decades and concluded in 1990 when Judge Hodge of the Alameda County Superior Court affirmed EBMUD's right to receive American River water through the Folsom South Canal while limiting diversions during dry conditions to protect fishery resources. EBMUD, USBR, and SCWA eventually agreed to move EBMUD's diversion point downstream to a location on the Sacramento River near the town of Freeport. Accordingly, SCWA sought changes in its water supply contracts and its appropriative right to include the FRWP as a point of diversion. SCWA [Sacramento County Water Agency] amended its CVP contract with USBR in 2001 authorizing delivery of CVP water at the FRWP intake; around the same time, the FRWP intake was included as a point of diversion for its appropriative water right.	This comment summarizes historical events around the development of the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-146	[ATT 3:] In 2002, SCWA [Sacramento County Water Agency] and EBMUD [East Bay Municipal Utility District] formed a joint powers authority, FRWA [Freeport Regional Water Agency], to build and operate the FRWP [Freeport Regional Water Project]. The details of the formation of FRWA are documented in the Third Amended Joint Powers Agreement Between Sacramento County Water Agency and East Bay Municipal Utilities District	This comment summarizes historical events around the development of the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	(Third Amended JPA). Exhibit SCWA-12 [not included in ATT 3] contains a true and correct copy of the Third Amended JPA. In addition to the Third Amended JPA, the Agreement for Delivery of Water (Delivery Agreement) further defines FRWA's responsibilities to deliver water to SCWA and EBMUD. Exhibit SCWA-33 [not included in ATT 3] contains a true and correct copy of the Delivery Agreement. The FRWP was completed in 2011. SCWA spent nearly $500 million on its portion of the project, including its Vineyard Surface Water Treatment Plant (VSWTP). The FRWP intake can divert 185 million gallons per day (MGD), of which 85 MGD is dedicated to SCWA and 100 MGD to EBMUD.	
610-147	[ATT 3:] As shown on Appendix A to Exhibit SCWA-39, which is a true and correct copy of Agreement for Provision of Operation and Maintenance Services: The Freeport Authority Intake and Pipeline (FRWA O&M [Freeport Regional Water Agency Operations & Management] Agreement), FRWA diverts water from the Sacramento River and conveys it to the SCWA [Sacramento County Water Agency] and EBMUD [East Bay Municipal Utility District] service areas using the following facilities: • A water intake/pumping plant located on the Sacramento River at the Freeport bend • An 84-inch joint pipeline from the river intake to the bifurcation point • Bifurcation facility (isolation valve vaults, surge control, etc.) • A flow control structure • A 72-inch EBMUD extension pipeline from the bifurcation point to the Folsom South Canal • A 66-inch SCWA extension pipeline (Gerber Pipeline) from the bifurcation point to SCWA's VSWTP [Vineyard Surface	This comment summarizes historical events around the development of the Freeport Regional Water Project (FRWP) as well as technical specifications pertaining to the FRWP and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	Water Treatment Plant] • A terminal weir structure, located at the intersection of the 72-inch EBMUD extension pipeline and the Folsom South Canal • A pipeline extending from the Folsom South Canal terminus to EBMUD's Mokelumne River Aqueducts	
610-148	[ATT 3:] The river intake/pumping plant, 84-inch joint pipeline, bifurcation facility and flow control structure are owned by FRWA [Freeport Regional Water Agency]. The 72-inch EBMUD East Bay Municipal Utility District] extension pipeline and terminal weir structure are solely owned by EBMUD. Similarly, the 66-inch SCWA extension pipeline is solely owned by SCWA [Sacramento County Water Agency].	This comment summarizes technical specifications pertaining to the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-149	[ATT 3:] The raw water intake and pumping facility is located on the Sacramento River at the Freeport Bend. Water is diverted from the river through fish screens and pumped into the raw water pipeline. This is the only pump station serving the joint pipeline. Eight identical vertical turbine raw water pumps are driven by four adjustable frequency drives to generate flows between 15 and 185 MGD. Each pump is rated for a nominal capacity of 26.5 MGD at 285 feet of head, and its 36-inch, above grade discharge head is connected to a 2,000 horsepower motor. The pumps draw Sacramento River water and send it through the 84-inch pipe to the bifurcation facility. At the bifurcation point, water can be directed towards the VSWTP [Vineyard Surface Water Treatment Plant] or to EBMUD's [East Bay Municipal Utility District] turnout on the Folsom South Canal.	This comment summarizes technical specifications pertaining to the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-150	[ATT 3:] From the bifurcation point, water serving SCWA [Sacramento County Water Agency] is conveyed through the following	This comment summarizes technical specifications pertaining to the Freeport Regional Water Project and does not contain a comment related

Letter-Comment Number	Comment	Response
	facilities: • Gerber Pipeline: The Gerber Pipeline is a 66-inch diameter cement mortar lined and welded steel pipe. The pipeline is located in Sacramento County and starts at the bifurcation area and extends north along a dedicated easement to the VSWTP [Vineyard Surface Water Treatment Plant], north of Florin Road. • VSWTP: The VSWTP is a conventional treatment plant and includes flash mixing/coagulation, sedimentation, filtration, washwater recovery, and sludge dewatering facilities. The facility also includes a CT (concentration time) tank, clear well and chemical feed systems necessary to treat and distribute potable water.	to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-151	[ATT 3:] The FRWA [Freeport Regional Water Agency] pumps can supply raw water to solely the VSWTP [Vineyard Surface Water Treatment Plant] or the EBMUD [Easy Bay Municipal Utility District] bifurcation point, or to both facilities at the same time. Pump controls are utilized to regulate pump discharge-based operator inputs: flow rate, destination, and start time. Automatic controls are used to assess and address adverse river conditions, such as tidally-influenced reverse and low flows. Under specific river conditions, the automatic controls may drive a shutdown of the intake.	This comment summarizes technical specifications pertaining to the Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-152	[ATT 3:] IV. SURFACE WATER RIGHTS USED AT FREEPORT Over the last decade SCWA [Sacramento County Water Agency] has invested in multiple sources of surface water to divert through FRWA [Freeport Regional Water Agency] at the FRWP [Freeport Regional Water Project], to supplement groundwater and maintain a diverse and reliable water supply	This comment summarizes surface water rights used at Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	portfolio for SCWA customers. Information about these supplies is summarized in the following table [see exhibit 1 of ATT 3], and more detailed information is provided in the Testimony of Michael Peterson (Exhibit SCWA-19) [not included with ATT 3].	
610-153	[Exhibit 1 of ATT 3: Sacramento County Water Agency water contracts/rights and related information. Originally pulled from the Testimony of Michael Peterson (Exhibit SCWA-19).]	This comment summarizes contracts and water rights used at Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-154	[ATT 3:] As summarized above [in Exhibit 1 of ATT 3], SCWA [Sacramento County Water Agency] diverts water at the FRWP [Freeport Regional Water Project] intake under an appropriative water right, contract rights for Central Valley Project (CVP) water, and a contract for delivery of remediated groundwater. SCWA's appropriative right, Permit 21209, entitles it to up to 71,000 acre-feet annually (afa) of water from the Sacramento River, which can be diverted at a rate of 132 cubic feet per second. (Exhibit SCWA-20, contains a true and correct copy of Permit No. 21209.) The priority date associated with this right is June 13, 1995. (Id.)	This comment summarizes diversions, contracts and water rights for Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-155	[ATT 3:] SCWA [Sacramento County Water Agency] has also entered into contracts with the Bureau of Reclamation (Bureau) and other water users for water provided by the Central Valley Project (CVP). In 1999, SCWA entered into a contract with the Bureau for 22,000 afa. (Exhibit SCWA-14 [not included with ATT 3], contains a true and correct copy of Contract No. 6-07-	This comment summarizes diversions, contracts and water rights for Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling

Letter-Comment Number	Comment	Response
	20-W1372.) This contract is known as the "Fazio Water" contact in recognition of Congressman Vic Fazio's efforts to secure the contract. Of the 22,000 afa, 7,000 afa has been subcontracted to the City of Folsom for diversion from Folsom Lake. Thus, 15,000 afa is available for SCWA to divert from the Sacramento River. (Exhibit SCWA-15 [not included with ATT 3] contains a true and correct copy of the CVP Subcontract with City of Folsom.) SCWA holds a second CVP contract resulting from an assignment from the Sacramento Municipal Utility District (SMUD). This CVP contract provides for delivery of 30,000 afa from the American River Division. (Exhibits SCWA-16 and SCWA-17 [not included with ATT 3] are true and correct copies of CVP Contract Nos. 14-06-200-5198B-IR1 and 14-06-200-5198B-IR2).) In total, these three rights (appropriative and contract) entitle SCWA to divert up to 116,000 afa at the FRWP [Freeport Regional Water Project] intake.	simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-156	[ATT 3:] SCWA [Sacramento County Water Agency] has the right to receive a remediated groundwater supply of 8,900 afa in accordance with the terms and conditions in the agreement entitled "Agreement between Sacramento County, SCWA, and Aerojet-General Corporation With Respect To Transfer of GET Water" dated May 18, 2010. This Agreement is based on groundwater remediation activities conducted by Aerojet and Boeing/McDonnell Douglas in the eastern portion of Sacramento County for extraction and treatment of contaminated groundwater, and discharge of that water to surface streams including the American River and its tributary waters. (Exhibit SCWA-28 [not included with ATT 3] contains a true and correct copy of the SCWA-Aerojet Agreement.) Due to Aerojet's obligations pursuant to regulatory orders and	This comment summarizes contracts and agreements for Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	the terms of the County-SCWA-Aerojet- General Agreement; SCWA planning assumptions include receiving this 8,900 afa (calculated at the point(s) of discharge) for the foreseeable future. This supply is diverted by SCWA from the Sacramento River at Freeport after it is discharged into the American River or its tributaries. Aerojet supplies information on the daily discharge rates from the remediation facilities into the American River or its tributaries. SCWA accounts for a ten percent (10%) carriage loss at FRWP [Freeport Regional Water Project], and historically has diverted its Aerojet water at an approximately constant daily rate of the 8,900 afa minus carriage loss averaged over a year. (See Exhibit SCWA-35 [not included with ATT 3], which is a true and correct copy of SCWA's recent surface supply deliveries.) This amounts to a diversion rate of approximately 8 MGD each day of the year. In all other respects, SCWA diverts the Aerojet remediated groundwater in the same manner and at the same time as SCWA's surface water supplies. However, when other SCWA surface supplies are unavailable for diversion, SCWA continues to have the opportunity to divert Aerojet water.	
610-157	[ATT 3:] As discussed in the Testimony of Michael Peterson (Exhibit SCWA-19) [not included with ATT 3], SCWA [Sacramento County Water Agency] has developed a Water System Infrastructure Plan (Infrastructure Plan). The Infrastructure Plan was first created in 2006, and was updated in 2016. The 2016 Infrastructure Plan is the most current staff-level water system planning tool. In sum, in wet and average years, SCWA anticipates availability all of its 45,000 afa CVP contract supplies, an additional 35,000 afa in appropriative right supplies, and 8,900 afa of remediated groundwater supplies (less 10% carriage loss) for a total of approximately 88,900 afa	This comment summarizes contracts and agreements for Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California

Letter-Comment Number	Comment	Response
	of supply for diversion through the FRWP [Freeport Regional Water. (Exhibit SCWA-27 [not included with ATT 3] contains a true and correct copy of Figure 4-5, 2016 Infrastructure Plan.) In both dry and critically dry years, SCWA anticipates diverting water through the FRWP under its CVP and Aerojet contract rights. In dry years, SCWA anticipates that water is unavailable under Permit 21209, but does anticipate having between 33,750 and 22,500 afa of CVP water for diversion. (/d.) Additionally, SCWA anticipates having access to its Aerojet contract water supply. In critically dry years, SCWA anticipates CVP supplies will be reduced to approximately 22,500 afa and that it will have full access to its remediated groundwater supply.	WaterFix project.
610-158	[ATT 3:] In years when appropriative supplies are unavailable to SCWA [Sacramento County Water Agency] and CVP contract water is restricted, SCWA anticipates relying heavily on the 8,900 afa (less carriage loss) of remediated water for diversion at FRWP. This source of water is not subject to any cutbacks or restrictions, aside from operational issues that may arise with the Aerojet remediation facilities.	This comment summarizes contracts and agreements for Freeport Regional Water Project and does not contain a comment related to a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project.
610-159	[ATT 3:] V. OPERATIONAL CONSTRAINTS- REGULATORY REQUIREMENTS IMPACTING FRWP The FRWP's [Freeport Regional Water Project] location was chosen for its deep water, available land, and desirable	As described in Appendix 5A, Modeling Technical Appendix, the Lower Mokelumne River Module used in the CalSim 3 hydrologic modeling simulates diversion by EBMUD as part of the Freeport Regional Water Project. Please see response to comment 610-69 regarding comments submitted

Letter-Comment Number	Comment	Response
	location downstream from the confluence with the American River. Most importantly, the chosen site is located upstream of Sacramento Regional County Sanitation District's ("Regional San") wastewater treatment plant discharge facility. The FRWA [Freeport Regional Water agency] intake, located at river mile 47.1, can be impacted by wastewater treatment plant discharges at Sacramento River Mile 46. To ensure adequate water quality at the FRWP intake, SCWA entered into a Coordinated Operations Agreement (COA) with Regional San. The COA describes the coordination between FRWA, Regional San and SCWA. (See Exhibit SCWA-37 [not included with ATT 3], which contains a true and correct copy of the COA.) To prevent diversion of these discharges, the following operating requirement was incorporated into the FRWA control strategies and into the permit issued by the State Division of Drinking Water (DOW) (See Exhibit SCWA-36 [not included with ATT 3], which contains a true and correct copy of SCWA's DOW permit): • Diversions at FRWP cannot take place when treated effluent from the Sacramento Regional Wastewater Treatment Plant (SRWTP) may be present in the river at dilution ratio exceeding about 0.1 %. The FRWA control system calculates "particulate position" based on the velocity of the river (velocity x time = distance). The pumps will shut down when the "particle" has traveled 0.9 miles upstream of a flow sensor located between the FRWP Intake and the SRWTP and can resume pumping when the "particle" has returned to 0.7 miles upstream of the flow sensor located between the FRWP Intake and the SRWTP.	on the Bay Delta Conservation Plan/California WaterFix project and regarding potential reverse flow events north of the proposed intakes and proposed operations. As described in Chapter 3, Description of the Proposed Project and Alternatives, operation of the project includes sweeping velocity requirements which limit the diversions to times when velocity at the north Delta intakes is in the downstream to direction at 0.4 feet per second.

Letter-Comment Number	Comment	Response
610-160	[ATT 3:] VI. ANALYSIS OF REVERSE FLOW EVENT SHUT DOWN IMPACTS TO SCWA Sacramento River conditions and flows may influence the trigger of operational constraints, as described above, at the FRWP intake. These 'reverse flow events' may result in FRWP [Freeport Regional Water Project] shut downs that restrict SCWA's [Sacramento County Water Agency] use of its surface water supplies, and lead to extensive labor efforts cascading through the SCWA VSWTP [Vineyard Surface Water Treatment Plant] to appropriately shut down and restart the treatment process. In connection with the agencies' FRWA [Freeport Regional Water Agency] partnership, EBMUD [East Bay Municipal Utility District] conducted an extensive analysis of the California Water Fix (Water Fix) modeling being presented to the State Water Resources Control Board (SWRCB), relative to the potential for reverse flow event impacts to the FRWP intake. (See Exhibit EBMUD-152 [not included in ATT 3].) That analysis and its conclusions identify WaterFix project-related increases in the frequency and duration of reverse flow events in the Sacramento River that exceed the threshold criteria that require the FRWP intake facility to temporarily cease water diversions. The analysis concludes that implementation of the Cal WaterFix project will likely result in Sacramento River flow reductions in low flow periods, and that these incremental flow reductions, as compared to the No Action Alternative, result in more frequent reverse flow events that meet or exceed FRWP intake shutdown criteria. Increases in FRWP intake shut down events due to the WaterFix project would cause project-related	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.

Letter-Comment Number	Comment	Response
	injury to SCWA's use of its available water supplies. When the FRWP intake is shut down, SCWA is unable to divert its surface water supplies or contracted remediated groundwater.	
610-161	[ATT 3:] WaterFix project-related significant reverse flow events potentially causing shut down of the FRWP [Freeport Regional Water Project] intake in years with significantly low flows on the Sacramento River (typically occurring in dry year types) would affect SCWA's [Sacramento County Water Agency] dry and critically dry year surface water diversions generally limited to contractual supplies (i.e. a portion of SCWA's CVP contract supply and Aerojet remediated groundwater). Significant reverse flow events which cause shut down of the FRWP intake may require SCWA to shift to using its groundwater supplies. These shifts to the use of groundwater from the South American Subbasin could result in an unplanned use of groundwater that may disrupt SCWA's conjunctive use plans for groundwater from the South American Subbasin.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.
610-162	[ATT 3:] Further, increased FRWP [Freeport Regional Water Project] intake shut downs result in a loss of Aerojet remediated groundwater flowing past the FRWP intake and unavailable for capture and return to beneficial use in the South American Subbasin. Notwithstanding these additional losses to the basin, because SCWA's Sacramento County Water Agency's] historical daily Aerojet diversions have been limited to a daily averaged amount of its full annual contract right, increased shut down events that result in an inability to divert Aerojet water during the summer and fall months may cause SCWA to be unable to make the most complete use of its annual Aerojet contract amount after reverse flow event shut downs are over.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.

Letter-Comment Number	Comment	Response
	Further, to the extent that SCWA has built up its historical use of CVP water at build out, SCWA may lose the portion of its dry-year CVP supply that might otherwise be available for its diversion during the time that a similar shut down occurs.	
610-163	[ATT 3]: Aside from the loss of water supplies that occur with each reverse flow incident, SCWA [Sacramento County Water Agency] staff is required to undertake significant operational procedures in order to accommodate the shut down. In addition, upon a shut down of the FRWA [Freeport Regional Water Agency] intake there are cascading effects to the SCWA downstream infrastructure. Portions of the VSWTP [Vineyard Surface Water Treatment Plan] related to the raw water supply must be shut down including: raw water pumps, chemical feed systems, filtration systems and wash water return systems. This includes isolating associated valves, monitoring and disabling alarms and performing additional record keeping. Once the shutdown event at the FRWP is complete similar start up procedures would be undertaken to bring the VSWTP back online.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.
610-164	[ATT 3:] Aside from the actual shut down and restart process and its attendant labor and mechanical expense, operational planning for shut downs of the system create another burden. WaterFix project related increases in shut downs of the FRWP [Freeport Regional Water Project] intake and SCWA's [Sacramento County Water Agency] VSWTP [Vineyard Surface Water Treatment Plant] facilities may require change or retooling of the operations or supply plans during a dry year or dry periods to accommodate the increased operational and supply uncertainty. In addition to the additional staff time required to perform the shut down and restart process, essentially trained	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.

Letter-Comment Number	Comment	Response
	staff -on duty or on-call-must respond during reverse flow events, requiring an increased dedication of labor during such times.	
610-165	[ATT 3:] VII. CONCLUSION Reverse flow events requiring the shutdown of the FRWP [Freeport Regional Water Project] intake cause consequential effects to downstream SCWA [Sacramento County Water Agency] treatment and distribution facilities, resulting in increased labor and planning requirements. These events impact SCWA's use of surface water supply and thereby may also affect SCWA's implementation of its conjunctive use program, SCWA's use of groundwater, and SCWA's ability to return remediated groundwater back to beneficial use in the subbasin of its service area. In dry periods of dry and critically dry years, reverse flow events causing FRWP intake shut downs prevent SCWA from using its available CVP allocation and Aerojet remediated groundwater contract supply. WaterFix project-related increases in reverse flow events causing FRWP intake shut downs would result in project-related injuries to SCWA operations and use of its water supplies.	Please see response to comment 610-69 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project and regarding reverse flows and the Freeport Regional Water Project.
610-166	[ATT 3:] I declare under penalty of perjury under the laws of the State of California that the facts recited above are true and correct. Executed on this 31st day of August 2016 in Sacramento, California.	Please see response to comment 610-140 regarding comments and attachments submitted on the Bay Delta Conservation Plan/California WaterFix project..
610-167	[ATT 4: Report prepared by MBK Engineers titled "Delta Conveyance Project Modeling Review" dated December 16, 2022.]	The commenter provided this attachment for reference purposes in support of their comments. The report prepared by MBK Engineers titled, “Delta Conveyance Project Modeling Review” dated December 16, 2022, was submitted by multiple commenters. Rather than duplicate content, this attachment is included and responded to in letter 545. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms,

Letter-Comment Number	Comment	Response
		to locate responses to letter 545 contained in Chapter 4, Response to Comments Tables.
610-168	[ATT 1 of ATT 4: Walter Bourez, PE Resume]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-169	[ATT 2 of ATT 4: Lee Bergfeld, PE Resume]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-170	[ATT 3 of ATT 4: Daniel Easton, PE Resume]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-171	[ATT 4 of ATT 4: Gomathishankar Parvathinathan, PE, PhD Resume]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-172	[ATT 5:] Key Comments on Delta Conveyance Project Draft EIR Below are key comments on the Delta Conveyance Project Draft EIR; specific recommendations are provided in the Draft Technical Memorandum referenced in text as Attachment A [ATT1 of ATT5].	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-173	[ATT 5:] 1. The Draft EIR does not present impacts in standard formats, i.e., contour maps, hydrographs, or address impacts to all communities near the proposed intake locations.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, which discusses how the information in the EIR was presented in a way to adequately analyze impacts. Maps, figures, and graphics contained in chapters and appendices are designed to provide the level of detail appropriate to depict potential affects and orient readers to locational information and to accurately

Letter-Comment Number	Comment	Response
		present the effects of the conveyance facilities. Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding the modeling approach, and specifically Appendix 8A, Delta Groundwater Model: Development and Calibration, for discussion of hydrographic figures and hydrographic contours. Multiple chapters in the EIR evaluate potentially significant environmental impacts associated with the intake locations, including Chapter 17, Socioeconomics, and Chapter 29, Environmental Justice, both of which consider intake locations in the analysis.
610-174	[ATT 5:] 2. As a summary of LWA [Larry Walker Associates] findings, the effects of the project are anticipated to include: Reduction in groundwater recharge along the Sacramento River due to reduced river stage (Draft EIR Ch. 8, P. 8-9, lines 8-10)	This information summarizes a statement made in comment 610-37. The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-175	[ATT 5:] 2. As a summary of LWA [Larry Walker Associates] findings, the effects of the project are anticipated to include: Lowering of groundwater levels along the Sacramento River and in the vicinity of the intake locations due to dewatering wells and reduced river recharge	This information summarizes statement(s) made in responses to comments 610-202 and 610-203. The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-176	[ATT 5:] 2. As a summary of LWA [Larry Walker Associates] findings, the effects of the project are anticipated to include: Increasing well pumping lifts and energy costs; increased potential for shallow wells to go dry	This information summarizes statement(s) made in responses to comments 610-221, 610-225, and 610-226. The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-177	[ATT 5:] 2. As a summary of LWA [Larry Walker Associates] findings, the effects of the project are anticipated to include:	This information summarizes statement(s) made in response to comment 610-204. The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these

Letter-Comment Number	Comment	Response
	Decline in riparian ecosystems due to lowered groundwater elevations	responses to the commenter's letter.
610-178	[ATT 5:] Proposed intake locations are located in the North Delta GSA [Groundwater Sustainability Agency] along the Sacramento River upstream of the Mokelumne Confluence in the southern portion of the South American Subbasin (SASb). The SASb GSP [Groundwater Sustainability Plan] identifies this reach of the Sacramento River as interconnected surface water (ISW). This reach consistently loses water to groundwater during the baseline period between 1990-2018 (e.g., CoSANA model), and occurs in a wetland region of relatively shallow depth to groundwater (Attachment A Figure 2C [See Exhibit 3 of ATT 5]).	The commenter has provided information regarding the hydrology of the North Delta GSA, upstream of the Mokelumne Confluence. The comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-179	[ATT 5:] Diverting surface water in this reach [North Delta GSA along the Sacramento River upstream of the Mokelumne Confluence in the southern portion of the South American Subbasin] will potentially reduce river stage and change hydraulic gradients between surface water and groundwater, which could have detrimental effects on communities and agricultural and private users dependent on groundwater, as well as groundwater dependent ecosystems. See Attachment A [ATT1 of ATT5], Impacts on Interconnected Surface Water.	The DeltaGW model uses simulated stream stage to calculate stream gains and losses to the aquifer. In Chapter 8, Groundwater, Impact GW-1 was assessed using the simulated volumes of stream gains and losses under project alternatives. Recharge from the rivers to the neighboring subbasins is assessed under Impact GW-1. On average, the difference in stream-aquifer interaction between existing conditions and project alternatives is 0.62% or less. The greatest difference is 1.69%. The volumetric change in stream-aquifer interaction for each alternative is presented in Appendix 8B, Impact Analysis: Groundwater Model Results. Impact GW-2, which evaluates the changes groundwater elevations across the region, did not find any changes to groundwater flow gradients to the neighboring subbasins. The impact of reduced recharge to underlying groundwater basins are addressed in Chapter 8 under Impact GW-4. As described under Impact GW-4, under all project alternatives, there is a slight modeled increase in groundwater storage in the region. Please also see response to comment 610-36 which provides a discussion of CalSim modeling results which demonstrate that the project will not affect surface

Letter-Comment Number	Comment	Response
		water deliveries within the region of the South American Subbasin. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding a description and discussion of GDEs and SGMA. GDEs are not discussed in Chapter 8 because substantial changes in interconnected surface waters and groundwater elevation would not occur. The EIR addresses temporary and permanent impacts on GDEs as a result of other potential impact mechanisms by identifying and evaluating potential impacts on all natural systems and habitat supported by groundwater that could be impacted by the project in Chapter 13, Terrestrial Biological Resources. For example, groundwater-dependent ecosystems including tidal and nontidal perennial aquatic, tidal and nontidal freshwater emergent wetland, tidal brackish emergent marsh, valley/foothill riparian, alkaline seasonal wetland and vernal pool complex are evaluated in Impact BIO-1 through Impact BIO-8 in Chapter 13. Thresholds of significance for these and other sensitive resources are listed in the section titled Thresholds of Significance. Mitigation and avoidance and minimization measures are allocated in the following sections: Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources, describes the mitigation that would be implemented to offset impacts on these land cover types. Attachment 3F.1, Compensatory Mitigation Design Parameters, provides the design commitments and guidelines for compensatory mitigation of impacts. Avoidance and minimization measures that would apply during construction of the project (including but not limited to construction of the compensatory mitigation sites themselves) are contained in Appendix 3B, Environmental Commitments and Best Management Practices.
610-180	[ATT 5:] The Draft EIR states, “there would be less-than-significant impacts on the overall Sacramento River flows” when considering annual changes (Draft EIR Ch. 8, P. 8-33, lines 18-25). The effects of the project on ISW [interconnected surface	The assertion that the EIR does not adequately address impacts on interconnected surface waters is not consistent with the contents of the EIR. Chapter 5, Surface Water, provides the results of the hydrological assessment conducted for the proposed project and alternatives and concluded that neither the proposed project nor its alternatives would

Letter-Comment Number	Comment	Response
	water] have not been adequately determined in the EIR, which looks at water budgets for long stretches of the Sacramento River over annual periods (Draft EIR Ch. 8, P. 8B-11, line 22-24)— potentially missing spatially or temporally localized impacts.	change upstream hydrologic conditions when compared to existing conditions. Please also see response to comment 610-36, which provides a discussion of the CalSim modeling results that demonstrate that the project will not affect surface water deliveries within the region of the South American Subbasin. Please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The scale for the evaluation of interconnected surface waters is discussed in Common Response 10.
610-181	[ATT 5:] The Draft EIR states, "localized impacts [during project construction and maintenance] could affect water wells near the project sites," but doesn't quantitatively assess these water level and quality impacts and points to post-impact mitigation measures as a solution rather than identifying water wells of concern and preventative measures (Draft EIR Ch. 8, P. 8-1, lines 26-31).	Common Response 10, Surface Water Quality and Groundwater Resources, provides additional clarifying information regarding the methodology and information used to adequately and appropriately evaluate construction-related impacts described in Chapter 8, Groundwater. As described in Common Response 10 and Chapter 8 (in the section titled Methods for Analysis), the Delta Conveyance Project construction-related impacts are evaluated using existing groundwater conditions and hydrogeology, standard design and construction methods (Delta Conveyance Design and Construction Authority 2022c, 2022d), and anticipated changes in groundwater elevations, storage, and quality during construction. As described in Common Response 10, cutoff walls would be designed to applicable standards depending on the unique site-specific conditions and the location of the facility being constructed. Cutoff walls are designed and used to minimize need for dewatering and the movement of groundwater outside of the cutoff walls. Given this, and the other information provided in Common Response 10, construction would not result in substantial changes to groundwater levels or groundwater water quality.
610-182	[ATT 5:] Accurate location and screened depth of dewatering wells for intake construction or tunnel shaft construction are not	Dewatering activities are accurately characterized and described in the EIR. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, for a discussion regarding construction and dewatering

Letter-Comment Number	Comment	Response
	presented in the Draft EIR. The Draft EIR notes “dewatering could result in short-term lowered groundwater levels locally at neighboring supply wells,” but does not provide the necessary simulation results to demonstrate there would not be significant impacts (Draft EIR Ch. 8, P. 8-42, lines 25-27).	timeframes. Additional details can be found in the Engineering Project Reports associated with the project (Delta Conveyance Design and Construction Authority 2022c, 2022d). The Methods for Analysis section in Chapter 8, Groundwater, describes how the project’s construction- and maintenance-related effects were evaluated. The evaluations are based on existing groundwater conditions and hydrogeology and anticipated changes in groundwater elevations, storage, and quality. Groundwater could be changed from existing conditions based upon construction methods and protocols described in the Engineering Project Reports. Substantial construction-related changes in groundwater levels resulting from dewatering are not expected to occur as construction dewatering at the intakes, Southern Forebay, and Bethany Pumping Plant would occur in within cutoff walls designed to meet state standards for low permeable materials as already described. As such, dewatering sites would be generally isolated from the regional groundwater by the slurry cutoff walls. Construction of the tunnel shafts tunnel does not require dewatering with the exception of removing residual water from the tunnel shafts once completed. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts on groundwater.
610-183	[ATT 5:] Ch 8., P. 8-29, lines 17-18 states, “tunnel shafts would be “wet” constructed” with “no dewatering,” but Ch. 8, P. 8-42, lines 11-12 notes “Construction would require some short-term dewatering at the tunnel shafts (few weeks at each shaft).” It is unclear what dewatering was included in the model when assessing impacts.	Dewatering at the tunnel shafts would only occur once the shaft is completed and is sealed from surrounding groundwater. This is the short-term dewatering noted in the comment. The tunnel shafts would be constructed to be water-tight before dewatering occurs. Therefore, the only "dewatering flows" at the tunnel shafts would be the remaining water within the tunnel shaft after the water-tight walls are constructed and the concrete bottom is placed and sealed. Most of the shaft construction would occur in "wet conditions" below the groundwater elevation and would not include dewatering prior to completion of the tunnel shaft.

Letter-Comment Number	Comment	Response
610-184	[ATT 5:] Accurate municipal well locations and construction information (e.g., pump depth) were not used in the Draft EIR and the impact of the project on shallow domestic wells was not directly quantified (Draft EIR Ch. 8, P. 8-40, lines 6-11). - The Hood water system wells should have accurate locations and depths represented in the DeltaGW Model.	As described in Appendix 8A, Delta Groundwater Model: Development and Calibration, in the section titled Well Perforation, well construction information from OSWCR was used to determine the depth of pumping simulated in the model. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts and regarding the inclusion of local wells in the modeling analysis. The production wells used in the analysis include all wells that produce water (domestic, irrigation, public supply, and industrial), and excludes monitoring wells and wells identified as "other" in the OSWCR database. As described under the discussion of Impact GW-3 of the DEIR, the exact location of wells in the OSWCR database are not known and only the PLSS section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the existing conditions. The figure titled PLSS Sections with Supply Wells within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. Potential impacts on wells in the project area are described under Impact GW-3 and summarized in the table titled Number of Supply Wells with Decline in Groundwater Elevations Relative to Existing Conditions. The section titled Alternatives Impacts in Appendix 8B, Impact Analysis: Groundwater Model Results, provides details on the groundwater changes expected at supply wells under each alternative. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2–3 feet at any well in the region. While wells installed before

Letter-Comment Number	Comment	Response
		1977 were not included in the analysis, the potential impacts across the entire region are covered by through the spatial coverage of wells installed after 1977, as shown in the figure titled PLSS Sections with Supply Wells within 3 Miles of the Delta Region.
610-185	[ATT 5:] The DeltaGW model used to evaluate potential impacts of the project on shallow groundwater users such as GDEs and shallow wells may be too coarse spatially to determine local impacts accurately (Draft EIR 8.3.1.1 p. 8-14, lines 15-17). See Attachment A [ATT1 of ATT5] - Impacts on Groundwater Levels, Model Discretization for more description. - The model should be spatially refined near areas of concern such as the Hood water system wells where localized drawdown effects due to dewatering may be greater than currently shown in the Draft EIR.	The DeltaGW model is based on the best available model and data at the time of initiating the study pursuant to the CEQA guidelines and the EIR adequately discloses the construction- and operational-related impacts on groundwater resources. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts and the model resolution and consideration of local wells.
610-186	[ATT 5:] Water quality impacts are assessed in the Draft EIR using groundwater levels as a proxy to measure impacts (Draft EIR 8B4.7.1 - p. 29). However, groundwater level is a poor surrogate for water quality as small changes in groundwater levels can change gradients influencing vertical and horizontal flow path directions over time and space. See Attachment A – Impacts on Groundwater Quality [ATT1 of ATT5].	Common Response 10, Surface Water Quality and Groundwater Resources, includes a detailed discussion on the analysis of groundwater quality, which provides additional information regarding the adequacy of the groundwater quality analysis in the Draft EIR. Hydraulic gradients are calculated using groundwater levels, and therefore the numerical flow model indirectly calculates changes in hydraulic gradient. In evaluating contaminant movement, advection is the primary process by which plume migration occurs (with dispersion and diffusion being secondary processes). As advection is the movement of contaminants driven by hydraulic gradients, and hydraulic gradients are calculated from groundwater levels, the use of groundwater levels as a proxy is an appropriate methodology. In the Draft EIR, construction impacts on water quality were evaluated in Chapter 9, Water Quality. Operational impacts on groundwater quality would be plume migration and/or introduction of saline waters, both of which can be evaluated using hydraulic gradients and groundwater levels.

Letter-Comment Number	Comment	Response
610-187	[ATT 5:] The lack of transport model capability in IWFM is not a good reason for omitting analysis of potential contaminant migration or other project impacts on groundwater quality (Draft EIR Figures 8B.3 - 8.B.11); locally refined models can be constructed from existing models for this purpose and in some cases, analytical models, with simplifying assumptions, can also be used to estimate potential impacts.	Please see Chapter 8, Groundwater, which uses modeled groundwater elevation change results to inform qualitative analysis of potential impacts on degradation of groundwater quality in Impact GW-7. The results are summarized in table titled Comparison of Impacts of Project Operations on Groundwater by Alternative. The discussion of Impact GW-7 provides the results of the analysis of impacts on groundwater quality. As described in Impact GW-7, modeled groundwater elevation changes near identified groundwater plumes in the study area are limited to 1 to 2 feet between the baseline and alternatives, which is unlikely to cause a change in groundwater flow paths. The figure titled Location of Identified Groundwater Plumes in the Study Area provides the location of the plumes relative to the Delta Conveyance Project facilities.
610-188	[ATT 5:] Similar to the review of ISW impacts, the Draft EIR lacks a spatially and temporally refined review of the impacts of the project on agricultural drainage, potentially missing localized impacts (Draft EIR Table 8-9).	Agricultural drainage is simulated by the DeltaGW model at the model node scale. During the analysis, the changes in agricultural drainage were evaluated both spatially and temporally and no outliers were observed. Results are aggregated to the entire region for a simpler presentation of the results in Chapter 8, Groundwater.
610-189	[ATT 5:] For groundwater storage, the Draft EIR, p.8-47, lines 39-42 indicates that “Under project alternatives, the region would see an increase in groundwater storage due to increased surface water supplies, as simulated in the surface water analysis. The increase in surface water supply reduces groundwater use and thus reduces the decline in groundwater storage.” However, details (e.g., locations, volumes, and timing) of how this increased surface water supply was incorporated into the DeltaGW model are not provided. These details should be included to better understand how this additional supply of surface water affects the simulated results.	Surface water supply analysis was conducted as part of Chapter 5, Surface Water, and Chapter 6, Water Supply. Details pertaining to changes in future surface water supplies are described in the Water Supply Changes section of Chapter 6. Changes in surface water deliveries between existing conditions and project alternatives as simulated by the CalSim 3 model for surface water analyses are reflected in the DeltaGW Model. As described in the Delivery Data section of Appendix 8B, Impact Analysis: Groundwater Model Results, water demands and water use in CalSim 3 are designated by demand units, which generally correspond to water districts, water agencies, Central Valley Project (CVP) and State Water Project (SWP) contractors, and non-district water users. Surface water delivery areas within the DeltaGW Model were assigned to match the CalSim 3 demand units.

Letter-Comment Number	Comment	Response
		The groundwater analysis reflects the changes in surface water deliveries and resulting increase in groundwater storage. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, includes reservoir storage results, changes in streamflow, and changes in water supply as a result of project operations. In addition, Chapter 8, Groundwater, has been updated to clarify statements regarding changes in groundwater storage under project operations. As discussed in Impact GW-4, modeling indicates a slight increase in groundwater storage compared to existing conditions. These modeled changes are so small that they would have no noticeable effect on subbasins. Therefore, model simulation supports the understanding that the project will not affect surface water deliveries within the region. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit. Additional details are not needed to better understand the supply of surface water and simulated results because simulated results do not indicate an adverse change.
610-190	[ATT 5:] The addition of extra surface water supply can confound the results. To better understand the impacts of the Project diversions, dewatering, and tunnels on the SASb [South American Subbasin], a local scenario should be simulated of the SASb that does not include these increased surface water supplies unless evidence or justification is provided to support an assumed increase in surface water supply in the SASb.	Surface water supply analysis was conducted as part of Chapter 5, Surface Water, and Chapter 6, Water Supply. Details pertaining to changes in future surface water supplies are described in the Water Supply Changes section of Chapter 6 and are further analyzed, as appropriate, in the relevant resource chapters. Please see response to comment 610-37 regarding the use of the models. Changes in surface water deliveries between existing conditions and project alternatives as simulated by the CalSim 3 model for surface water analyses are reflected in the DeltaGW Model. As described in the Delivery Data section of Appendix 8B, Impact Analysis: Groundwater Model Results, water demands and water use in CalSim 3 are designated by demand units, which generally correspond to water districts, water agencies, Central Valley Project (CVP) and State Water Project (SWP) contractors, and non-district water users. Surface water delivery areas within the DeltaGW

Letter-Comment Number	Comment	Response
		Model were assigned to match the CalSim 3 demand units. Chapter 8, Groundwater, of the EIR has been updated to clarify statements regarding changes in groundwater storage under project operations. As discussed in Impact GW-4, modeling indicates a slight increase in groundwater storage compared to existing conditions. These modeled changes are so small that they would have no noticeable effect. Therefore, model simulation supports the understanding that the project will not affect surface water deliveries within the region. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit.
610-191	[ATT 1 of ATT 5:] Review of the Delta Conveyance Project Draft EIR Technical Memorandum	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-192	[ATT 1 of ATT 5:] TABLE OF CONTENTS Section (Page) INTRODUCTION (5) Documents and Data Reviewed (5) IMPACTS ON INTERCONNECTED SURFACE WATER (5) ISW impact assessment: SASB GSP and Draft EIR (7) IMPACTS ON GROUNDWATER LEVELS (8) Municipal and Domestic Well Survey (8) Model Discretization (9) IMPACTS ON GROUNDWATER QUALITY (12) DRAFT EIR RECOMMENDATIONS (12) REFERENCES (15) FIGURES (16) ATTACHMENT 1 - RESUMES (25)	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
610-193	[ATT 1 of ATT 5:] LIST OF FIGURES Figure 1: The South American Subbasin is a high priority GSP Plan Area bounded by the Sacramento, American, Mokelumne, and Cosumnes Rivers. This figure originally appears as Figure 2.2-43 in the SASb GSP. ([page]17) Figure 2: (A) The southern portion of the SASb plan area (green outline) contains proposed intake locations along the Sacramento River upstream of the Mokelumne River Confluence. Figure modified from Draft EIR Figure 3-2. (B) State monitoring wells in the SASb. (C) Depth to groundwater in this wetland region is shallow. For instance, State Well 383610N1214825W001 ranges from around 12 to 25 feet below land surface since 2000. ([page]18) Figure 3: (A) Analysis on output from the CoSANA integrated groundwater and surface water model shows that on a seasonal basis (i.e., spring and fall) from 2005-2018, groundwater elevations intersected the clogging layer elevation for a majority of reach nodes between 75-100% of the time. (B) The Sacramento River upstream of the Mokelumne Confluence is identified as ISW. (C) Reach names and ISW class and GSA areas in the SASb. These figures originally appear as Figure 3-8 and Figure 3-11 in the SASb GSP. ([page] 19) Figure 4: Seasonally averaged ISW depletion estimated by CoSANA at ISW designated reaches over the current conditions baseline model simulation is relatively constant. Negative numbers indicate losing stream conditions (stream loss to groundwater) and positive numbers indicate gaining stream	The commenter provided this list of figures for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	conditions (stream gain from groundwater). Spring (February - April) and fall (August - October) depletion rates are averaged per month in each 3-month seasonal window. A black vertical dashed line at 2015-01-01 is drawn for reference, and a black solid horizontal line at y = 0 indicates the transition from gaining to losing conditions. Most scenarios have little impact on seepage. Figure modified from Figure 3-12 in the SASb GSP. ([page]20) Figure 5: (A) Map of Well Completion Reports identified as domestic or public supply wells within a 1-mile radius of the tunnel alignments. (B) Cumulative distribution plot of well depth for domestic and public supply well. ([page] 21) Figure 6: CVHM example model: contours of computed head change due to dewatering at 2000 gpm. Head change contours plotted in feet in upper layers. Intended for illustrative purposes only, not intended to represent actual head changes due to the Project. ([page]22) Figure 7: Draft EIR maximum groundwater elevation differences greater than 1 foot for Alternative 2a. ([page]23) Figure 8: Computed head changes along a general west-east direction near Intake 3. Head changes are shown for the uppermost model layers 1-3. ([page]24)	
610-194	[ATT 1 of ATT 5:] Key Terms APN = Assessor Parcel Number CoSANA = Cosumnes South American North American [Groundwater Model] Draft EIR = Draft Environmental Impact Report	This information describes clarification on the submittal of the comment letter. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	DTSC = Department of Toxic Substances Control GSA = Groundwater Sustainability Agency GSP = Groundwater Sustainability Plan ISW = Interconnected Surface Water LUST = Leaking Underground Storage Tank LWA = Larry Walker Associates OSWCR = Online System of Well Completion Reports Project = Delta Conveyance Project SASb = South American Subbasin	
610-195	[Exhibit 1 of ATT 1 of ATT 5: Table of models referenced in technical memo.]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
610-196	[ATT 1 of ATT 5:] Introduction Larry Walker Associates (LWA) was retained by Sacramento County Water Agency to review the Department of Water Resources Draft Environmental Impact Report (Draft EIR) for the Delta Conveyance Project (henceforth, Project). Our review of the Draft EIR focused on impacts of the Project on interconnected surface water (ISW) and groundwater conditions, including groundwater levels and water quality in the vicinity of the Project. The purpose of the review was to provide Sacramento County with technical information to support comments on the Draft EIR. In particular, the review was intended to identify deficiencies that DWR should address to ensure protection of domestic and community water supplies, sustainability of groundwater in the South American Subbasin (SASb), and beneficial uses of ISW and groundwater potentially impacted by the Project. The Authors of this memorandum have extensive knowledge of	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	the South American Subbasin and Cosumnes Subbasin as they have been involved with the development of the two Groundwater Sustainability Plans for these subbasins. Dr. Mehl and Dr. Foglia provided previous testimony on behalf of Sacramento County Water Agency regarding the adequacy of modeling of interconnected surface water and groundwater used in the Draft EIR for the California Water Fix (the precursor of the Delta Conveyance Project). Resumes are provided in Attachment 1 [ATT 1 of ATT 1 of ATT 5].	
610-197	[ATT 1 of ATT 5:] DOCUMENTS AND DATA REVIEWED To prepare this memorandum, LWA [Larry Walker Associates] primarily referred to Chapter 8 of the EIR and its related appendices that present the existing hydrologic conditions and expected impacts of the Project on groundwater conditions. The SASb [South American Subbasin] Groundwater Sustainability Plan (GSP) is referenced herein as it includes several appendices that detail the potential impacts of groundwater level decline on ISW [interconnected surface water], vulnerable wells, and groundwater dependent ecosystems (GSP Appendices 3A, 3C, 3D).	This information describes the structure or organization of the comment letter section on groundwater resources, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the specific contents of the EIR.
610-198	[ATT 1 of ATT 5:] The DWR C2VSIM-FG model grid was reviewed for spatial variability in grid element dimensions near the proposed intake locations. Well completion report summary data were retrieved from the DWR Well Completion Reports Database and reviewed to identify the ages, locations, depths, and uses of groundwater wells in the Project area. Additionally, Sacramento County provided a geospatial dataset of the parcels in the Project area that were connected to a well completion report PDF as a secondary means of reviewing well locations.	This information describes the structure or organization of the comment letter section on groundwater resources, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the specific contents of the EIR.

Letter-Comment Number	Comment	Response
610-199	[ATT 1 of ATT 5:] Impacts on Interconnected Surface Water The Project proposes intake locations along the Sacramento River, which has been identified as an ISW [interconnected surface water] in the SASb [South American Subbasin] GSP [groundwater sustainability plan]. The numerical models used to represent ISW, and the criteria by which impacts to ISW are defined, differ between the Draft EIR, which describes the Project, and the SASb GSP. These differences in models and impact criteria – and the aggregated spatial and temporal resolution of the Draft EIR's findings – make it difficult to assess the Project's impact on ISW in the SASb. The challenge of determining if the Project's intakes threaten ISW, as defined in the SASb GSP, thus require a comparison of models and impact criteria of ISW between the Draft EIR and the SASb GSP.	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's Sustainable Groundwater Management Act (SGMA) and how groundwater sustainability plans (GSPs) and interconnected surface waters were addressed in Chapter 8, Groundwater. Constructing or operating the proposed project or alternatives would not impact interconnected surface waters.
610-200	[ATT 1 of ATT 5:] First, we review and discuss characteristics of ISW [interconnected surface water] in the SASb [South American Subbasin] with a focus on the proposed Project intake locations along the Sacramento River. Next, we review definitions for impact criteria to ISW as defined by the SASb GSP [Groundwater Sustainability Plan] (i.e., significant and unreasonable impacts) and the Draft EIR. Finally, limitations in the Draft EIR that prevent an unambiguous avoidance of significant and unreasonable impacts to ISW are identified and recommendations to address these limitations are outlined and discussed.	This information describes the structure or organization of the comment letter section on groundwater resources, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text.
610-201	[ATT 1 of ATT 5:] The SASb [South American Subbasin] is managed by five Groundwater Sustainability Agencies (GSAs); the sub-basin is bounded by the Sacramento and American Rivers to the north and west, and the Cosumnes and Mokelumne Rivers to the	This information describes the structure or organization of the comment letter section on groundwater resources, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the specific contents of the EIR.

Letter-Comment Number	Comment	Response
	east and south (Figure 1 [Exhibit 2 of ATT 1 of ATT 5]). Proposed intake locations identified in the Draft EIR are located in the North Delta GSA along the Sacramento River upstream of the Mokelumne Confluence in the southern portion of the SASb (Figures 2A, 3C [Exhibits 3 and 4 of ATT 1 of ATT 5]). According to the SASb GSP [Groundwater Sustainability Plan], this reach of the Sacramento River is identified as an ISW [interconnected surface water] (Figures 3A-B [Exhibit 4 of ATT 1 of ATT 5]). Furthermore, the CoSANA model, which was used in the development of the GSP for the North American, South American and Cosumnes subbasins, shows that the reach persistently loses water to groundwater in the SASb during the GSP model's baseline period between 1990-2018 (Figure 4 [See exhibit 5 of ATT 1 of ATT 5], bottom left, red-outlined hydrograph), and that it occurs in a wetland region of relatively shallow (i.e., within tens of feet) depth to groundwater (Figure 2C).	
610-202	[ATT 1 of ATT 5:] The Project's proposed diversion of surface water in this reach [the sub-basin is bounded by the Sacramento and American Rivers to the north and west, and the Cosumnes and Mokelumne Rivers to the east and south] will potentially reduce river stage and change hydraulic gradients between surface water and groundwater. The key question is if these changes would lead to substantial negative impacts to beneficial users of groundwater [Footnote 1: In this review we define substantial and negative impacts according to the SASb GSP definition of "significant and unreasonable" impacts to beneficial users, notably ISW.]. A lower hydraulic gradient between the river and the underlying aquifer with the Project implies that leakage to groundwater - from the currently losing Sacramento River - will decrease, thus reducing groundwater	Impacts to groundwater storage are addressed under Impact GW-4. Detailed tables showing long term changes in groundwater storage for the Delta and neighboring regions are presented in the Changes to Long-Term Change in Groundwater Storage section of Appendix 8B, Impact Analysis: Groundwater Model Results. Change in storage in model subregion 3, which contains the South American subbasin, under all project alternatives is less than 0.1% of the change in storage under baseline conditions and is considered to be less than significant. Please see responses to comments 610-37, 610-38, 610-40, and 610-232 for additional details regarding the South American subbasin. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding consideration of California's Sustainable Groundwater Management Act (SGMA) and groundwater sustainability plans (GSPs).

Letter-Comment Number	Comment	Response
	recharge along this reach. Importantly, the Draft EIR should demonstrate that the effects of these changes in river flow and stage are within the "operational flexibility" and do not exceed the minimum thresholds of the ISW [interconnected surface water] system, as identified in the SASb [South American Subbasin] GSP [groundwater sustainability plan]. Framed as a question: will projected changes lead to results, e.g., adverse impacts to the riparian ecosystem, reduction in groundwater recharge, that the SASb GSP has deemed to be significant and unreasonable?	
610-203	[ATT 1 of ATT 5:] Table 8B-2 of the Draft EIR shows that the maximum decline in stream losses is negative; this implies an increase in stream seepage to groundwater as a result of the Project, which would only occur if the hydraulic gradient were increased between the stream and groundwater (Draft EIR p. 8B-13, line 7). In fact, we would not expect the gradient to increase as the Project exports streamflow, which reduces stream stage. Assuming a connected stream-aquifer system, the decline in groundwater levels due to a reduction in seepage during operation would need to be greater than the reduction in the stream stage to increase streambed seepage. The model should be reviewed to identify causes of the changes in stream seepage. Possibilities include the transient reduction in seepage or the low permeability units in the model (i.e., model representation of subsurface tunnels) that reduce groundwater levels enough to increase the maximum stream seepage from baseline conditions. This will require a more detailed analysis of stream seepage (e.g. presentation of stream seepage as hydrographs to understand when and where maximum seepage changes occur and presentation of the corresponding groundwater hydrographs to identify the cause of the decline).	The causes of changes in stream seepage as simulated by the model are understood. While the maximum decline is negative under some alternatives, on average the streams lose less water under project scenarios compared to the baseline conditions. Increases in stream losses under project conditions occur due to the timing of project operations. Under project conditions, there are months where streams have more water than the baseline due to operation of upstream reservoirs and scheduling of non-project diversions. See Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is discussed in Common Response 10.

Letter-Comment Number	Comment	Response
610-204	[ATT 1 of ATT 5:] Tables 8B-3 and 8B-4 of the Draft EIR show reduced seepage, which seems reasonable with a lower water level in the Sacramento River due to exported streamflow. However, because the change in modeled seepage has so much variability (showing both increases and decreases), a more localized and refined analysis (in space and time) is required to ensure that no acute, local impacts are missed. The Draft EIR analyzed seepage over a long stretch of the Sacramento River (from the mouth of the Bear River to confluence with the San Joaquin River - Draft EIR p. 8B-11, line 28) and accumulated seepage over an annual period potentially masking significant changes to sections of the river where the ISW [interconnected surface water] impacts to the SASb [South American Subbasin] are more acute. The Draft EIR's rationale to only consider annual seepage changes because groundwater responds slowly to streamflow changes (P. 8B-11, line 22-24) might be justified on a regional scale, but not on a local scale where one might be assessing different effects near the river (e.g., Groundwater Dependent Ecosystems) due to seasonality and groundwater management. .	Please refer to the comment response in the body of the letter, which addresses this comment; see specifically 610-199, which address the approach used in the EIR to address interconnected surface waters. During the analysis, stream-aquifer interaction was assessed both at the stream reach scale as well as by individual stream nodes. The behavior at individual stream nodes were consistent with the stream-aquifer interaction changes at the stream reach scale. Results are presented at the stream-reach scale for clarity. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's Sustainable Groundwater Management Act (SGMA) and how groundwater sustainability plans (GSPs) were considered and Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is discussed in Common Response 10.
610-205	[ATT 1 of ATT 5:] Furthermore, the summary in the Draft EIR Appendix 8B p. 16 lines 7-9, highlights the increase in seepage (Draft EIR Table 8B-2, alternative 4b with an increase in seepage of 684 AF/yr), and emphasizes that this reflects only 0.25% of the annual stream aquifer interaction. But from the Sacramento County perspective, considering that the stream appears to currently be losing (i.e., recharging the aquifer), a reduction in seepage would be of concern as this will reduce the supply of ISW [interconnected surface water] that recharges the SASb [South American Subbasin] groundwater system. In fact, the Draft EIR	Please see response to comment 610-203 regarding seepage and response to comment 610-202 regarding impacts on groundwater storage. Reduction in seepage and substantial changes in storage are evaluated in the EIR and would not occur in the South American subbasin.

Letter-Comment Number	Comment	Response
	modeling results show that the aquifers would be receiving less recharge due to the reduced leakage from the Sacramento River (Draft EIR Tables 8B-3 and 8B-4), but that impact is not discussed. This impact should be discussed and the average and maximum amounts of less recharge should be compared to groundwater basin storage conditions identified in the SASb GSP [Groundwater Sustainability Plan] rather than stream-aquifer interaction volumes.	
610-206	[ATT 1 of ATT 5:] ISW [interconnected surface water] IMPACT ASSESSMENT: SASB [South American Subbasin] GSP [Groundwater Sustainability Plan] AND DRAFT EIR This section compares how the SASb and Draft EIR define significant and unreasonable impacts to ISW. The Draft EIR does not use exact GSP language (i.e., "significant and unreasonable impacts") but rather refers to "significant" impacts. To protect flow for fish and GDEs, the SASb GSP defines significant and unreasonable impacts to ISW occurring when the following undesirable results are identified (SASb GSP Section 3.2.1.2): (i) percentage decrease in ISW reach length exceeds 5%, and (ii) percentage decrease in the 50th percentile of ISW streamflow exceedance during October-December spawning months exceeds 10% of historical conditions. The Draft EIR defines a significant impact to ISW (Draft EIR Section 8.3.2.2 and Appendix 8B.4.1) as changes in stream losses or stream gains that exceed 5% with respect to the	The EIR is not required to use exact GSP language in Chapter 8, Groundwater, because the EIR is complying with CEQA and potentially significant impacts as defined under CEQA based on the details of the project description and the scope of analysis and potential impact mechanisms. Please see response to comment 610-205 regarding the limited change in stream-aquifer interaction and groundwater storage under project alternatives. Please Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for a discussion of interconnected surface water and groundwater dependent ecosystems under the Sustainable Groundwater Management Act and the fact that the Delta Conveyance Project would not conflict with SGMA.

Letter-Comment Number	Comment	Response
	annual average baseline (i.e., existing conditions - CEQA baseline). This 5% threshold is rationalized by comparison to historical modeled variations in annual stream gains/losses (i.e., 62% to 124% of average annual stream gains and losses in the Delta region from 1974 through 2015).	
610-207	[ATT 1 of ATT 5:] The Draft EIR uses various aggregate statistics of numerical model output to summarize regional scale impacts to surface water and groundwater nodes across the simulation's spatial domain and temporal range. However, these aggregate statistics do not address the localized spatial and temporal scale of significant and unreasonable impacts to ISW [interconnected surface water] as defined in the SASb [South American Subbasin] GSP [Groundwater Sustainability Plan] (defining impacts by effects to individual reach lengths). Specifically, it is unclear which nodes or reach lengths are impacted and at what times during the year, thus results should be presented on an individual reach basis, ideally with lengths on the scale of 500 m rather than tens of kilometers. To assess significant and unreasonable impacts to ISW, and the Project's consistency with SGMA [Sustainable Groundwater Management Act] and the SASb GSP, model output, and associated analysis in Chapter 8 of the Draft EIR, is needed that shows if the reach length of ISW decreases by more than 5% or if streamflow exceedance during October-December spawning months decreases by more than 10% of historical conditions.	During the analysis, stream-aquifer interaction was assessed both at the stream reach scale as well as by individual stream nodes for each timestep. An example of the nodal evaluation of stream-aquifer interaction can be found in the Stream-Aquifer Interaction section of Appendix 8A, Delta Groundwater Model: Development and Calibration, in the figure titled Average Stream-Aquifer Interaction at Each Stream Node in Acre-Feet/Month for Water Year 2015. The behavior at individual stream nodes were consistent with the stream-aquifer interaction changes at the stream reach scale. Results are presented at the stream reach scale for clarity. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's Sustainable Groundwater Management Act (SGMA) and how groundwater sustainability plans (GSPs) were considered and Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is discussed in Common Response 10.
610-208	[ATT 1 of ATT 5:] Impacts on Groundwater Levels In this section, we review impacts of the Project on groundwater levels due to dewatering for construction and final constructed Alternatives with regards to shallow	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text.

Letter-Comment Number	Comment	Response
	groundwater typically used for domestic purposes and deeper water pumped by municipal and irrigation wells.	
610-209	[ATT 1 of ATT 5:] MUNICIPAL AND DOMESTIC WELL SURVEY The Draft EIR addressed the impact of the project on municipal (i.e., public supply) wells, but did not directly address potential effects to the numerous private shallow domestic wells in the project area (Figure 5A [See exhibit 6 of ATT 1 of ATT 5]). Specifically, the Draft EIR does not identify the domestic wells by location or depth and does not present results for these wells. Rather, the Draft EIR combines domestic wells with other production wells and only evaluates impacts by depth range – and only uses average water level declines computed by the model. The depths of the domestic wells are consistently shallower than the municipal wells such that the Draft EIR's analysis for determining supply impacts on municipal wells is not sufficient to ensure protection of domestic wells (Figure 5B [See exhibit 6 of ATT 1 of ATT 5]). An analysis to identify the exact locations and depths of the shallow domestic wells and municipal wells in the project area is necessary to accurately characterize the impact of the project on nearby drinking water wells. As the Draft EIR notes, "[t]he DeltaGW Model simulates groundwater elevations at the centroid of each PLSS section centroid for every timestep and layer." (Appendix 8B, page 8B-20, lines 19-20). Thus, DWR could have readily produced hydrographs for the domestic wells impacted by the project.	Chapter 8, Groundwater, provides an analysis of the project's construction and operation-related impacts on groundwater supplies within the Delta study area. As concluded in the EIR, the project would not adversely affect these supplies. In addition, DWR will implement a monitoring program to ensure wells continue to function at pre-project levels. As described in Appendix 8A, Delta Groundwater Model: Development and Calibration, in the section titled Well Perforation, well construction information from State's Online System of Well Completion Reports (OSWCR) was used to determine the depth of pumping simulated in the model. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts. As described Chapter 8, the exact location of wells in the OSWCR database are not known and only the Public Land Survey System (PLSS) section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the existing conditions. The Chapter 8 figure titled PLSS Sections with Supply Wells Within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. Potential impacts on any wells in the project area are described under Impact GW-3 and summarized in the Chapter 8 table titled Number of Supply Wells with Decline in Groundwater Elevations Relative to Existing Conditions. In Appendix 8B, Impact Analysis: Groundwater Model Results,

Letter-Comment Number	Comment	Response
		the section titled Impact GW-3: Reduction in Groundwater Levels Affecting Supply Wells details the groundwater changes expected at supply wells under each alternative. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2–3 feet at any well in the region. The comment incorrectly states that the analysis only uses average water level declines computed by the model. The analysis considers groundwater elevation changes at every timestep and reports the greatest decline expected at any supply well relative to existing conditions.
610-210	[ATT 1 of ATT 5:] LWA [Larry Walker Associates] compiled information about wells that could be affected by the Project. LWA compiled a combination of well locations using well completion reports with Latitude and Longitude coordinates from the DWR Well Completion Report (WCR) Database and with well logs submitted to the Sacramento County Environmental Management Division that were connected to Assessor Parcel Numbers (APNs). The well completion reports and APNs were filtered within 1 mile of the tunnel alignments to identify wells that may be potentially impacted by tunnel construction activities. The wells from the WCR database were filtered to those drilled within the last 40 years to identify wells that are likely actively used. There are 23 plausibly active domestic wells and 4 public supply wells within 1 mile of the Project intakes 3 and 5 which could be impacted by Project-induced drawdown effects; the number of domestic wells is key as they are shallower than public supply wells and therefore more susceptible to declines in groundwater levels. The well location coordinates from the DWR WCR database are listed as having an accuracy to the Township Range Section centroid (approximately ½ mile), which may place some wells closer or	Please refer to the comment response in the body of the letter, which addresses this comment, specifically 610-42 regarding impacts on groundwater wells. Modeling results indicate the fluctuations are not expected to be significant and within in the range of natural variability that the wells already experience. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2–3 feet at any well in the region, including those noted in the comment. Mitigation Measure GW-1 would further reduce less than significant impacts and allows DWR to monitor and address unanticipated change in groundwater levels at these specific locations.

Letter-Comment Number	Comment	Response
	further from the intake locations. DWR should at least individually evaluate these 23 domestic and 4 public supply wells to identify location and depth to groundwater and associated Project impacts.	
610-211	[ATT 1 of ATT 5:] Draft EIR Table 8-7 summarizes declines in groundwater elevation due to the Project Alternatives compared against existing conditions, but it is unclear whether "existing conditions" are simulated or measured. If simulated conditions are used instead of current observations, then the impact of these declines on current groundwater conditions may be different than those reflected in the Draft EIR, e.g., if simulated current groundwater levels are higher than actual conditions then any decline in groundwater levels will be more impactful than reflected in the Draft EIR. The simulated change in groundwater levels due to the Project Alternatives should be referenced to measured current conditions to properly assess the impact of groundwater level decline on shallow wells.	Assumptions pertaining to existing conditions are described in detail in Appendix 8B, Impact Analysis: Groundwater Model Results, in the section titled Existing Conditions (CEQA Baseline). During the analysis, both observed and simulated groundwater elevations were compared at different layers and depths. An overview of the CEQA baseline is described in Chapter 4, Framework for the Environmental Analysis, and supporting information can be found in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions. In addition, Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, provides additional information regarding the CEQA baseline. For modeling purposes, existing conditions (CEQA baseline) is characterized by the following: (1) current regulatory environment (2) current facilities and programs; (3) current water demands and water use; (4) rim watershed inflows derived from historical streamflow records; and (5) valley floor hydrology simulated under an existing level of development. Existing conditions model assumptions and input data are based on conditions that existed in 2020. Using this information model provides an accurate representation of baseline conditions and project alternative conditions for comparative purposes.
610-212	[ATT 1 of ATT 5:] MODEL DISCRETIZATION The Draft EIR states that the CVHM-D [model] grid with 0.25 mile by 0.25-mile grid cells may be insufficient to capture the project impacts. Yet, the DeltaGW Model, which uses the same model grid structure as the C2VSim-FG (Draft EIR 8.3.1.1 p. 8-	DeltaGW model is based on the best available model and data at the time of initiating the study pursuant to the CEQA guidelines. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts. Please see response to comment 610-43 regarding the model grid structure of C2VSim and its applicability to the groundwater analysis reported in Chapter 8, Groundwater.

Letter-Comment Number	Comment	Response
	14, lines 15-17), has an average element size of 0.47 square mile (equivalent to a grid cell size of 0.69 mile by 0.69 mile) in the Delta area, which is coarser than the CVHM-D uniform grid cell size of 0.0625 square miles (Draft EIR p. 8A-6 lines 7-8). The Draft EIR does not explain DWR's basis for using a model with a grid cell size that is coarser than the size used in a model that DWR has recognized as being insufficient to capture project impacts.	
610-213	[ATT 1 of ATT 5:] The Draft EIR also notes that local impacts could be addressed adequately by using the bilinear interpolation feature of estimating groundwater elevation at any point in the model area (Draft EIR p. 8A-6 lines 8-10), which they suggest is an advantage over finite-difference models such as CVHM-D (Draft EIR p. 8A-5 lines 37-41). However, we note that bilinear interpolation can also be applied to finite-difference model results to estimate heads at any location., The important point is that interpolation is a post-processing step and does not improve the accuracy of model computed heads; therefore, the DeltaGW Model would be interpolating using model computed heads that are too coarse to be representative of the true conditions at the locations of interest used to assess potential Project impacts. To address this issue, we suggest that DWR evaluate the potential limitations of using the C2VSim-FG grid structure, and weigh the potential benefits of a refined grid model, like the proposed C2VSim-D, on the accuracy of computed impacts due to project construction and operation.	Please refer to the comment response in the body of the letter, which addresses this comment, including response to comment 610-43, which addresses the element sizes of C2VSim, CVHM, and CVHM-D. The DeltaGW model is based on the best available model and data at the time of initiating the study pursuant to the CEQA guidelines. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, for additional information regarding the suitability of the model for analysis of local impacts and the basis for averaging groundwater heads for the assessment of changes in groundwater elevations for Impact GW-2. Groundwater heads in each individual layer were used in the assessment of potential impacts on wells for Impact GW-3.
610-214	[ATT 1 of ATT 5:] To demonstrate the effects of model grid resolution on simulated groundwater levels, LWA [Larry Walker Associates] computed head changes due to dewatering with a locally	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.

Letter-Comment Number	Comment	Response
	refined model derivative of CVHM and compared those with the head changes for the 1 square mile cell CVHM. LWA simulated increased head changes in the refined model within a few miles of the dewatering wells; thus, DWR should be aware there may be greater effects closer to the dewatering wells than is predicted by the relatively coarse mesh of the DeltaGW Model. These results are discussed below A contour plot (Figure 6 [see exhibit 7 of ATT 1 of ATT 5]) and a head-change profile plot (Figure 8 [see exhibit 9 of ATT 1 of ATT 5]) are presented herein to depict the model results. Please note that Figure 6 and Figure 8 are included for illustrative purposes only, and do not represent actual head differences in the area due to the project. Figure 6 shows example contours of computed head changes due to Project dewatering with two wells each pumping 1,000 gpm. This type of plot shows the extent and magnitude of computed impacts on groundwater levels due to the pumping of two dewatering wells at anticipated project rates. Thus, the contours show the effect of dewatering pumping at these rates on groundwater levels computed by CVHM in the vicinity of Intake 3. The Draft EIR presented Figure 8B-4 (included herein as Figure 7 [see exhibit 8 of ATT 1 of ATT 5]), which shows maximum groundwater elevation differences greater than 1 foot for Alternative 2a. (Although Alternative 5, the proposed project, impacts a smaller area along the river than Alternative 2a (Draft EIR, p. 8B-38, Figure 8B-11), this paragraph applies equally to Alternative 5 results.) Figure 8 shows a plot of computed head changes relative to the distance from simulated dewatering wells at Intake 3. Head changes are plotted for the uppermost model	

Letter-Comment Number	Comment	Response
	layers. This type of plot is useful for looking at impacts at different depths with distance from the pumping wells.	
610-215	[ATT 1 of ATT 5:] We recommend that DWR identify which wells were used to determine impacts and which aquifer depth units the wells are completed in. DWR should also document the locations, pumping rates, and depths of the simulated dewatering wells; they should produce contour plots showing the projected head changes due to dewatering both in shallow and deeper aquifers; and they should also plot hydrographs of head changes at representative shallow and deeper wells.	The analysis of potential construction- and operational-related impacts on groundwater reported in Chapter 8, Groundwater, is an accurate estimate of potential effects on groundwater wells for purposes of CEQA compliance. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts on groundwater. Specifically, the section titled Inclusion of Local Wells in the Modeling Analysis, which explains adequacy of data-driven evaluation performed for disclosing the type, magnitude, and severity of potential groundwater impacts related to construction in the EIR. As described under the discussion of Impact GW-3 in Chapter 8, the exact locations of wells in the OSWCR database are not known and only the PLSS section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the existing conditions. The figure titled PLSS Sections with Supply Wells Within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. As described in the Chapter 8 section titled Methods of Analysis, the Delta Conveyance Project construction and maintenance related effects were evaluated qualitatively. The qualitative evaluations are based on existing groundwater conditions and hydrogeology and anticipated changes in groundwater elevations, storage, and quality from the construction methods and protocols described in the Engineering Project Reports associated with the project (Delta Conveyance Design and Construction Authority 2022c, 2022d).

Letter-Comment Number	Comment	Response
		As described under Impact GW-1, piezometers would be installed outside the slurry wall and/or sheet pile walls to allow monitoring of potential groundwater level impacts affecting neighboring supply wells during construction for adaptive management of dewatering activities. If required to mitigate potential impacts, Mitigation Measure GW-1 would be implemented in which a series of groundwater recharge and extraction wells would be installed around the external perimeter of each intake cutoff wall system to allow discharge of captured dewatered water back into the subsurface in the event that local external effects on neighboring supply wells due to dewatering beyond average seasonal variation are observed.
610-216	[ATT 1 of ATT 5:] The Draft EIR states every node of the model was compared between the baseline and each project alternative, but then states the simulated groundwater elevations were averaged over the top 3 layers (Draft EIR 8B4.2.1 p. 17 lines 7-9, 10-13). Averaging groundwater elevations across 3 layers may reduce the net change between the baseline and project alternatives if some of the layers are less impacted by the changes in groundwater conditions due to project alternatives (e.g., dewatering pumping in layer 3 only vs pumping from layers 1, 2, and 3). The Draft EIR's DeltaGW Model was designed so that, if the combined thickness of the top two layers was greater than 200 ft, then the top layer was reduced to 65 ft followed by layers that were 50 ft thick for layer 2 and 3 (Draft EIR p. 8A-19 lines 3-12). DWR should justify why their analysis averaged heads over the upper 3 layers (potentially masking larger declines in the shallow groundwater system) when the DeltaGW model was refined in the upper layers. This additional refinement should allow for better representation of shallow groundwater heads, but this is lost through averaging. Instead,	During the analysis, both observed and simulated groundwater elevations were compared at different layers and depths; no significant vertical variations in groundwater heads were seen. Averaging the groundwater elevations across the top three layers of the model allows for a simpler presentation of the results. Presenting results in this way does not provide a lesser representation of shallow groundwater heads because no vertical variations in groundwater heads were seen. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, for more information about assessing results across model layers.

Letter-Comment Number	Comment	Response
	the groundwater elevations should be presented for each of the first 3 layers individually.	
610-217	[ATT 1 of ATT 5:] It is not clear in the current model documentation how the pumping in the top layer and aquifer parameters in the top two layers were translated from the C2VSim-FG to the more the vertically refined DeltaGW model. These details should be provided, especially if there are changes in storage parameters, hydraulic conductivity, groundwater pumping, and surface water connectivity between layers that may create significant differences in simulated groundwater elevations.	Well construction data from DWR's Online System for Well Completion Report (OSWCR) was used to determine the depths of pumping near the project footprint. In the Integrated Water Flow Model, pumping distribution is assigned by layer. Well depths and perforations are used to assign pumping fractions based on the refined model layering. As explained in Appendix 8A, Delta Groundwater Model: Development and Calibration, parameters associated with the model were determined through the Parameter Estimation facilitated calibration process.
610-218	[ATT 1 of ATT 5:] Impacts on Groundwater Quality Lowering of groundwater levels due to the dewatering for the Project may cause increased vertical migration of shallow aquifer contamination. Groundwater underlying Leaky Underground Storage Tank LUST [Leaking Underground Storage Tank] and DTSC [Department of Toxic Substances Control] remediation sites, and regional groundwater impacted by nitrates and pesticides could also be affected.	Please see the discussion of seepage cutoff walls provided in Common Response 10, Surface Water Quality and Groundwater Resources. In addition, Chapter 25, Hazards, Hazardous Materials, and Wildfire, under Impact HAZ-2, provides the results of the assessment of the project's impacts on hazardous materials. The assessment concluded that the project would not result in significant impacts as a result of exposure or disturbances of hazardous materials or sites.
610-219	[ATT 1 of ATT 5:] In the Draft EIR, water quality impacts are assessed using groundwater levels as a proxy to measure impacts (Draft EIR 8B4.7.1 - p. 29). However, groundwater level is a poor surrogate for water quality as small changes in groundwater levels can change gradients influencing vertical and horizontal flow path directions over time and space. Additionally, these changes in gradients could go completely unnoticed under the Draft EIR's analysis of head changes as the temporal frequency employed in the Draft EIR model is too coarse. By only considering the maximum change in groundwater level, the	As described in Chapter 8, Groundwater, historical groundwater elevation changes in the Delta regularly fluctuate 5 to 15 feet without the project. When comparing the No Project model simulation with the operational project simulation, the difference in changes in groundwater levels is small; as such, groundwater quality changes resulting from the rise and fall of groundwater levels will be predominantly driven by fluctuating groundwater levels occurring as a result of natural changes in hydrologic conditions and resultant groundwater use, and not by Project operations. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the adequacy of the DeltaGW model for

Letter-Comment Number	Comment	Response
	transient effects of water level changes are missed. Rising and falling water tables that intersect the source zones could mobilize contaminants and provide the hydraulic gradients needed to allow contaminant migration.	assessment of groundwater quality.
610-220	[ATT 1 of ATT 5:] In order to understand the extent of potential groundwater contamination caused by the Project, transport simulations on the Geotracker sites identified in Draft EIR Figures 8B.3 - 8.B.11 should be performed. Of note is the Leaky Underground Storage Tank (LUST) site near Walnut Grove that appears to be in an area where the groundwater contours change (changes in horizontal gradients impact flow paths). To apply particle tracking on a coarse grid used in the DeltaGW Model may be insufficient to capture local changes in velocity, so the grid should be refined in areas where particle tracking is applied (i.e., Geotracker sites).	As described in Chapter 8, Groundwater, model results show groundwater elevation changes near contamination sites never exceed 1 to 2 feet and the likelihood of plume mobilization as a result of changes in groundwater elevation is considered to be less than significant. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the use of the DeltaGW model for assessment of groundwater quality.
610-221	[ATT 1 of ATT 5:] Draft EIR Recommendations The Draft EIR findings are based on an analysis that lacks the relevant specificity (spatial and temporal disaggregation) to identify local, acute impacts that may occur on shallow wells and interconnected surface water; the Draft EIR findings are also insufficient to determine whether the Project will have impacts as identified under the impact framework established by the SASb [South American Subbasin] GSP [Groundwater Sustainability Project] (and thus conflict with or obstruct implementation of the SASb GSP).	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding California's Sustainable Groundwater Management Act (SGMA) and how groundwater sustainability plans (GSPs) were considered and Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the DeltaGW model for analysis of local impacts. The spatial scale for the evaluation of interconnected surface waters is discussed in Common Response 10. Groundwater elevations are evaluated at the centroid of (Public Land Survey System) PLSS sections for every layer at every timestep to assess the potential impacts on local wells. The greatest decline in any layer at each timestep is used to assess the magnitude and frequency of groundwater elevation changes. The changes are tied to the number of wells within each PLSS section for reporting in the EIR. Shallow domestic wells are indirectly evaluated as part of the analysis since groundwater elevation changes in each layer of the model are evaluated independently.

Letter-Comment Number	Comment	Response
		Well depth and perforations were not considered in the assessment of groundwater elevation declines. Under Impact GW-3, all declines were found to be less than significant. Please see response to comment 610-37 which provides additional discussion regarding effects on the South American Subbasin. As noted in that response, operation of the proposed project or alternatives would not affect groundwater storage in the subbasin.
610-222	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Interconnected Surface Water 1) The Draft EIR should be revised to include October - December exceedance flow tables that compare median exceedance flow between the no project alternative and the preferred Project alternative specifically for the Sacramento River reach between the American and the Mokelumne River confluences.	Monthly exceedance flow tables and graphs for October through March are presented in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives at 2020. The Sacramento River reach between the American and Mokelumne River confluences is covered by the tables and graphs for the Sacramento River at Verona down through the Sacramento River at Rio Vista.
610-223	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells:	As part of the analysis of groundwater impacts, stream-aquifer interaction was assessed both at the stream reach scale as well as by individual stream nodes. The behavior at individual stream nodes were consistent with the stream-aquifer interaction changes at the stream reach scale. Results are presented at the stream-reach scale for clarity. The results are presented in Chapter 8, Groundwater, under Impact GW-1 and further detailed in the Groundwater Impact Analysis section of Appendix 8B, Impact Analysis: Groundwater Model Results.

Letter-Comment Number	Comment	Response
	Interconnected Surface Water 2) The Draft EIR should be updated to include groundwater contour plots, stream vs groundwater hydrographs to identify the cause of seepage change, nodal or local reach scale seepage change in place of regional values, or any other post-processed analysis product of interest to stakeholders.	
610-224	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Interconnected Surface Water 3) DWR should provide model output files (e.g., post-processed csv files with metadata) that report nodal stream flow and groundwater head over time. This release of model output files is not a substitute for the analyses in 1) and 2), above.	Please see response to comment 610-223, which addresses stream-aquifer interactions.
610-225	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Groundwater Levels 1) A survey of the shallow domestic and municipal wells in the Project area should be completed to identify precise well	As described in the Well Perforation section of Appendix 8A, Delta Groundwater Model: Development and Calibration, well construction information from State's Online System of Well Completion Reports (OSWCR) was used to determine the depth of pumping simulated in the model. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts. The evaluation was conducted using the best available data and assessment methodologies appropriate for CEQA compliance purposes.

Letter-Comment Number	Comment	Response
	coordinates and total depth. This will allow simulation of Project impacts at the true coordinate location and depths to correctly assess where adverse impacts will occur.	As described in Chapter 8, Groundwater, under Impact GW-3, the exact location of wells in the OSWCR database are not known and only the Public Land Survey System (PLSS) section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the existing conditions. The figure titled PLSS Sections with Supply Wells within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. As shown in the figure, the potential impacts across the entire region are covered through the spatial coverage of wells included in the analysis. Potential impacts on any wells in the project area are described under Impact GW-3 and summarized in table titled Number of Supply Wells with Decline in Groundwater Elevations Relative to Existing Conditions. The section titled Impact GW-3: Reduction in Groundwater Levels Affecting Supply Wells of Appendix 8B, Impact Analysis: Groundwater Model Results, details the groundwater changes expected at supply wells under each alternative. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2–3 feet at any well in the region. Also, as described under Mitigation Measure GW-1, prior to construction, the location of existing wells would be determined within the anticipated area of influence at project sites where dewatering would occur during construction or maintenance. Monitoring would occur to ensure dewatering activities do not adversely affect groundwater supplies. Measures, including deepening or modifying existing wells, would be implemented in the event monitoring indicates dewatering was resulting in an substantial adverse impact on groundwater availability.

Letter-Comment Number	Comment	Response
610-226	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: 2) The simulated changes in groundwater levels due to the Project Alternatives should be referenced to measured current groundwater level conditions to properly assess the impacts of groundwater level decline on shallow wells.	Simulated conditions due to project alternatives are compared against the existing conditions baseline. Assumptions pertaining to existing conditions are described in detail in Appendix 8B, Impact Analysis: Groundwater Model Results, in the section titled Existing Conditions (CEQA Baseline). For modeling purposes, existing conditions (CEQA baseline) is characterized by the following: (1) current regulatory environment; (2) current facilities and programs; (3) current water demands and water use; (4) rim watershed inflows derived from historical streamflow records; and (5) valley floor hydrology simulated under an existing level of development. Existing conditions model assumptions and input data are based on conditions that existed in 2020.
610-227	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: 3) Thus, groundwater levels due to the project should be computed at the actual well locations and depths of the shallow private domestic wells, and the public supply wells, and compared with current groundwater levels at these wells.	As described in Appendix 8A, Delta Groundwater Model: Development and Calibration, in the section titled Well Perforation, well construction information from State's Online System of Well Completion Reports (OSWCR) was used to determine the depth of pumping simulated in the model. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts. The evaluation of impacts on groundwater was conducted using the best available data and assessment methodologies appropriate for CEQA compliance purposes. As described in Chapter 8, Groundwater, under Impact GW-3, the exact location of wells in the OSWCR database are not known and only the Public Land Survey System (PLSS) section number of wells is included. As a result, DeltaGW Model results were evaluated at the centroid of each PLSS section to determine the total number of supply wells that could be affected by project operations due a decline in groundwater elevations when comparing the simulated groundwater levels of alternatives with the

Letter-Comment Number	Comment	Response
		existing conditions. The Chapter 8 figure titled PLSS Sections with Supply Wells within 3 Miles of the Delta Region shows the spatial coverage of supply wells considered in the impact analysis. Potential impacts on any wells in the project area are described under Impact GW-3 and summarized in the Chapter 8 table titled Number of Supply Wells with Decline in Groundwater Elevations Relative to Existing Conditions. The section titled Impact GW-3: Reduction in Groundwater Levels Affecting Supply Wells in Appendix 8B, Impact Analysis: Groundwater Model Results, details the groundwater changes expected at supply wells under each alternative. As described in Impact GW-3, the greatest decline in groundwater elevations relative to existing conditions is 2–3 feet at any well in the region. Simulated conditions due to project alternatives are compared against the existing conditions baseline. Assumptions pertaining to existing conditions are described in detail in Appendix 8B in the section titled Existing Conditions (CEQA Baseline). For modeling purposes, existing conditions (CEQA baseline) is characterized by the following: (1) current regulatory environment; (2) current facilities and programs; (3) current water demands and water use; (4) rim watershed inflows derived from historical streamflow records; and (5) valley floor hydrology simulated under an existing level of development. Existing conditions model assumptions and input data are based on conditions that existed in 2020.
610-228	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells:	The DeltaGW Model is based on the best available model and data at the time of initiating the study pursuant to the CEQA guidelines. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the suitability of the model for analysis of local impacts.

Letter-Comment Number	Comment	Response
	4) The DeltaGW Model grid should be refined to test whether there are more acute local impacts under GW-2 or GW-3 due to dewatering wells or reductions in streambed seepage (e.g., there is deeper drawdown at the impacted node). LWA [Larry Walker Associates] recommends a grid size on the order of 90 meters in the vicinity of the intakes and dewatering wells.	
610-229	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Groundwater Quality 1) Refine the model grid in the locale of GeoTracker sites near the Project and perform particle tracking to identify how the temporal and spatial change of groundwater levels impact the flow paths of particles from these contaminated sites.	Revisions to the EIR are not required because the groundwater impact analysis is adequate for the purposes of CEQA compliance. Please refer to Common Response 10, Surface Water Quality and Groundwater Resources, regarding the use and applicability of the DeltaGW model for assessment of groundwater quality for purposes of CEQA compliance.
610-230	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Agricultural Drainage 1) This is similar to impacts on ISW [interconnected surface water] in that the analysis is not localized and is instead presented as annual values. The data presented in Draft EIR	Agricultural drainage is simulated by the DeltaGW model at the model node scale. During the analysis, the changes in agricultural drainage were evaluated both spatially and temporally and no outliers were observed. Results are aggregated to the entire region for a simpler presentation of the results in Chapter 8, Groundwater.

Letter-Comment Number	Comment	Response
	Tables 8B-39 (average annual change) vs. Draft EIR Table 8B-40 (max annual change) indicates that the maximum change in annual agricultural drainage is often 10-20 times greater than the average value. This large variation between average and maximum raises the possibility that significant variability is missed locally (again, same issue as the ISW).	
610-231	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: Groundwater Storage 1) The Draft EIR, p.8-47, lines 39-42 indicates that "Under project alternatives, the region would see an increase in groundwater storage due to increased surface water supplies, as simulated in the surface water analysis. The increase in surface water supply reduces groundwater use and thus reduces the decline in groundwater storage." However, details (e.g., locations, volumes, and timing) of how this increased surface water supply was incorporated into the DeltaGW model are not provided. These details should be included to better understand how this additional supply of surface water affects the simulated results.	Surface water supply analysis was conducted as part of Chapter 5, Surface Water, and Chapter 6, Water Supply. Details pertaining to changes in future surface water supplies are described in the Water Supply Changes section of Chapter 6. Changes in surface water deliveries between existing conditions and project alternatives as simulated by the CalSim 3 model for surface water analyses are reflected in the DeltaGW Model. As described in the Delivery Data section of Appendix 8B, Impact Analysis: Groundwater Model Results, water demands and water use in CalSim 3 are designated by demand units, which generally correspond to water districts, water agencies, Central Valley Project (CVP) and State Water Project (SWP) contractors, and non-district water users. Surface water delivery areas within the DeltaGW Model were assigned to match the CalSim 3 demand units. In Chapter 8, Groundwater, Impact GW-4 has been updated to clarify statements regarding changes in groundwater storage under project operations. As discussed in Impact GW-4, modeling indicates a slight, not notable, increase in groundwater storage compared to existing conditions. The revision does not result in a new significant environmental impact, substantial increase in the severity of an environmental impact, or require additional mitigation measures to which DWR was unwilling to commit. Changes in storage in neighboring regions are presented in Appendix 8B.
610-232	[ATT 1 of ATT 5:] The following revisions to the Draft EIR modeling and associated impact analyses are necessary to address these concerns and present relevant information regarding the	Surface water supply analysis was conducted as part of Chapter 5, Surface Water, and Chapter 6, Water Supply. Details pertaining to changes in future surface water supplies are described in the Water Supply Changes section of Chapter 6. While the surface water analysis simulates that under

Letter-Comment Number	Comment	Response
	Project's potential adverse effects on groundwater, interconnected surface water, groundwater dependent ecosystems, and domestic wells: 2) The addition of extra surface water supply can confound the results. To better understand the impacts of the Project diversions, dewatering, and tunnels on the SASb [South American Subbasin], a local scenario should be simulated of the SASb that does not include these increased surface water supplies unless evidence or justification is provided to support an assumed increase in surface water supply in the SASb.	project operations, there would be changes in both project and non-project surface water deliveries in the Delta region, no changes to surface water supplies are expected in the South American Subbasin. Please see response to comment 610-37, which describes why the project will not affect groundwater storage in the South American Subbasin. Groundwater conditions for the South American Subbasin are evaluated by the DeltaGW model. No significant changes to groundwater elevations (Impact GW-2) or groundwater storage (Impact GW-4) are expected to occur within the South American Subbasin under project operations. Groundwater levels and management of the South American Subbasin would not be affected by operation of the Delta Conveyance Project. A localized study of the South American Subbasin is not needed or required.
610-233	[ATT 1 of ATT 5:] References California Department of Water Resources (DWR). Delta Conveyance Project Draft Environmental Impact Statement Chapter 8 (Draft EIR). 2022. C2VSimFG. 2021. https://data.cnra.ca.gov/dataset/c2vsimfg-version-1-0 Delta Conveyance Design and Construction Authority. Revised Delta Conveyance Site Book (DCP Mapbook). 2022. DWR Well Completion Reports Database. https://data.ca.gov/dataset/well-completion-reports South American Subbasin Groundwater Sustainability Plan (SASb GSP). 2021.	The commenter provided this list for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
610-234	[Exhibit 2 of ATT 1 of ATT 5: Figure 1: "The South American Subbasin is a high priority GSP Plan Area bounded by the Sacramento, American, Mokelumne, and Cosumnes Rivers".]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-235	[Exhibit 3 of ATT 1 of ATT 5: Figure 2: "(A)The southern portion of the SASb plan area (green outline) contains proposed intake locations along the Sacramento River upstream of the Mokelumne River Confluence. Figure modified from Draft EIR Figure 3-2. (B) State monitoring wells in the SASb. © Depth to groundwater in this wetland region is shallow"]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-236	[Exhibit 4 of ATT 1 of ATT 5: Figure 3: "(A) Analysis on output from the CoSANA integrated groundwater and surface water model shows that on a seasonal basis (i.e., spring and fall) from 2005-2018, groundwater elevations intersected the clogging layer elevation for a majority of reach nodes between 75-100% of the time. (B) The Sacramento River upstream of the Mokelumne Confluence is identified as ISW. © Reach names and ISW class and GSA areas in the SASb."]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-237	[Exhibit 5 of ATT 1 of ATT 5: Figure 4: "Seasonally averaged ISW depletion estimated by CoSANA at ISW designated reaches over the current conditions baseline model simulation is relatively constant. Negative numbers indicate losing stream conditions (stream loss to groundwater) and positive numbers indicate gaining stream conditions (stream gain from groundwater). Spring (February - April) and fall (August - October) depletion rates are averaged per month in each 3-month seasonal window. A black vertical dashed line at 2015-01-01 is drawn for reference, and a black solid horizontal line at y = 0 indicates the transition from gaining to losing	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.

Letter-Comment Number	Comment	Response
	conditions. Most scenarios have little impact on seepage. Figure modified from Figure 3-12 in the SASb GSP."]	
610-238	[Exhibit 6 of ATT 1 of ATT 5: Figure 5: "(A) Map of Well Completion Reports identified as domestic or public supply wells within a 1-mile radius of the tunnel alignments. (B) Cumulative distribution plot of well depth for domestic and public supply well."]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-239	[Exhibit 7 of ATT 1 of ATT 5: Figure 6: "CVHM example model: contours of computed head change due to dewatering at 2000 gpm.Head change contours plotted in feet in upper layers. Intended for illustrative purposes only, not intended to represent actual head changes due to the Project."]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-240	[Exhibit 8 of ATT 1 of ATT 5: Figure 7: "Draft EIR maximum groundwater elevation differences greater than 1 foot for Alternative 2a."]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-241	[Exhibit 9 of ATT 1 of ATT 5: Figure 8: "Computed head changes along a general west-east direction near Intake 3. Head changes are shown for the uppermost model layers 1-3"]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
610-242	[ATT 1 of ATT 1 of ATT 5: Resumes of the preparers of the technical report included in ATT 5]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
611-1	The City of Sacramento (City) appreciates the opportunity to provide comments on the July 2022 Delta Conveyance Project (DCP) Draft Environmental Impact Report/Environmental Impact Statement (DEIR). As a local public agency with water rights in both the Sacramento River and the American River, the City has significant interests in the long-term management of the Sacramento and American Rivers, and the operation of	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	the storage facilities along each river	
611-2	The DCP has the potential to impact water storage operations as well as quality and quantity of water supplies in and upstream of the Delta. Accordingly, the City [of Sacramento] provides these comments to ensure the DEIR thoroughly assesses project impacts and adequately identifies mitigation measures for those impacts as required pursuant to the California Environmental Quality Act (CEQA) statutes and related legal authorities.*	This information describes the structure or organization of the comment letter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process. Please refer to Common Response 3, Alternatives Development and Description regarding Delta Conveyance Project's operations, which do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. In addition, changes to surface waters upstream of the north Delta intakes are described in Chapter 5, Surface Water, and changes to water supply are disclosed in Chapter 6, Water Supply. The full range of potential water quality impacts on multiple constituents that may result from construction and operation of the proposed project and alternatives in the Delta are evaluated in Chapter 9, Water Quality (Impacts WQ-1 through WQ-17). The Delta Conveyance Project EIR has been prepared in compliance with CEQA.
611-3	By way of background, the City provides a potable water supply primarily from surface water tributaries to the Delta that serves more than 145,000 customer accounts, and over 525,000 residents. The City's[of Sacramento] diversions of surface water are made pursuant to pre-1914 rights, five water right permits, and a permanent water right operating contract with the United States Bureau of Reclamation.	This information describes the background of the organization or individual commenter. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
611-4	In addition, the City [of Sacramento] provides the following critical services that benefit City residents and business as well as the Delta: Municipal separate storm water sewer system (MS4) services that include a management program, compliance with the National Pollutant Discharge Elimination System permit (NPDES	This information describes the background of the organization or individual commenter. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	No. CAS082597, Order No. R5-2016-0040), and participation in the Sacramento Stormwater Quality Partnership (SSQP). TheSSQP and City stormwater programs provide education and outreach to reduce pollution and to standardize pollution best management practices for development projects across the region. The SSQP and City programs have supported water quality improvements in local creeks and rivers for more than 25 years. A combined sewer system (NPDES No. CA0079111, Order No. R5-2016-0040) that treats wastewater and more than 99.5% of the stormwater drainage from an 11.3 square mile area in the City's Downtown, East Sacramento, and Land Park areas.	
611-5	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 and quality of life 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 supports the coequal goals of restoring the ecological health of the Delta and creating a reliable water supply for all of California.	This comment does not raise a significant environmental issue associated with the Delta Conveyance Project. DWR has reviewed all comments and will consider all comments in its decision-making process.
611-6	The City [of Sacramento] also participates in the Northern California Water Association (NCWA), the Sacramento Central Groundwater Authority (SCGA) and the Sacramento area's Regional Water Authority (RWA) all of which are also commenting on the DEIR. The City hereby incorporates those comment letters by reference into this comment letter.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate the letter numbers of

Letter-Comment Number	Comment	Response
		comments provided by other entities that are of interest (i.e., Sacramento Central Groundwater Authority and Regional Water Authority). Responses to all comment letters are provided in Chapter 4, Response to Comments Tables.
611-7	The City's [City of Sacramento's] review of the DEIR has raised significant concerns with the DEIR's evaluation, or lack thereof in some instances, and mitigation of project impacts to water quality and water supply in and upstream of the Delta. Ultimately, the DEIR insufficiently evaluates impacts of the proposed project and provides insufficient mitigation.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the evaluation of water-dependent resources throughout the EIR. As described in Common Response 1, changes to surface water resources and water supply disclosed in Chapter 5, Surface Water, and Chapter 6, Water Supply, are used to evaluate potentially significant impacts throughout the EIR (e.g., Chapter 12, Fish and Aquatic Resources, and Chapter 8, Groundwater) and feasible mitigation measures are proposed in the relevant resource chapters where appropriate. The EIR has fully evaluated and disclosed potentially significant environmental impacts on a wide range of resources pursuant to CEQA requirements. Please also refer to Common Response 1 regarding the selection of the study area(s) evaluated in the EIR. As described in Common Response 1 and Common Response 3, Alternatives Development and Description, the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding discussion of the modeled upstream effects. Please refer to Chapter 9, Water Quality, regarding the study area for water quality analysis and how the impacts discussion considers areas upstream of the Delta.
611-8	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments:	Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate the letter numbers of comments provided by other entities that are of interest (e.g., Sacramento Stormwater Quality Partnership). Responses to all comment letters are provided in Volume 2, Chapter 4, Response to Comments Tables.

Letter-Comment Number	Comment	Response
	Insufficient Characterization of Impacts Due to Segmenting the State and Federal Portions of the Project	There is no federal portion of the project as claimed by the comment. The EIR evaluates alternative(s) that could accommodate federal participation by Reclamation. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate and required analysis of the project as a whole and the NEPA process related to the preparation of the Environmental Impact Statement (EIS) by the U.S. Army Corps of Engineers, and the scope of the analysis based on the current known level of project design and engineering. The EIR recognizes and considers all known state and federal actions (i.e., NEPA, Clean Water Act, Rivers and Harbors Act, Endangered Species Act, etc.) and requirements that would be needed for the project and which are shown in Chapter 1, Introduction, in the section titled Intended Uses of this Final EIR and Agency Roles and Responsibilities, including the subsection titled Federal Agencies. As described in Chapter 1, DWR fully described alternatives including SWP and CVP operations as appropriate, and therefore fully analyzed the project as a whole.
611-9	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments: Inappropriate Application of Climate Change Scenario for No Project Alternative (Comment 2 for Attachment 1 [see ATT 1] and Attachment 2 [see ATT 2])	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenters letter.
611-10	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments:	The Delta Conveyance Project EIR has been prepared in compliance with CEQA and evaluates the full range of potential water quality impacts on multiple constituents that may result from construction and operation of the proposed project and alternatives in the Delta (Chapter 9, Water Quality, Impacts WQ-1 through WQ-17). All project facilities associated with each alternative are evaluated in Chapter 9, Chapter 26, Public Health,

Letter-Comment Number	Comment	Response
	Insufficient Evaluation of Water Quality Impacts.	and all other chapters in the EIR, as is the implementation of the Compensatory Mitigation Plan and the restoration that would occur under that plan. As described in Chapter 9 sections titled Methods for Analysis, Evaluation of Operations and Maintenance, Upstream of the Delta, the project alternatives would not affect surface water quality in the reservoirs and rivers upstream of the Delta. This conclusion is supported by modeling output in Appendix 5A, Modeling Technical Appendix, Section B, Modeling Technical Appendix – Hydrology And Systems Operations Modeling, and analysis included in the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) which is part of the EIR administrative record, showing little to no change in upstream reservoir storage and river flows. Where some changes were modeled to occur (Oroville Reservoir and Feather River), those changes would not affect upstream water quality because the project alternatives would not affect external sources of constituents and the small changes in reservoir storage and river flows would not affect internal sources of the constituents. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of the study area evaluated in the EIR. Please refer to Common Response 3, Alternatives Development and Description, regarding Delta Conveyance Project operations, which does not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Finally, please refer to Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of upstream effects and operations criteria. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate the letter numbers of comments provided by other entities that are of interest. Responses to the Sacramento Stormwater Quality Partnership's comment letter are provided in Volume 2, Chapter 4, Response to Comments Tables. Given the above, the evaluation of potential upstream water quality

Letter-Comment Number	Comment	Response
		changes and impacts is adequate and based on substantial evidence presented in the EIR. The record provides sufficient disclosure of the lack of impacts upstream for decision makers to understand. Comments regarding the water quality analysis, particularly in relation to areas upstream of the proposed north Delta intakes, are found throughout this letter, including comments 611-12, 611-17, and 611-19 to 611-31. Responses to those comments may refer to this comment 611-10 and/or may include additional responses depending on the comment.
611-11	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments: Insufficient Demonstration of Consistency with Antidegradation Policy and Water Quality Regulation	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship of the State Antidegradation Policy to the EIR and the CEQA process. Please also see Common Response 10, Surface Water Quality and Groundwater Resources, for information on how antidegradation policies were considered when formulating thresholds of significance for use in the EIR. As described in those Common Responses, the thresholds used in Chapter 9, Water Quality, are related to state and federal antidegradation policies, and application of antidegradation policy will be considered by the State Water Board with respect to DWR's application to change the points of diversion in their water right permits.
611-12	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments: Insufficient Proposed Monitoring and Mitigation Related to Water Quality.	Please see response to comment 611-10 regarding the adequacy of the water quality assessment in the Draft EIR in Chapter 9, Water Quality, and effects of the alternatives on water quality on upstream of Delta reservoirs and rivers. As described in Chapter 9, no significant impacts on water quality of reservoirs and rivers upstream of the Delta would occur, thus no mitigation is required, and no monitoring is proposed.
611-13	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment	The EIR provides sufficient detail regarding operations in Chapter 3, Description of the Proposed Project and Alternatives, sections titled Intake Operations and Maintenance and Real-Time Operational Decision-Making Process, and as described in Common Response 3, Alternatives

Letter-Comment Number	Comment	Response
	2 [see ATT 2], both of which are enclosed and fully incorporated into our comments: Lack of Operational Detail for DCP	Development and Description.
611-14	The most significant deficiencies are generally discussed in this letter, which is supported by the specific comments provided in Attachment 1 [see ATT 1] and in the Sacramento Stormwater Quality Partnership's comment letter provided as Attachment 2 [see ATT 2], both of which are enclosed and fully incorporated into our comments: Technical Errors and Omissions, as presented in Attachment 1 [see ATT 1]	DWR considered all comments in letter 611 and reviewed specific comments regarding potential technical errors or omissions to determine if modifications or revisions to the EIR were necessary. Those responses to specific identification of errors and omissions can be found in the letter table for letter 611 (e.g., responses to comments 611-48 through 611-53 and responses to comments 611-56 through 611-125). Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate the letter numbers of comments provided by other entities that are of interest. Responses to all comment letters are provided in Volume 2, Chapter 4, Response to Comments Tables.
611-15	Comment 1 - Insufficient Characterization of Impacts Due to Segmenting the State and Federal Portions of the Project The City requests that the DEIR consider the federal components of the Delta Conveyance Project.	The assertion that the EIR analysis of the project was segmented or piecemealed is not supported by any information presented in the comment letter or attachment. The presentation of the proposed project and alternatives and the analysis in the EIR are appropriately analyzed and no segmenting has occurred related to “federal portions” because there are no federal portions of the project. There are federal permitting requirements through the USACE which requires compliance with Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and through the Section 408 process under the Rivers and Harbors Act. USACE is the lead agency for compliance with NEPA which, under USACE discretion, determined to prepare a separate EIS. Please refer to response to comment 611-8 regarding analysis of the project as a whole and the involvement of U.S. Army Corps of Engineers. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-16	Comment 2 - Inappropriate Application of Climate Change Scenario for No Project Alternative The DEIR summarizes the wide array of climate change models	Please see Common Response 9, Hydrologic Modeling and Approach, regarding the assumptions used in the modeling of climate change and the sensitivity analysis performed by DWR in Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections, which

Letter-Comment Number	Comment	Response
	available to make 21st Century climate change projections. All of the models show significant climate changes throughout the study area, although the degree of impacts can vary widely. DWR summarizes how a single climate change scenario (2040 Central Tendency [CT] with 1.8 feet of sea level rise [SLR]) was developed to incorporate into CalSim (Chapter 30.2.4) to prepare the No Project Alternative and conduct environmental assessments. The 2040 CT with 1.8 feet SLR climate change scenario is very conservative, including extreme risk aversion, with DWR stating, "The higher level sea level rise of 1.8 feet assumed in the DEIR has a probability of occurrence of less than 0.5%." (Appendix 30A.1.2). This likely results in an extreme estimation of the climate change variability and future conditions used lo assess future impacts in the DEIR. Appendix 30A presents a sensitivity analysis of the climate change assessment and two alternate scenarios are discussed; 2040 Central Tendency with only 0.5 feel of SLR and 2040 Median with 1.8 feet of SLR. The sensitivity analysis highlights the significance of scenario selection to determine reservoir storage and river flows in the future, and the impact that sea level rise will have as well. Lower SLR results in higher reservoir storage volume (Appendix 30A.1.3.1), while scenario hydrology appears to have a stronger effect on river flow (Appendix 30A.1.3.2).	considers different climate change variables (e.g., hydrology). Please also see Common Response 6, Climate Resilience and Adaptation, regarding the content of Chapter 30, Climate Change, and meeting CEQA requirements regarding climate change. Finally, please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of the 2040 analysis, which includes a modeled climate change analysis and the 2070 climate change discussion, both which are provided for informational purposes and exceed the requirements of CEQA regarding climate change. The results presented in Appendix 30A confirm the validity of the Draft EIR conclusions with respect to the incremental changes due to the project operations under a wide range of climate change conditions.
611-17	The DEIR conducts comparative water quality analysis based on a single climate change scenario, which DWR has selected to be a very conservative option. The sensitivity analysis shows that there could be significant differences in projected reservoir storage and river flows under alternate climate change scenarios. Reservoir storage and river flow are key driving factors for water quality impacts in areas upstream of the Delta	Please see response to comment 611-16 regarding the modeled climate change scenario. See response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects of project alternatives are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the

Letter-Comment Number	Comment	Response
	and therefore selection of the scenario for development of the No Project Alternative could significantly impact the water quality comparative assessment. This use of a worst-case scenario may minimize the ability to discern differences between a more moderate No Project Alternative and the DCP alternatives.	proposed north Delta intakes.
611-18	Requested Actions: The City [of Sacramento] requests that DWR consider alternate climate change scenarios to allow for water quality impacts between the No Project Alternative and DCP alternatives to be better identified and compared.	Please see response to comment 611-16 regarding the modeled climate change scenarios. The results presented in Appendix 30A confirm the validity of the Draft EIR conclusions with respect to the incremental changes due to the project operations under a wide range of climate change conditions; therefore, alternate climate change scenarios are not needed. Appendix 9L, Water Quality 2040 Analysis, compares the No Project Alternative under climate change scenario with project alternatives under climate change scenario. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-19	Comment 3 - Insufficient Evaluation of Water Quality Impacts The DEIR Chapter 9 assessment of water quality, as well as the impact on Public Services and Utilities in Chapter 21, and Public Health Impacts in Chapter 26 do not adequately address Delta Conveyance Project water quality impacts including cumulative future impacts due to operations of the project facilities and the restoration areas included in the Compensatory Mitigation Plan (Chapter 3). The DEIR review and analysis of the effects of the DCP on water quality in the study area is insufficient. The evaluation needs to be expanded to provide an accurate and more complete assessment. More details are provided in Attachment 1 [see ATT 1].	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small, modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.
611-20	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment	The proposed Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Modeling results indicate that there are small changes in reservoir storage and river flows. The

Letter-Comment Number	Comment	Response
	considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Conduct quantitative analyses, using available data and computational models, to verify that potential impacts to water quality do not cause or contribute to exceedances of water quality objectives or trends in degradation as the City requested in the NOP Comments dated April 16, 2020. Ensure that appropriate time-step basis is applied during the analysis, based on water quality constituent vulnerability.	Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) discusses these small, modeled changes and concludes there is no substantial evidence to support the potential for significant impacts upstream of the Delta. The technical memorandum is part of the administrative record for the EIR and relevant information has been incorporated into Chapter 9, Water Quality, and Appendix 9L, Water Quality 2040 Analysis, as appropriate. Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-21	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the DEIR and must be formally incorporated into the DEIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance.	Please see response to comment 611-10 regarding substantial evidence regarding the areas upstream of the Delta, which has been formally incorporated to support the analysis and conclusions in the Draft EIR and is part of the administrative record for the EIR and the sufficiency of the water quality analysis for the areas upstream of the Delta. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-22	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters

Letter-Comment Number	Comment	Response
	be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Add temperature to the list of constituents included in the evaluation since this is significantly impacted by both reservoir storage and river flows that will be affected by the DCP and is a driver to other water quality impacts (such as CHABs and formation of disinfection by-products). In addition, correct the list of constituents in Section 1 to consider water quality upstream of the Delta to add 'trace metals", as this was included in the subsequent analysis.	Upstream of the Delta at 2040) addresses modeled differences in temperature in the CHABs analysis. The phrase “trace metals” was added into Section 1 of the Upstream of Delta Water Quality Analysis technical memorandum; it was inadvertently omitted in the original version. The revision to include the phrase “trace metals” does not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-23	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Conduct all trace metals evaluations using total concentrations, in order to accurately assess potential for exceedance of municipal water quality objectives or trends of degradation.	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta and response to comment 611-22 regarding trace metals. Based on the small modeled changes in reservoir storage and river flows described in the Upstream of Delta Water Quality technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040), the project alternatives could not cause substantial changes in trace metals (total or dissolved) that would cause exceedance of water quality objectives or degradation. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-24	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Provide quantitative analysis for the water quality evaluation conducted for both study area reservoirs and rivers. There is	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta and the substantial evidence presented in the EIR and the record to support the adequate evaluation. Therefore, the request(s) made by the comment are not necessary for the Final EIR.

Letter-Comment Number	Comment	Response
	sufficient data available in the Sacramento River watershed upstream of the Delta, in both the main reservoirs and rivers, to allow for more specific and accurate consideration of potential water quality impacts.	
611-25	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Provide a method and limits for determination of qualitative findings related to assessment of the CalSim3 modeling output significance.	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding the use of CalSim 3 as the best available tool for hydrologic modeling and the analysis of areas upstream of the north Delta intakes. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-26	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Provide expanded discussion for justification of qualitative water quality determinations, especially the assertion regarding the relationship between small changes in average end-of-month reservoir storage or average monthly/annual river flows and water quality and the findings of significance related to frequency of exceedance of water quality objectives.	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-27	Requested Actions: The City [of Sacramento] requests that DWR incorporate the	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir

Letter-Comment Number	Comment	Response
	area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Provide specific evaluations for periods of greatest potential water quality vulnerability (usually late summer or early fall to account for low storage volumes, low river flows, and warmer temperatures) to verify and validate determinations regarding expected frequency of exceedance of water quality objectives and trends of degradation.	storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-28	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Revise the methodology for the CHAB evaluation upstream of the Delta to more accurately assess impacts to factors such as velocity and temperature, and account for shorter periods of interest. This should be more similar to the Delta analysis presented in Appendix 9E.	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. The CHABs analysis in the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) addresses modeled changes in temperature and flow rate (which is directly related to velocity). Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-29	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta:	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. The expansion of the study area is not warranted given the information in the record regarding areas upstream of the north Delta intakes. Therefore, the

Letter-Comment Number	Comment	Response
	Expand Section 2 on Study Area Reservoirs to include separate evaluation of organic carbon, trace metals, TSS/turbidity, and temperature since these have the potential to be impacted by reservoir internal physical and chemical processes. The trace metals evaluation should include a comparison to upstream reservoir storage. This section also needs to include quantitative analysis for periods of greatest vulnerability, specifically in dry or critical years when reservoir storage is below normal for extended periods.	request(s) made by the comment are not necessary for the Final EIR.
611-30	Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the DEIR. The City requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Expand Section 3 on Study Area Rivers to include separate evaluation of pesticides and temperature since these have the potential to be impacted by river flows and dilution capacity. The TSS/turbidity evaluation needs to consider the potential for increased river turbidity levels during winter months if "excess flows" are released without being held in reservoirs. This section also needs to include quantitative analysis for periods of greatest vulnerability, specifically periods with projected reductions in river flow such as summer and fall months of dry and critical years.	Please see response to comment 611-10 regarding the adequacy of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-31	The City [of Sacramento] requests that DWR update its water quality evaluation in Chapter 26 - Public Health to incorporate temperature impacts to disinfection by-product formation, revise metals analysis based on total concentrations, and consider lower dilution capacity effects on pesticide	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for the reservoirs and rivers upstream of the Delta. The Upstream of Delta Water Quality Analysis technical memorandum addresses modeled differences in temperature in the CHABs analysis. The conclusions regarding potential effects on reservoirs and rivers upstream of

Letter-Comment Number	Comment	Response
	concentrations.	the Delta are based on the small modeled changes in reservoir storage and river flows, and the fact that, as discussed in Common Response 3, Alternatives Development and Description, the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Therefore, there would be no substantial changes in the concentrations of trace metals (total or dissolved), pesticides, or organic carbon or bromide (i.e., potential precursors to disinfection byproducts). Accordingly, no revision to the analysis in Chapter 26, Public Health, is required.
611-32	The City [of Sacramento] requests that DWR reconsider the Less than Significant determinations for impacts associated with water quality in areas upstream of the Delta Water; Quality (WQ-8, WQ-11, WQ-12, WQ-13, WQ-14), Utility (UT-2), and Public Health (PH-2 and PH-5), based on updated water quality evaluations.	Please see responses to comments 611-10 through 611-30 regarding the adequacy of the water quality evaluation for the reservoirs and rivers upstream of Delta. As described in those responses, substantial evidence is in the record of the EIR supporting the information regarding areas upstream of the Delta and the determination(s). Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-33	Comment 4 - Insufficient Demonstration of Consistency with Antidegradation Policy and Water Quality Regulation Antidegradation policies have been issued at both the federal and State of California (State) level. These policies are intended to protect existing water quality and associated beneficial uses. The federal policy is expressed as a regulation in 40 CFR 131.12. and requires protection of existing in-stream uses and water quality necessary to protect those uses. The federal policy also requires maintenance and protection of water quality beyond that required to support propagation of fish, shellfish and wildlife, and recreation (i.e., meet "fishable, swimmable" standards} when high water quality exists, unless a state finds that lower water quality is necessary to accommodate important economic and social development. The State policy,	Please see response to comment 611-11 regarding the relationship of the State Antidegradation Policy to the EIR and the CEQA process.

Letter-Comment Number	Comment	Response
	adopted in 1968 as a resolution of the State Water Resources Control Board (State Water Board, Resolution 68-16), addresses the need to maintain high quality waters in California consistent with maximum benefit to the people of the State. USEPA Region 9 1 [Footnote 1: USEPA Region 9. Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12. June 3, 1987. http·// water.epa.gov/scitech/swguidance/standards/adeg/upload/Region9_ antideg_guidance. Pdf]and the State Water Board2 [Footnote 2: Attwater, William, Chief Counsel, State Water Resources Control Board. Federal Antidegradation Policy. Memorandum to Regional Board Executive Officers. October 7, 1987.] also provided guidance on implementing the antidegradation provisions. These guidance documents specify that diversion projects, such as the Delta Conveyance Project, meet antidegradation requirements. The USEPA Region 9 guidance document specifies that actions subject to antidegradation requirements include "3. Other "major Federal actions" (pursuant to NEPA and the Endangered Species Act)" and "4. Water quantity/water rights actions which affect water quality." The DEIR is insufficient because it does not specify how the Delta Conveyance Project fulfills the requirements in the federal and State policies.	
611-34	The limited water quality analysis conducted related to constituents of interest for drinking water as part of the Chapters 9, 21, and 26, as well as the Upstream of Delta Water Quality Analysis technical memorandum, did not include any consideration of degradation trends over time. The analysis was largely qualitative and quantitative evaluations only looked at discrete comparisons to existing numerical water quality objectives.	The purpose of the water quality analysis in Chapter 9, Water Quality, is to identify potential impacts of the project alternatives per the requirements of CEQA. Impacts are evaluated and identified using a comparative analysis, in which conditions under each alternative are compared to the baseline. The water quality thresholds of significance address both frequency of exceedance of water quality objectives and water quality degradation relative to effects on beneficial uses, and impact conclusions were made accordingly. Therefore, the water quality impact analysis did

Letter-Comment Number	Comment	Response
	When determining significance of the findings related to water quality, there was only a comparative analysis to exceedances of water quality objectives.	not only look at comparisons to water quality objectives as claimed by the comment. Water quality degradation (or improvements) over time due to factors unrelated to the project alternatives are addressed within the cumulative analysis in Chapter 9, in the section titled Cumulative Analysis.
611-35	Requested Actions: The City [of Sacramento] requests that DWR perform a complete antidegradation analysis according to the State and federal guidance. The City also requests that DWR specifically include trends of degradation as part of the threshold of significance for water quality and prepare an antidegradation analysis as part of the water quality evaluation to verify that trends of degradation are not caused by implementation of the project throughout the Study Area, including areas upstream of the Delta.	As described in response to comment 611-34, the thresholds of significance for water quality included consideration of water quality degradation relative to effects on beneficial uses. Furthermore, water quality degradation over time is addressed in Chapter 9, in the section titled Cumulative Analysis. Please refer to response to comment 611-11 and Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding an antidegradation analysis and the relationship to the project. As described in those responses and Common Response, the thresholds used in Chapter 9, Water Quality, are related to state and federal antidegradation policies, and application of antidegradation policy will be considered by the State Water Board with respect to DWR's application to change the points of diversion in their water right permits. Therefore, the request(s) made by the comment are not necessary for the Final EIR.
611-36	Comment 5 - Insufficient Proposed Monitoring and Mitigation Related to Water Quality A lack of a complete and comprehensive water quality assessment has eliminated any impacts from being identified as part of this Draft EIR. Therefore, there are no proposed mitigation actions in the DEIR that are related to water quality in areas upstream of the Delta, or specifically addressing the municipal use.	Please see response to comment 611-10 regarding the adequacy of the water quality assessment in the Draft EIR and effects of the alternatives on water quality in upstream Delta reservoirs and rivers. As described in Chapter 9, Water Quality, no significant impacts on water quality of reservoirs and rivers upstream of the Delta would occur, thus no mitigation is required and no monitoring is proposed.

Letter-Comment Number	Comment	Response
611-37	The substantial amount of uncertainty employed in the conduct of this Draft EIR, and future operation of the DCP, necessitates a plan to monitor, track, and evaluate the validity of these assumptions and the lack of water quality impacts caused by future operation of the DCP. This plan should also involve a strategy to adaptively manage identified impacts through mitigation efforts.	Please refer to responses to comments 611-10 and 611-36 regarding the water quality analysis and areas upstream of the north Delta intakes. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding a discussion of uncertainty. As discussed in Common Response 1, uncertainty is addressed as appropriate throughout the EIR and also in regards to development and implementation of adaptive management during operation of the project.
611-38	Requested Actions: The City [of Sacramento] requests that DWR consider how it will plan to implement a long-term monitoring program to ensure that the qualitative assessments and determinations of no significant impact to water quality are valid during operation of the DCP. Given the extreme uncertainty in environmental conditions and operations of the DCP, many of the assumptions should be validated. In addition, DWR should identify a process for other beneficial users upstream of the Delta to be engaged as stakeholders in the DCP.	Please see response to 611-36 and response to comment 611-37 regarding impacts on water quality, which are less than significant and do not require mitigation measures, and for a discussion regarding uncertainty.
611-39	Comment 6 - Lack of Operational Detail for DCP The City of Sacramento requested inclusion of operational detail, including development of tools to evaluate potential operating scenarios, as part of the DEIR in our comments on the EIR NOP on April 16, 2020. This is not provided in the DEIR. DWR justifies this lack of inclusion in the DEIR (Section 5.0) since: "Existing regulations, operational rules, and water supply allocation procedures governing SWP and CVP system operations would not change because of operation of the project alternatives. However, because of the effect that integration of the proposed north Delta intakes has on the	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to Letter 545 (comments 545-9 through 545-15) for detailed responses on those similar topics. Please refer to Volume 2, Chapter 2, to locate the letter numbers of comments provided by other entities that are of interest (e.g., Letter 545). Responses to all comment letters are provided in Volume 2, Chapter 4, Response to Comments Tables. In addition, the EIR describes the project in sufficient detail to present the whole of the project, and adequately details project components for use in resource chapter analyses. Proposed operations of the project alternatives are sufficiently described to adequately analyze impacts under CEQA. Additional detail about how the project would be operated beyond what is disclosed in Chapter 3, Description of the Proposed Project and Alternatives, is not required by CEQA nor would additional "tools to evaluate potential operating

Letter-Comment Number	Comment	Response
	overall system, their operation could lead to changes in river flows and upstream storages." The primary goal of the DCP is to augment DWR's ability to capture "excess flows" during wet weather periods to increase the reliability of deliveries through the SWP/CVP. The term "excess flows" is not formally defined in the DEIR, nor the process of how these flows will be identified. The DEIR states in Section 5.3.2.2 that "In the CalSim 3 model, increasing exports is always prioritized; however, these savings would remain in storage when sufficient export capacity does not exist", so it appears that prioritization of diversion would occur. This may be a philosophical shift in operation of the SWP/CVP system and yet, DWR repeats frequently in the DEIR that there are no proposed changes in the system operation. There is no clear definition in the current operations of the SWP on how DWR will decide the balance of where "excess flows" will be kept (i.e., upstream storage or NDI diversion for downstream storage). The historic norm has been to maximize upstream storage for later release and diversion, but this is not formally mandated/obligated in the SWP/CVP system operations (i.e., water control manuals for the various CVP/SWP reservoirs). If NDI [North Delta Intakes] diversion is prioritized to capture "excess flows" it could allow increased capacity at the South Delta intakes, which could endanger upstream reservoir storage volumes, river flows, and subsequent water quality.	scenarios" aid in disclosing impacts of the Delta Conveyance Project as described in Chapter 3. Additional clarifications regarding operations and integrating the Delta Conveyance Project into the SWP are provided in Chapter 3 and explanation of project operations and operational criteria, including operations to capture excess flows, is addressed in Common Response 3, Alternatives Development and Description.
611-40	Modeling Limits on Delta Exports DEIR Appendix 05A, Section B, Page B-63 states that "[t]he operation rules could result in months when simulated	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to Letter 545 (specifically comment 545-9) for detailed responses on those similar topics. In addition, the information provided in Chapter 3, Description of the Proposed Project

Letter-Comment Number	Comment	Response
	diversions through the proposed north Delta intakes are not maximized, even when the bypass flow requirements would allow greater diversions". The DEIR does not describe or demonstrate when these conditions occur in the modeling, how frequently use of North Delta Diversion (NOD) facilities are limited, nor why NOD operations are not maximized. It is unclear whether the modeled operational rules are intended to become actual operational requirements if the DCP is constructed. Additional clarification would help the reader understand if the DCP alternatives fully cover the maximum range of potential operations and project effects.	and Alternatives, regarding the operation of the Delta Conveyance Project intakes is an accurate description of the criteria under which the Delta Conveyance Project will operate. As discussed in Common Response 3, Alternatives Development and Description, the purpose of the Delta Conveyance Project is not to change the existing operation of upstream reservoirs. The hydrologic modeling conducted for each alternative is an accurate depiction of how each alternative would operate and the resulting changes in hydrologic conditions including river flows, reservoir storage, and water deliveries. Those changes are summarized in Chapter 5, Surface Water, and provides information that was used to support the environmental assessment and allow an accurate comparison of impacts between alternatives.
611-41	Additionally, as stated in DEIR Appendix 05A, Section B, Page B-63, "shifting of exports from the south Delta intakes to the proposed north Delta intakes only occurs when there is an operational advantage to doing so in terms of carriage water savings." The DEIR does not describe the operational criteria for this shift, the volume of this shift, or when ii occurs. The DEIR does not state if this criterion would be discretionary; if it is discretionary, DWR has not modeled an alternative that would demonstrate the maximum use of the NDD [North Delta Diversion]. Therefore, benefits and impacts of the NOD may be understated in the DEIR. Currently, Alternative 5 prioritizes South Delta Diversion (SDD) and there is a sensitivity analysis that prioritizes NDD; however, there is no alternative that maximizes combined NDD and SDD. If the modeling rules are not intended to become actual operational requirements, the potential effects of maximum allowed exports with the DCP have not been analyzed.	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to response to comment 545-10 for a detailed response regarding the modeling accurately representing the proposed Delta Conveyance Project operations, including seasonal shifting from south Delta exports to the proposed north Delta diversions.

Letter-Comment Number	Comment	Response
611-42	Model Assumptions on Shared CVP/SWP Obligations and Benefits The DCP and NDD [North Delta Diversion] increase total diversions from the Delta. Increases in total diversions from the Delta, and the corresponding decreases in Delta outflow will increase Delta salinity and may result in greater Delta outflow required to meet salinity requirements in future months. CalSim 3 modeling of the Preferred Alternative shows that Minimum Required Delta Outflow "MRDO" increases an average of 40 thousand acre-feet (TAF) per year in DCP Alternative 5 when compared to Existing Conditions. MRDO is a shared obligation of the SWP and CVP under the Coordinated Operations Agreement (COA). An increase in MRDO increases the obligation on both projects and can be a risk to water users of both the SWP and CVP. Additionally, the increased MRDO may lead to increased instances of Term 91. Modeling results show migration of X2 inland in almost every month of the CalSim 3 simulation; this eastward movement of X2, due to increases in Delta Export, demonstrates that the salinity field is moving eastward and increasing salinity in the Delta. Conversely, the use of the NOD can also reduce the quantity of the waters that are needed for Delta Outflow to maintain Delta salinity standards for a given rate of Delta exports, commonly referred to as carriage water. The DEIR does not fully evaluate the additional water costs associating with increases in X2, salinity requirements, and the carriage water savings explicitly and in a detailed manner including the frequency and conditions when each effect could occur.	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to Letter 545 (specifically comments 545-11 and 545-12) for detailed responses on those similar topics. In addition, as noted in the comment, the carriage water benefits are split between the SWP and CVP according to the Coordinated Operating Agreement (COA). The “water costs” to meet X2 and Delta salinity-related objectives for chloride and electrical conductivity, as well as other regulatory requirements, are reflected in the CalSim 3 modeling results, including the reservoir storage changes described in Chapter 5, Surface Water, and water supply deliveries described in Chapter 6, Water Supply. As described in Chapter 5, the SWP/CVP shared responsibilities are modeled in CalSim 3. Changes in SWP/CVP storage and releases due to MRDO and X2 shift with Delta Conveyance Project are also included. This comment suggests that increased COA obligations due to eastward movement of X2 will increase water supply risk to SWP and CVP. Viewed in isolation, this may be true but there are also COA benefits to both SWP and CVP due to carriage water savings, which counterbalance these effects. More importantly, the modeling shows increases in upstream storages and exports for both SWP and CVP, so even if releases for X2 are increasing, minor increases in in-basin use when the Delta is in a balanced condition are typically not large enough to trigger Term 91 conditions. While modeling results presented in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives, in the section titled Delta Inflow, indicate that salinity does increase and X2 does move eastward slightly, all existing standards will continue to be met for X2, and salinity standards would not be violated. Any upstream storage and water supply risks from increased salinity and eastward movement of salinity would be reduced by the storage benefits of the carriage water savings from the Delta Conveyance Project. This is why model results show

Letter-Comment Number	Comment	Response
		slight increases in storage in upstream reservoirs. Please also see Common Response 9, Hydrologic Modeling and Approach, for additional information on use of the CalSim 3 model and representation of net Delta outflow. The comment speculates that the triggering of Term 91 would increase with the Delta Conveyance Project without any supporting analysis. As described in Common Response 9, Hydrologic Modeling and Approach, the frequency of when Term 91 is in effect under the project alternatives is similar to that under existing conditions, with no significant changes. Furthermore, even assuming a potential for increase in the instances of Term 91 triggering with Delta Conveyance Project, that in itself is not an impact, since SWP has senior water rights.
611-43	Furthermore, the DEIR does not describe how the project would shift diversions from SDD [South Delta Diversions] to NDD [North Delta Diversions] in real time operations. The DEIR does not describe how this shift would result in an overall improvement in water quality in the Delta. As indicated by the salt balance calculations, an increased diversion of Sacramento water from the Delta (which is better in quality than San Joaquin water) could degrade the water quality in the Delta with prolonged use of NDD facilities.	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to Letter 545 (specifically comments 545-13) for detailed responses on those similar topics. Please refer Common Response 3, Alternatives Development and Description, for additional explanation regarding carriage water savings/efficiency and under what conditions diversions would be shifted from the south Delta to proposed north Delta diversion facilities when salinity limits exports in the south Delta. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, in the section titled Absolute Versus Relative Analysis, acknowledges that CalSim 3 reliance on generalized rules and specific operations in response to real-time operations is not represented in the model. Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, describes the general strategy expected to be employed during dual conveyance operations, including elements to adjust to real-time conditions. Additionally, in Chapter 3, a table titled Delta Conveyance Preliminary Proposed Operations Criteria provides additional information

Letter-Comment Number	Comment	Response
		on responding to real-time hydrological and biological conditions. The project's impacts on water quality are fully disclosed in Chapter 9, Water Quality. The analysis concluded that operation-related impacts on chloride levels within the Delta are less than significant.
611-44	Modeling Constraints on Use of Stored Water Release and conveyance of SWP stored water from Oroville is constrained in the modeling of the Preferred Alternative by criteria that are inconsistent with existing SWP operations. Current SWP operational objectives allocate and move stored water with available SDD [South Delta diversions] capacity until Oroville carryover storage is 1.6 million acre-feet (MAF). This operation is simulated as part of the Existing Conditions in modeling for the DEIR. The DCP provides additional capacity for the SWP to export water from the Delta, and when combined with current SWP operations, would result in more frequent carryover storage of 1.6 MAF in Oroville. However, modeling of the Preferred Alternative does not utilize the additional capacity provided by the DCP to move stored water. Although there is additional release and conveyance of stored water from Oroville in modeling of the Preferred Alternative, it is limited in the modeling to a greater extent than is described in the DEIR. There are no operating criteria described in the DEIR that prevent exports of stored water through NDD [North Delta Diversions] and the effects of utilizing the additional capacity provided by DCP to convey additional stored water were not evaluated. Increases in release of stored water from Oroville may result in lower storage in dry and critical years and increase risk to Feather River Settlement Contractors. Additionally, lower storage in Oroville can be a risk to the CVP	This comment raises similar project operation and hydrologic modeling topics to those raised in Letter 545. Please refer to response to comment 545-14 for a detailed response regarding the modeling accurately representing the proposed Delta Conveyance Project operations, including the use of stored water and proposed north Delta diversion capacity.

Letter-Comment Number	Comment	Response
	if Oroville storage is not adequate to meet the shared obligations of both projects. The DEIR in Appendix 05A, Section B, Page B-63 states that "for the SWP only, releases of up to 100 TAF/year [thousand acre feet] can be made from Lake Oroville in wetter 16 years for diversion at the north Delta intakes from July through September." The DEIR modeling does not demonstrate how this operating rule is modeled. II is unclear whether the modeled operational rule is intended to become actual operational requirements if the DCP is constructed. Additional clarification would help the reader understand if the DCP alternatives fully cover the maximum range of potential operations.	
611-45	The City [of Sacramento] requests that DWR acknowledge that it anticipates the SWP/CVP system will be operated differently in the future with construction of the NDI [North Delta Intake] and it prepare a general framework presenting programmatic goals and conditions as part of the SWP/CVP system. This should also include development of a plan or tool to comprehensively evaluate and manage the potential impacts of operational changes on upstream reservoir storage, river flows, and water quality.	The EIR accurately presents the Delta Conveyance Project operational criteria, integration into the SWP and the real-time operations process in Chapter 3, Description of the Proposed Project and Alternatives. Modeling results summarized in Chapter 5, Surface Water, and detailed in Appendix 5A, Modeling Technical Appendix, are accurate depictions of the Delta Conveyance Project operations. Additional clarifying text is provided in the operations and maintenance section related to operational criteria and integration of the Delta Conveyance Project into the SWP. Please also refer to Common Response 3, Alternatives Development and Description, for additional information about project operations. CEQA requires the proposed project and alternatives to be compared to existing conditions to determine impact significance. The EIR also presents resource analyses for the No Project Alternative and project alternatives under future 2040 conditions assuming climate change and sea-level rise. DWR's Operations Division monitors SWP reservoir conditions, stream flows, and environmental conditions continuously. The suggestion of an additional predictive tool for this purpose is beyond the scope of the Delta Conveyance Project and this EIR and would not provide additional

Letter-Comment Number	Comment	Response
		information useful in disclosure of impacts under CEQA in the EIR.
611-46	In addition, the City [of Sacramento] requests that DWR formally define "excess flows" as well as a process for how those will be identified and stored, including consideration of setting minimum storage volumes in upstream reservoirs, especially during dry and critical years, to ensure protection of upstream Beneficial Uses, including water quality for municipal use.	Please refer to Common Response 3, Alternatives Development and Description, for additional explanation about Delta Conveyance Project operations to capture excess flows including a working definition.
611-47	Comment 7 - Technical Errors and Omissions The DEIR has numerous technical errors and omissions related to the evaluation of the impacts of the DCP related to drinking water quality. These errors and omissions are related to several general topics. Requested Actions: The City [of Sacramento] requests that these errors and omissions be reviewed and addressed.	DWR considered all comments in letter 611 and reviewed specific comments regarding potential technical errors or omissions to determine if modifications or revisions to the EIR were necessary. Those responses to specific identification of errors and omissions can be found in this letter table for letter 611.
611-48	Incorrect application of the drinking water regulatory requirements in California Incorrect drinking water standards provided in Appendix 9A - Screening Analysis on Table 9A-6: Aluminum (should also include the primary MCL [maximum contaminant level] of 1000 ug/L), Chlorobenzene (monochlorobenzene has a primary MCL of 70 ug/L),	The drinking water regulatory requirements and standards provided in Appendix 9A, Screening Analysis, are correctly applied in the EIR analysis. Water quality constituent screening in Appendix 9Acompared maximum detected or non-detect concentration with the lowest applicable federal water quality criterion or state water quality objective. The lowest applicable water quality objective for aluminum is the secondary MCL of 200 µg/L, which was listed in the Appendix 9A table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta. The maximum detected aluminum concentration of 2,040 µg/L resulted in aluminum being retained for further analysis in Chapter 9, Water Quality. Using the primary MCL of 1,000 µg/L would not result in any changes to the analyses or impact conclusions and no change

Letter-Comment Number	Comment	Response
	TTHM (represents chloroform, bromoform, bromodichloromethane, and dibromochloromethane and is set at 80 ug/L), HAAS (represents monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid and is set at 60 ug/L), Color (should include California Maximum Contaminant Levels footnote "b" to represent a secondary MCL), Gross Beta (primary MCL is 4 millirems/year), and Thiobencarb (should also include the primary MCL [maximum contaminant level] of 70 ug/L)).	to the table is needed. The table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta listed the California Toxics Rule (CTR) criterion for the protection of human health water and organisms of 680 µg/L for chlorobenzene. Monochlorobenzene is a synonym for chlorobenzene and the MCL of 70 µg/L was inadvertently omitted from this table, though the 70 µg/L MCL was listed in the Appendix 9A table titled Constituents Analyzed but Never Detected (Totaling 319) at a Source Water Monitoring Location. Chlorobenzene was not detected in any of the 47 samples available in the screening database and the reporting limit of 0.5 µg/L did not exceed the MCL. Thus, chlorobenzene was not carried forward for detailed assessment. The table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta has been amended to include the 70 µg/L MCL. Because all data for chlorobenzene are non-detect at reporting limit of 0.5 µg/L, this change does not affect the analysis results in Appendix 9A or in Chapter 9. The lowest applicable objective of 80 µg/L for total trihalomethanes (TTHM) is listed in the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta under “Total Trihalomethanes.” Chloroform, bromoform, bromodichloromethane, and dibromochloromethane were below detection limits in all samples with reporting limits of 0.5 µg/L; thus, the sum of maximum reporting limits for individual constituents contributing to TTHM does not exceed the objective. Bromoform, bromodichloromethane, and dibromochloromethane were also compared to their CTR criterion for human health water and organisms of 4.3 µg/L, 0.56 µg/L, and 0.41 µg/L, respectively (the CTR did not promulgate a criterion for chloroform). Furthermore, TTHMs are not naturally present in surface waters; they are a chlorine disinfection byproduct. Based on results compared to these objectives/criteria, it was appropriate that neither individual TTHMs nor

Letter-Comment Number	Comment	Response
		TTHM were carried forward for detailed assessment in Chapter 9. The lowest applicable objective for haloacetic acids five (HAA5) is the California Drinking Water MCL of 60 µg/L. This was listed in the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta for "Haloacetic acids (five)." The objective is also listed for monobromoacetic acid (MBAA) and monochloroacetic (MCAA) in the table titled Step 2: All Constituents (Totaling 263) that were Detected at Least Once at a Source Water Monitoring Location. Maximum concentrations of MBAA (20 µg/L) and MCAA (6.7 µg/L) did not exceed their objectives as individual constituents or as summed HAA5. No data for dichloroacetic, trichloroacetic, and dibromoacetic acid were available in the screening database. Furthermore, HAA5 are not naturally present in surface waters; they are a chlorine disinfection byproduct. Thus, it was appropriate that neither individual HAA5 nor the total HAA5 were carried forward for detailed assessment in Chapter 9. In the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta, the California Drinking Water MCL footnote "b" has been added to the color MCL to identify that it is a secondary MCL. The revision to this table does not result in a change to an impact determination or require additional mitigation measures that DWR is unwilling to commit to. The MCL for Gross Beta was correctly described in the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta in the footnote "f" as 4 mRem/year but was incorrectly listed in the body of this table as 4 pCi/year. This has been corrected. The change does not affect the water quality analysis in Chapter 9 or impact determinations, as no data for gross beta were in the screening database for comparison to the objective. The revision to the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin

Letter-Comment Number	Comment	Response
		Delta does not result in a change to an impact determination or require additional mitigation measures that DWR is unwilling to commit to. The lowest applicable water quality objective for thiobencarb is the secondary MCL of 1 µg/L, which was listed in the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta. The maximum detected thiobencarb concentration of 0.0652 µg/L, did not exceed the lowest applicable objective. This concentration also is less than the higher primary MCL of 70 µg/L. Thus, it was appropriate that thiobencarb was not carried forward for detailed assessment in Chapter 9.
611-49	Incomplete depiction of CVRWQCB [Central Valley Regional Water Quality Control Board] Basin Plan metals water quality objectives in Appendix 9A - Screening Analysis on Table 9A-6, Central Valley Regional Water Quality Control Board (RWQCB) Water Quality Control Plan (WQCP) footnote "a" does not address the MUN [municipal] beneficial use, which must use total metals analysis for primary MCLs [maximum contaminant levels] and filtered metals analysis in accordance with the Secondary MCL Policy for secondary MCLs.	Central Valley Regional Water Quality Control Board (RWQCB) Water Quality Control Plan (WQCP) footnote "a" in the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta describes conditions for trace metal water quality objectives applicable to arsenic, barium, copper, cyanide, iron, manganese, silver, and zinc consistent with Table 3-1 in the WQCP. The footnote in Appendix 9A table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta cited in this comment is correct as written. Primary and secondary maximum contaminant levels (MCLs) are provided in a separate column at the far right of the table titled Applicable Water Quality Criteria and Objectives for the Sacramento–San Joaquin Delta in Appendix 9A. Comparisons between the lowest water quality criterion or objective and the maximum concentrations of both total and dissolved trace metals were made in the screening analysis. The conservative screening analysis ensured that total concentrations of trace metals were compared with MCLs in the detailed analyses, and dissolved metal concentrations were compared with trace metal water quality objectives in the detailed analyses, as appropriate.
611-50	Incorrect determination of compliance with drinking water standards and misrepresentation of the regulatory requirements and enforceability of secondary drinking water	The screening analysis procedures in Appendix 9A, Screening Analysis, compared both total and dissolved metals concentrations to lowest water quality criteria. In some cases, the lowest criterion was the drinking water

Letter-Comment Number	Comment	Response
	standards in California for drinking water agencies in Appendix 9A - Screening Analysis: All metals moving on from Step 2 analysis in Appendix 9A - Screening Analysis were limited to the rows representing the dissolved metals analysis, rather than the total metals analysis. Use of dissolved metals data is not permissible to evaluate compliance with water quality objectives. This is incorrect as compliance with all constituents with primary 'MCLs [maximum contaminant levels] must use total concentrations for determining compliance with a Primary MCL, and only allow total concentrations of filtered samples (at 2um) for secondary MCLs (as per CVRWQCB's Secondary MCL Policy), and In the evaluation of color (9A.8.2), which has a secondary MCL, there is an incorrect reference to drinking water objectives compliance in California. The text states, "Secondary MCLs are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations." In California, the Department of Drinking Water (DOW) mandates compliance with all secondary MCLs, these are not guidelines.	MCL, which is a water quality objective in the Central Valley Water Board's Basin Plan for water designated for municipal and domestic supply uses. For example, total arsenic concentrations are compared to the 10 ug/L MCL. In other cases, the lowest applicable criterion was a California Toxics Rule criterion for protection of aquatic life (e.g., silver, zinc). Therefore, the screening analysis in Appendix 9A appropriately identified trace metals warranting detailed analysis in Chapter 9, Water Quality. Also see response to comment 611-71 regarding the water quality objectives and criteria applied in the trace metals analysis in Chapter 9, Impact WQ-12. Appendix 9A, section titled Color, has been revised to remove reference to secondary MCLs being "guidelines" and clarify that secondary MCLs are established for consumer acceptance. The revision to Appendix 9A does not result in a change to an impact determination or require additional mitigation measures.
611-51	Add DDW [Department of Drinking Water] Recommended Acute/Short-Term Notification Levels for Cyanotoxins into Appendix 9E, Cyanobacteria Harmful Algal Blooms, as shown in the table below [see Exhibit 1].	The cyanotoxin notification levels referred to in this comment are California Office of Environmental Health Hazard Assessment (OEHHA) recommendations to the State Water Board Division of Drinking Water (DDW). Notification levels are health-based advisory levels established by DDW for chemicals that lack drinking water regulatory standards (maximum contaminant levels, or MCLs). When chemicals are found at concentrations greater than their notification levels, certain requirements and recommendations apply. OEHHA submitted the cyanotoxin notification level recommendations to DDW on May 3, 2021, and they are currently

Letter-Comment Number	Comment	Response
		under review and have not been adopted as notification levels. Furthermore, the CHABs analysis in Chapter 9, Water Quality, Impact WQ-14 addresses the impacts of the project alternatives on bloom potential, not cyanotoxin levels. Therefore, addition of the OEHHA-recommended cyanotoxin notification levels to Appendix 9E, Cyanobacteria Harmful Algal Blooms, is not necessary to support the analysis or impact conclusions.
611-52	Incorrect technical assumptions on the treatability of various water sources by conventional filtration -Incorrect assumption that temperature is not significant to drinking water supply, -Incorrect assumption that conventional filtration is not impacted by increased loads and concentrations of constituents, and -Incorrect use of long-term averages for determination of significance of impact.	Assertions that the alternatives would substantially alter water temperature and constituent concentrations in reservoirs and rivers upstream of the Delta are not supported by analyses in the EIR. As described in Chapter 9, Water Quality, and the Upstream of Delta Water Quality Analysis technical memorandum, the project alternatives would have little to no effect on the water quality of upstream reservoirs and rivers. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that, as discussed in Common Response 3, Alternatives Development and Description, the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. The conclusions reached in Chapter 9 are based on the monthly average reservoir storage and river flow rate CalSim modeling results presented in Appendix 5A, Modeling Technical Appendix, not just long-term averages of the modeling results. Please see response to comment 611-10 for additional explanation regarding effects of the alternatives on upstream of Delta reservoirs and river.
611-53	Inadequate representation of ambient water quality Insufficient data query for constituents of interest upstream of the Delta.	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects of are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.
611-54	[Exhibit 1: Table showing Recommended Acute and Short-Term LNs for Cyanotoxins]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.

Letter-Comment Number	Comment	Response
611-55	In closing, we [City of Sacramento] thank you for your consideration of our comments provided above and through the enclosed Attachments [see ATT 1 and ATT 2] as well as comments from other stakeholders expressing similar concerns. We understand the scale and significance of this project is both complex and resource intensive, requiring the cooperation of many agencies and other entities, and we hope to be constructive participants throughout the DEIR process.	This information is general closing text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
611-56	[ATT 1:] Sacramento's ability to continue use of surface water for municipal supply could be injured by the Proposed Project's diversion at the north Delta Intakes (NDI) by resulting in alteration of upstream reservoir operations and river flows, causing increased water temperature and lower flows, and the potential for increased disinfection by-products, the presence of blue-green algae, and other unintended water quality impacts that may require significant changes by Sacramento in their operations or water treatment. The focus of these comments is on water quality impacts upstream of the Delta, including both site-specific analysis and fundamental approaches in the Draft EIR evaluation.	Please see responses to comments 611-10 through 611-30 regarding the adequacy of the water quality evaluation for the reservoirs and rivers upstream of Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.
611-57	[ATT 1:] Comment 1 - Insufficient Characterization of Impacts Due to Segmenting the State and Federal Portions of the Project The EIR fails to comply with CEQA segmenting guidelines for consideration of "the whole of the action" (CEQA Section 15378 a). The EIR considers only the State Water Project portion of the larger Delta Conveyance Project and does not	Please see responses to comments 611-8 and 611-15 regarding evaluating the project as a whole as well as the NEPA process undertaken by USACE. As described in that response and in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, the assertion that the EIR analysis of the project was segmented is not supported by the EIR. The EIR fully evaluates the project as a whole and the preparation of one NEPA document and one CEQA document (i.e., two separate documents) for the same project is consistent with CEQA guidelines.

Letter-Comment Number	Comment	Response
	directly consider the federal elements as stated in Chapter 1 (Introduction) and Chapter 3 (Description of the Proposed Project and Alternatives, page 3-1): For the Delta Conveyance Project (project), DWR is preparing a standalone Draft EIR that will not be prepared jointly with a federal agency's National Environmental Policy Act (NEPA) compliance document. As explained in Chapter 1, a separate Environmental Impact Statement (EIS) will be prepared to meet the requirements of NEPA, with the U.S. Army Corps of Engineers (USACE) as the lead agency. CEQA Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) define a project under CEQA as "the whole of the action" that may result either directly or indirectly in physical changes to the environment. Segmenting a project into two or more pieces and evaluating each piece in a separate environmental document could understate the overall project impacts. Segmenting a project may also hinder developing comprehensive mitigation and compensatory strategies. Without including the federal elements of the Delta Conveyance Project, the EIR segments project elements and omits potential impacts.	
611-58	[ATT 1:] Comment 2 - Inappropriate Application of Climate Change Scenario for No Project Alternative The climate change assessment specifically includes areas upstream of the Delta in the study area (Chapter 30.1.1). The Draft EIR summarizes the wide array of climate change models available to make 21st Century climate change projections. All of the models show significant climate changes throughout the study area, although the degree of impacts can vary widely.	Please see responses to comments 611-16 and 611-18 regarding the evaluation of climate change in the EIR.

Letter-Comment Number	Comment	Response
	DWR summarizes how a single climate change scenario (2040 Central Tendency [CT] with 1.8 feet of sea level rise [SLR]) was developed to incorporate into CalSim (Chapter 30.2.4) to prepare the No Project Alternative and conduct environmental assessments. The 2040 CT with 1.8 feet SLR climate change scenario is very conservative, including extreme risk aversion, with DWR stating, "The higher level sea level rise of 1.8 feet assumed in the Draft EIR has a probability of occurrence of less than 0.5%." (Appendix 30A.1.2). This likely results in an extreme estimation of the climate change variability and future conditions used to assess future impacts in the Draft EIR. Appendix 30A presents a sensitivity analysis of the climate change assessment and two alternate scenarios are discussed; 2040 Central Tendency with only 0.5 feet of SLR and 2040 Median with 1.8 feet of SLR. The sensitivity analysis highlights the significance of scenario selection to determine reservoir storage and river flows in the future, and the impact that sea level rise will have as well. Lower SLR results in higher reservoir storage volume (Appendix 30A.1.3.1), while scenario hydrology appears to have a stronger effect on river flow (Appendix 30A.l.3.2).	
611-59	[ATT 1:] The Draft EIR conducts comparative water quality analysis based on a single climate change scenario, which DWR has selected to be a very conservative option. The sensitivity analysis shows that there could be significant differences in projected reservoir storage and river flows under alternate climate change scenarios. Reservoir storage and river flow are key driving factors for water quality impacts in areas upstream of the Delta and therefore selection of the scenario for	Please see response to comment 611-16 regarding the modeled climate change scenario. See response to comment 611-10 regarding the sufficiency of the water quality analysis for areas upstream of the Delta. The conclusions regarding effects are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.

Letter-Comment Number	Comment	Response
	development of the No Project Alternative could significantly impact the water quality comparative assessment. This use of a worst-case scenario may minimize the ability to discern differences between a more moderate No Project Alternative and the DCP alternatives.	
611-60	[ATT 1:] Requested Actions: The City [of Sacramento] requests that DWR consider alternate climate change scenarios ta allow for water quality impacts between the No Project Alternative and DCP alternatives to be better identified and compared.	Please see responses to comments 611-16 and 611-18 regarding the modeled climate change scenarios. Chapter 30, Climate Change, and Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections, and Appendix 9L, Water Quality 2040 Analysis, contain different climate change scenarios for informational purposes.
611-61	[ATT 1:] Comment 3 - Insufficient Evaluation of Water Quality Impacts The Draft EIR review and analysis of the effects of the DCP on water quality in the study area is insufficient. The evaluation needs to be expanded to provide an accurate and more complete assessment. The water quality evaluation presented in Chapter 9 of the Draft EIR, and supported by numerous other chapters and appendices, was insufficient in several ways: representation of all areas impacted by DCP operations (specifically the areas upstream of the Delta and on the Sacramento River up to all major water intakes),	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta and the substantial evidence presented in the EIR and the record to support the adequate evaluation.
611-62	[ATT 1:] Comment 3 - Insufficient Evaluation of Water Quality Impacts	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta and the substantial evidence presented in the EIR and the record to support the adequate evaluation.

Letter-Comment Number	Comment	Response
	The Draft EIR review and analysis of the effects of the DCP on water quality in the study area is insufficient. The evaluation needs to be expanded to provide an accurate and more complete assessment. The water quality evaluation presented in Chapter 9 of the Draft EIR, and supported by numerous other chapters and appendices, was insufficient in several ways: consideration of quantitative analysis, as well as incorporating trends of degradation, to determine significance of impacts,	
611-63	[ATT 1:] Comment 3 - Insufficient Evaluation of Water Quality Impacts The Draft EIR review and analysis of the effects of the DCP on water quality in the study area is insufficient. The evaluation needs to be expanded to provide an accurate and more complete assessment. The water quality evaluation presented in Chapter 9 of the Draft EIR, and supported by numerous other chapters and appendices, was insufficient in several ways: consideration of impacts of reservoir operations, specifically storage volume, and river flows on water quality of the areas upstream of the Delta, and	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta. The analysis considered impacts on storage volume and river flow rates and provides substantial evidence presented in the EIR and the record to support an adequate evaluation.
611-64	[ATT 1:] Comment 3 - Insufficient Evaluation of Water Quality Impacts The Draft EIR review and analysis of the effects of the DCP on water quality in the study area is insufficient. The evaluation needs to be expanded to provide an accurate and more	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta. Please see responses to comments 611-48, 611-49, and 611-50 regarding the methods for comparing source water data to drinking water MCLs.

Letter-Comment Number	Comment	Response
	complete assessment. The water quality evaluation presented in Chapter 9 of the Draft EIR, and supported by numerous other chapters and appendices, was insufficient in several ways: implementation of appropriate technical analysis related to drinking water impacts to the municipal beneficial use.	
611-65	[ATT 1:] Consideration of Areas Upstream of the Delta The Draft EIR presents the Study Area, including areas upstream of the Delta (including the Sacramento River) that could be affected by project operations (Chapter 9.1.1). Further, DWR acknowledges: "Water quality in the portion of the study area upstream of the Delta, within the Sacramento River and San Joaquin River watersheds, is affected by the factors listed above as well as watershed hydrology and water management activities, such as reservoir operations and diversions, as they affect reservoir storage levels, releases to downstream rivers, and river flow rates. River flow rates can affect the amount of water available for dilution and assimilation of contaminant inputs from point and non-point sources." (Chapter 9.1.2) However, in the identification of Environmental Impacts caused by the Operation and Maintenance of the project (Chapter 9.3.1.2) DWR determines not to include the area upstream of the Delta for further evaluation since, "Based on a screening level analysis, using CalSim and the HEC-SQ temperature model, there were only small, if any, changes in	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta. The screening analysis in Appendix 9A, Screening Analysis, looked at data for Delta source waters, including the Sacramento River.

Letter-Comment Number	Comment	Response
	reservoir storage, river flows, and temperature between project alternatives and existing conditions (Appendix SA, Modeling Technical Appendix)." It should be noted that the screening analysis in Appendix 9A was only conducted using water quality from Delta locations and there is no evaluation presented in the Draft EIR to correlate overall water quality characteristics to reservoir storage, river flows, and temperature upstream of the Delta.	
611-66	[ATT 1:] CalSim modeling is documented by DWR in the Draft EIR as only being a planning tool that is useful for comparative analysis and " … inferences using CalSim 3 results from any single scenario may be appropriate for general, long-term trend assessment, but may not be adequate to support detailed reviews on an individual time-step basis or for selected periods." (Chapter 5.3.1.1) The CalSim output is monthly average values for reservoir storage and river flow, which does not account for variability during shorter periods of time or seasons, identify peak values, or estimate duration of peak occurrences. The HEC-SQ temperature model is based on HEC-5, which uses the CalSim average monthly output to develop "daily downscaled CalSim 3 timeseries all assume a constant (uniform) daily flow over each month of the 94-year CalSim 3 simulation period." (Appendix SA-D.2.3.2) The uniform downscaling of an average monthly output into a uniform daily value incorporates significant manipulation of the data, leaving the validity of the short-term output (in HEC-SQ) in serious doubt.	Please see Common Response 9, Hydrologic Modeling and Approach, regarding best available tools, modeled representation of future conditions and climate change, modeled representation of CEQA baseline existing condition, climate change assumptions as input into hydrologic model. The comment Is critical of the modeling framework described in Attachment 4, Climate Change Development for the Delta Conveyance Project, found in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, and in the section titled Extreme Conditions in Appendix 5A, Section B, specifically related to the development, application, and limitations (e, g., downscaling) of CalSim 3. Even though flows are averaged monthly, equilibrium temperature is at a 6-hour timestep in HEC-5Q, so it does incorporate daily and sub-daily variability. Impacts are assessed using comparative analysis, so any errors introduced because of monthly flow averaging should be consistent between studies and hence cancelled out when taking the difference in results between two studies. Temperature results are only analyzed as a monthly average to keep those results consistent with the timestep used for flows. The comment does not provide any information to support the stated opinion at the end of the comment, therefore no further response is required.

Letter-Comment Number	Comment	Response
611-67	[ATT 1:] Overall, DWR's determination not to include areas upstream of the Delta for the water quality evaluation in Chapter 9 of the Draft EIR is not justified using the planning-level model output as described above because it is not intended as a predictive tool, lacks quantitative detail, overly simplifies time-step basis applied to water quality impacts, and has no calibration or consideration of real water quality data.	Please see response to comment 611-66 regarding CalSim 3 and HEC-5Q relationships, and see Common Response 9, Hydrologic Modeling and Approach, regarding CalSim 3 as the appropriate hydrologic model to simulate operations under baseline and project alternative conditions for the purposes of identifying potential impacts of the project on hydrology-related resources, including river flows and reservoir storage. Also please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta.
611-68	[ATT 1:] Chapter 9 - Water Quality Chapter 9 presents a discussion of the existing surface water quality data (9.1.5), which generally focuses on available data within the Delta and the river inflows to it. The discussion for CHABs (9.1.5.11) does not incorporate recent DOW Notification Levels for cyanotoxins. The section dismisses potential impacts upstream of the Delta, stating; "Hydrodynamic conditions of rivers in watersheds upstream of the Delta are less conducive to cyanobacteria bloom formation due to high velocity, high turbulence and mixing, and low residence times." In fact, none of the drinking water utility data for cyanotoxins has been presented or discussed which confirms the periodic presence of cyanotoxins in both the American and Sacramento Rivers.	Please see response to comment 611-51 regarding the addition of the cyanotoxin notification levels to Chapter 9, Water Quality. Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta, the substantial evidence presented in the EIR, and the record to support the adequate evaluation. Please see response to comment 611-74 for additional information regarding how there would not be changes to CHABs or associated cyanotoxins in the rivers upstream of the Delta due to implementation of the project alternatives. As such, additional cyanotoxins data would not change the impact assessment.
611-69	[ATT 1:] Chapter 9 includes an assessment of the impacts of the Project Alternatives on water quality (9.3.3.2), as represented by Existing Conditions. In this section, DWR asserts, " … the project alternatives would result in less than significant, if any,	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta the substantial evidence presented in the EIR and the record to support the adequate evaluation.

Letter-Comment Number	Comment	Response
	effects on water quality constituents upstream of the Delta. As such, no further assessment of water quality impacts upstream of the Delta is warranted." This assertion is based on a lack of modeling significance related to reservoir storage, river flows, and temperatures. There is no specific evaluation included in the Draft EIR to support these conclusions.	
611-70	[ATT 1:] Temperature modeling results are presented in Appendices for Chapter 5 (Appendix SA Section D, Attachments 1 and 2) [Attachment 1 and 2 of ATT 1 not included] and included in the evaluations for other constituents in Chapter 9. Temperature is a significant factor in drinking water quality, affecting production of disinfection by-products and contributing to the presence of cyanotoxins, and therefore it should be quantitatively assessed independently. 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). Impact WQ-9 for Dissolved Oxygen in Chapter 9.3.3.2 discusses the peak temperature increases modeled for project alternatives, showing those to occur in the Sacramento River at Freeport and I Street in November (as compared with Existing Conditions). This is located adjacent to the City's Sacramento River Water Treatment Plant, and thus could result in a water quality impact to the City.	As described in Chapter 9, Water Quality, Impact WQ-9, temperature modeling results show that project operations would have little effect on Delta water temperatures, relative to existing conditions. The greatest temperature increases modeled (0.5°F increase) for project operations, relative to existing conditions, would occur in the Sacramento River at Freeport and Sacramento River at I Street Bridge. The greatest decrease (0.8°F decrease) would occur in the Sacramento River at I Street Bridge in June and July. Peak river temperatures occur in July, at a time when modeling shows that project operations would decrease river temperatures in the vicinity of the City of Sacramento's Water Treatment Plant. The greatest increase occurs in November and is 0.5°F. At this time of year, river water temperatures are generally in the 50 degree F range, and the change in water temperature would not be expected to substantially increase disinfection by-product formation within the water treatment plant.
611-71	[ATT 1:] Trace metals analysis presented under Impact WQ-12, Chapter	Impact WQ-12 addresses impacts of project operations on concentrations of aluminum, arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel, silver, and zinc relative to the lowest applicable federal water

Letter-Comment Number	Comment	Response
	9.3.3.2, incorrectly uses dissolved metals analysis to estimate compliance with municipal water quality objectives. As per the CVRWQCB [Central Valley Water Resources Control Board], totals metals analysis must be used for constituents with both primary and secondary MCLs [Maximum Contaminent Levels], with secondary MCL samples being allowed to be filtered at 2 um prior to analysis (in accordance with the Secondary MCL Policy).	quality criteria or state water quality objectives. The Central Valley Regional Water Quality Control Board's Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin defines site-specific Delta objectives for arsenic, iron, manganese, and zinc expressed as the dissolved fraction, which are the lowest applicable objectives for these metals. Similarly, the federal California Toxics Rule criteria for the protection of aquatic life for cadmium, copper, lead, nickel, and silver, which are the lowest criteria for these metals, are expressed as the dissolved fraction. The lowest applicable objective for aluminum is the secondary maximum contaminant level (MCL), which, per the Central Valley Water Board's Secondary MCL Policy, is assessed passing a sample through a 1.5-micron filter then analyzed using an acid-soluble procedure. Use of dissolved aluminum data, rather than total data, best approximates this condition. The lowest applicable objective for chromium is the primary MCL (50 micrograms per liter [ug/L]), expressed as total, but the aquatic life criterion is expressed as dissolved. The 95th percentile dissolved chromium concentrations in Delta source waters (1 ug/L for the San Joaquin River, 3.8 ug/L for the Sacramento River, and 4.7 ug/L for the San Francisco Bay) are well below these levels, as are the total chromium concentrations reported in Appendix 9A, Screening Analysis, in the table titled All Constituents (Totaling 438) Measured at Boundary Stations, Number of Times Analyzed and Detected, and Minimum and Maximum Vales Reported in the Dataset. The conclusion of a less than significant impact on trace metals from project operations is substantiated by appropriate analysis and use of water quality criteria and water quality objectives as set by the State agency responsible for protecting beneficial uses of water in California.
611-72	[ATT 1:] Chapter 9 also presents a projected water quality summary for 2040 (9.3.4) as a Cumulative Analysis. Generally speaking, the climate change impacts that are applied result in significant	Please see response to comment 611-16 regarding representation of climate change in the hydrologic modeling. Chapter 30, Climate Change, and Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections, and Appendix 9L, Water Quality 2040 Analysis, contain different climate change scenarios for informational purposes.

Letter-Comment Number	Comment	Response
	projected degradation of water quality under the No Project Alternative. These are so extreme, that it is difficult to identify significant variability between the Project Alternatives. See Comment 2 [Comments 57 through 59] above for a discussion of the climate change scenarios.	
611-73	[ATT 1:] A review of Appendix 9A- Screening Analysis resulted in identification of several technical errors and omissions, which are discussed in Comment 7 below.	Please refer to responses to comments 611-48 through 611-53 regarding responses to assertions of technical errors and omissions in Appendix 9A, Screening Analysis.
611-74	[ATT 1:] CHABs are evaluated in detail in Appendix 9E, with a focus on Delta sites as compared to Existing Conditions. There is an evaluation of temperature and velocity at the Sacramento River between I Street and Freeport to characterize impacts just outside of the Delta (9E·2. 1.8). Model results for temperature are presented in Chapter 9E.3.1 and velocity are presented in Chapter 9E.3.2. Temperature and velocity at these sites resulted in no or little change between Existing Conditions and the alternatives (Tables 9E·l·ll·l through 3 and 9E·1·12·1 through 3, Figures 9E·2·10·1 through 6 and 9E·2·11·1 through 6)). Attachment 9E.1 provides an evaluation of temperature and velocity at the same sites to compare Existing Conditions with the 2040 No Project Alternative. Model results presented in Chapters 9E.1.1.1 and 9E.1.1.2 show that from June through November at both Sacramento River sites that the future No Project Alternative will result in higher water temperatures (ranging from 0.9 to 2.9% higher), especially in October and November, and lower velocities at all times as compared with Existing Conditions. This indicates that there may be more instances of CHAB bloom conditions, higher temperatures and	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta. CHABs have not occurred historically in the lower Sacramento River near the City of Sacramento's drinking water diversion intake because river velocities are sufficiently high to create a turbulent, well-mixed, flowing water column that is not conducive to CHAB formation. Although modeling shows that channel velocities are expected to be somewhat lower in 2040 in this river reach, relative to existing conditions, velocities would remain sufficiently high to maintain a turbulent, well-mixed, flowing water column that would not be conducive to CHAB formation. Turbulent water mixes all algae throughout the photic zone of the water column and reduces light through turbidity which allows faster growing chlorophytes (green algae) and diatoms to outcompete the slower growing cyanobacteria, including Microcystis. This occurs presently in this river reach and would continue to occur in 2040. Likewise, expected temperature increases modeled for this river reach during the months June through November would be small in magnitude, and would not cause more frequent CHABs here. The modeled small magnitude temperature increases and velocity decreases would not be of sufficient magnitude to create river reach conditions favorable to CHABs at 2040 where such conditions do not occur for existing conditions. Likewise, these small magnitude changes in river temperature and velocity, relative to existing conditions, would not have a substantial, if any, effect

Letter-Comment Number	Comment	Response
	lower velocities, in the Sacramento River in the future due to climate change impacts. This is evidence to support the City's request for additional quantitative analysis for CHABs upstream of the Delta for the DCP alternatives. This could also be indicative of potential future treated water quality issues related to disinfection by-product formation.	on disinfection by-product formation at the City's water treatment plant.
611-75	[ATT 1:] Similar to previous comments, the evaluation of trace metals in Appendix 9K is flawed in that it uses dissolved metals concentrations to determine compliance with municipal water quality objectives (9K.3). Data presented and evaluated should be updated to reflect total metals concentrations. Table 9K-12 should be updated to include the primary MCL [Maximum Contaminent Load] for aluminum as well (1,000 ug/L), as this is not allowed to be pre-filtered prior to total metals analysis and could have a different comparison value.	Please see response to comment 611-71 regarding the evaluation of trace metals and the water quality criteria/objectives considered in the analysis in Impact WQ-14 (trace metals). Application of the primary MCL of 1,000 micrograms per liter (ug/L) would not be appropriate because it is not the lowest applicable water quality objective. Furthermore, applying the 1,000 ug/L objective to ambient river data would not yield relevant information from which impacts could be determined. Ambient river concentrations of total aluminum can exceed the aluminum primary MCL during high flow events during which rivers have high suspended sediment concentrations and particulate concentrations of aluminum. This situation does not render rivers unusable as a water supply because these particulates are filtered out during the water treatment process. For this reason, the aluminum MCL is best applied to finished drinking water, not to ambient river concentrations for impact assessment purposes.
611-76	[ATT 1:] Appendix 9L (Water Quality 2040 Analysis) includes a discussion about the exclusion of water quality data upstream of the Delta. The discussion in Chapter 9L.2 states that impacts to water quality upstream of the Delta would be minor based on CalSim results for reservoir storage and river flows and references "Upstream of Delta Water Quality Analysis [Robertson-Bryan, Inc. 2022]". Although this technical memorandum was not included in the Draft EIR, a copy dated July 2022 was obtained by the City and reviewed (see discussion below).	This comment is stating findings in the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040). Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta.

Letter-Comment Number	Comment	Response
611-77	[ATT 1:] Chapter 21- Public Services and Utilities The City of Sacramento is identified in the Draft EIR as a water agency serving the study area (Appendix 21A, Table 21A-7), with potential for impact. It is not expected that construction impacts would affect the City's water utility, rather the operations and maintenance of the DCP has the potential to impact the City's water supply and treatment facilities. A review of Chapter 21.3.3.2 to identify assessment of potential impacts to water agencies identified Impact UT-2 (Require or Result in the Relocation or Construction of New or Expanded Service System Infrastructure, the Construction or Relocation of Which Could Cause Significant Environmental Impacts for Any Service Systems Such as Water, Wastewater Treatment, Stormwater Drainage, Electric Power Facilities, Natural Gas Facilities, and Telecommunications Facilities). The assessment of operations and maintenance for this potential impact to water only addressed the potential for reverse flow events in the Sacramento River at Freeport. There was no consideration of other water quality impacts, perhaps since those were previously determined to be less than significant.	As described in Chapter 9, Water Quality, and further addressed in response to comment 611-10, the project alternatives would not affect surface water quality in the reservoirs and rivers upstream of the Delta. Therefore, impacts on water suppliers that divert water from reservoirs and rivers upstream of the Delta were not further discussed in Chapter 21, Public Services and Utilities. The methodology related to public services and utilities, which provides additional information about the type of impact mechanisms and evaluation in Chapter 21 can be found in the section titled Methods for Analysis.
611-78	[ATT 1:] A reassessment of water quality, especially for areas upstream of the Delta, will necessitate reconsideration of potential impacts such as increased water temperature and increased CHABs.	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta, and response to comment 611-74 regarding the adequacy of the CHABs analysis.
611-79	[ATT 1:] Chapter 26 - Public Health Chapter 26 presents an assessment of Public Health impacts, including impacts to drinking water and CHABs. The Study Area specifically excludes upstream of the Delta (26.1.1), which is technically insufficient. DWR claims, "Given downstream flows,	Please refer to the response to comment 611-10 regarding the adequacy of the water quality analysis of reservoirs and rivers upstream of the Delta. As described in Chapter 9, Water Quality, the project alternatives would not affect surface water quality in the reservoirs and rivers upstream of the Delta. Accordingly, public health would not be affected by changes in

Letter-Comment Number	Comment	Response
	potential health effects from water quality-related impacts would not be transported upstream … ", however it is evident from the Draft EIR and its supporting models that operation of the DCP will result in upstream changes in reservoir storage and river flows thus impacting upstream water quality.	upstream water quality as a result of implementing the project alternatives.
611-80	[ATT 1:] The evaluation of disinfection by-products in drinking water is inadequate in that it omits consideration of temperature impacts (26.1.1.1) and the evaluation of trace metals must be reconsidered using total metals concentrations (26.1.1.1). The analysis of CHABs is incomplete because it does not incorporate the SWRCB DDW Notification Levels for cyanotoxins (26.1.1.4).	Please see response to comment 611-10 regarding the sufficiency of the water quality analysis for the reservoirs and rivers upstream of the Delta and water quality constituents identified by the commenter. Accordingly, no revision to the analysis in Chapter 26, Public Health, is required. The State Water Resources Control Board Division of Drinking Water (DDW) formally requested recommendations for notification and response levels for microcystin, cylindrospermopsin, anatoxin-a, and saxitoxin from the Office of Environmental Health Hazard Assessment (OEHHA) in February 2021 (State Water Resources Control Board 2023). OEHHA submitted their recommendations to DDW in May 2021 and revised the saxitoxin recommendation in June 2022 (California Office of Environmental Health Hazard Assessment 2022). These recommendations are currently being evaluated by DDW (State Water Resources Control Board 2023) and therefore have not been included in Chapter 26.
611-81	[ATT 1:] Subsequently, the Process and Methods of Review for Public Health must be revised to incorporate these omissions and any other updates based on revised water quality analyses and expanded study area (26.3.1.1). In addition, the review of pesticides must consider the potential for seasonally reduced river flows that limit the potential for pesticide dilution and result in increased concentrations.	Please refer to responses to comments 611-10, 611-28, 611-29, 611-30, and 611-31 regarding the evaluation of the following issues upstream of the Delta: effects of temperature on disinfection by-products in drinking water; reconsideration of potential trace metals effects using total trace metals concentrations; and consideration of lower dilution capacity effects on pesticide concentrations. Please refer to response to comment 611-80 regarding concern about incorporation of the Office of Environmental Health Hazard Assessment's recommendations for notification levels for cyanotoxins in drinking water.
611-82	[ATT 1:] The thresholds of significance presented in Chapter 26.3.2 need to be updated to include areas upstream of the Delta. In addition, in accordance with the State's Anti-Degradation Policy the second threshold should be expanded	Please refer to response to comment 611-10 regarding analysis of areas upstream of the Delta in the EIR. The thresholds of significance do not need to be updated because upstream effects would not occur. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and

Letter-Comment Number	Comment	Response
	to include not only exceedances of water quality objectives, but trends of degradation as well.	Programs, for information regarding the State's Antidegradation Policy as it relates to the water quality analysis in the EIR.
611-83	[ATT 1:] Evaluations for Impact PH-2 (Exceedance(s) of Water Quality Criteria for Constituents of Concern Such That 7 Drinking Water Quality May Be Affected) and PH-5 (Impact Public Health Due to an Increase in Microcystis Bloom Formation) presented in Chapter 26.3.3.2 need to be revised and reconsidered based on the comments above and revisions to assessments in Chapter 9. The Cumulative Analysis for 2040 in Chapter 26.3.4 does not incorporate the expected increases in water temperature impact to disinfection by-products. The Public Health 2040 Analysis presented in Appendix 26A also needs to be revised based on the input above.	Please refer to response to comment 611-31 regarding the evaluation of the following issues upstream of the Delta: effects of temperature on disinfection by-products in drinking water; reconsideration of potential trace metals effects using total trace metals concentrations; and consideration of lower dilution capacity effects on pesticide concentrations. Please refer to response to comment 611-80 regarding concern about incorporation of the Office of Environmental Health Hazard Assessment's recommendations for notification levels for cyanotoxins in drinking water. The Public Health 2040 Analysis, and the evaluations for Impact PH-2, Impact PH-5, and potential cumulative effects of the project do not need to be updated because upstream water quality effects due to the project would not occur.
611-84	[ATT 1:] Upstream of Delta Water Quality Analysis Review Since this technical memorandum is the basis for exclusion of evaluation in the Draft EIR, it should be formally incorporated into the Draft EIR. A review of the referenced technical memorandum indicates that it inadequately assesses water quality impacts by lacking quantitative assessment of water quality, applying inappropriate time-step basis for water quality evaluation, relying nearly entirely on qualitative determinations without any verification or validation, and including an insufficient amount of real data upstream of the Delta to corroborate findings of no significance.	Please see response to comment 611-20 regarding the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) as part of the administrative record for the EIR.

Letter-Comment Number	Comment	Response
611-85	[ATT 1:] The water quality analysis in this technical memorandum focuses on constituents evaluated in the Draft EIR Chapter 9, based on the Screening Analysis conducted in Appendix 9A (as per Section 1). It should be noted that the Screening Analysis only considered data in the Delta, and did not consider water quality upstream of the Delta so it is possible that the scope of data evaluated in this technical memorandum was insufficient since it did not specifically consider water quality data in the region upstream of the Delta. Trace metals and temperature are not listed in Section 1 and should be included in this evaluation since they have significant potential to be impacted by changes in both reservoirs and rivers and impact overall water quality (including both raw and treated drinking water quality). Previously submitted data by the City as part of the SWRCB Petition for Change for California WaterFix data specific to the Sacramento and American Rivers showed a strong negative correlation between upstream reservoir storage and water temperature at the City's water treatment plants (Exhibit CITYSAC-27 and 28), so this evaluation should be conducted.	The comment incorrectly asserts that Appendix 9A, Screening Analysis, only presents data for Delta locations. The screening analysis in Appendix 9A evaluated data for the primary Delta source waters, including the Sacramento River. As described in response to comment 611-22, the phrase “trace metals” was added to Section 1 of the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040), as requested by the commenter. Please see responses to comments 611-10 through 611-30 regarding the adequacy of the water quality evaluation for the reservoirs and rivers upstream of the Delta. The conclusions regarding effects upstream of the Delta are based on the small modeled changes in reservoir storage and river flows, and as described in Common Response 3, Alternatives Development and Description, Delta Conveyance Project proposed operations do not include modifications to State Water Project reservoir operations upstream of the project. DWR would not increase storage withdrawal for exports, except flood releases, even though the proposed Delta Conveyance Project may provide additional diversion capacity. The project would not include modifications to Central Valley Project reservoir operations upstream of the project.
611-86	[ATT 1:] The evaluation presented for both reservoirs and rivers is heavily dependent on the CalSim model output, which is an average monthly time-step. An average monthly time-step does not provide sufficient consideration of short-term or seasonal impacts and could mask potentially significant water quality events, such as a lack of dilution capacity during a specific contaminant loading or formation of CHABs over a few days. DWR discusses this very concern in Appendix SA-Section B, with Figure SA-B.4 showing the variability between average	Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding the use of CalSim 3 as the best available tool for modeling hydrologic changes under project alternatives. As further explained previously in responses to comments 611-10 and 611-85, the conclusions regarding effects upstream of the Deltan are based on the small modeled changes in reservoir storage and river flows, and the fact that the Delta Conveyance Project’s operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.

Letter-Comment Number	Comment	Response
	monthly and daily data and Figure SA-B.5 showing daily data variability by water year type. The flows vary widely and appear to be influenced by wet weather, when more variability between average monthly and daily flow is evident. The quantitative results of the CalSim modeling are qualitatively correlated to water quality impacts for significance in the technical memorandum, without clear explanation of these correlations and determinations. Small changes in these longer-term periods may become significant, depending on when and where they occur. For example, when looking at 2040 flow conditions in Section 3.1.2 for the Lower American River, it could appear that based on the full simulation period the impacts may be "negligible", since it is listed as only a 2% decrease in April. However, further inspection reveals that during dry and critical years, when flows are typically lower anyway, the flows are projected to decrease from 7 to 14%. This amount of flow reduction during dry and critical years in April may cause unanticipated water quality impacts, such as from limited dilution capacity or the presence of CHABs.	
611-87	[ATT 1:] Section 2 presents a summary of the approach for Study Area Reservoirs, including both external and internal factors affecting the water quality of reservoirs. This section discusses internal changes possible related to reservoir stratification: "Reservoir storage volume also can affect internal physical processes, such as temperature gradients from the water surface to the sediment, which in turn can affect other water quality parameters, such as nutrient cycling and dissolved	The analysis presented in the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) addresses dissolved organic carbon, trace metals, and total suspended solids (TSS) and turbidity, acknowledging that reservoir levels of these constituents are more likely to be affected by external sources than internal sources given the small modeled changes in reservoir storage. As discussed in the technical memorandum, the reservoirs would continue to thermally stratify with the project alternatives just as they do under existing conditions, thus the internal processes noted in the comment that

Letter-Comment Number	Comment	Response
	oxygen conditions." Section 2.2 excludes organic carbon, trace metals, and TSS [Total Suspended Solids]/turbidity as constituents that can be impacted by the project alternatives because of the small differences in end-of-month storage modeled. However, there is no evaluation or quantification of their significance to validate their exclusion. When stratification occurs and low dissolved oxygen occurs in the lower portion of reservoir storage it is expected that pH would also be depressed and allow for resuspension of both organic carbon and trace metals into the water column from the sediment, similar to phosphorus. Both organic carbon and trace metals are known to occur in the sediment entering the upstream reservoirs so it should be expected that their resuspension could occur and could be impacted by the volume of reservoir storage. An analysis of available total metals concentrations should be prepared to compare with reservoir storage volume, similar to the evaluation conducted for river flows in Section 3.6.	could affect suspension of trace metals, organic carbon, and TSS and turbidity would be similar with the project alternatives given the small modeled changes. As has been described in previous responses to comments, such as 611-10, the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes.
611-88	[ATT 1:] Additionally, if excess mountain runoff is released, rather than detained in upstream reservoirs, then the high solids loading associated with that runoff will be translated to the downstream river flows rather than reduced through sedimentation in the reservoirs and impacts to TSS [Total Suspended Solids] /turbidity should be considered.	As has been described in previous responses to comments, such as 611-10, the Delta Conveyance Project's operations do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Therefore, the concerns raised in this comment about release of high river flows rather than detainment in reservoirs, is not applicable to the project.
611-89	[ATT 1:] Section 3 presents a summary of the approach for Study Area Rivers, including both external and internal factors affecting the water quality of rivers. This section clarifies that:	Contrary to the comment, the Upstream of Delta Water Quality Analysis technical memorandum (Robertson-Bryan Inc. 2023; cited in Appendix 9L, Water Quality 2040 Analysis, in the section titled Impacts of the Project Alternatives on Water Quality in Waters Upstream of the Delta at 2040) directly addresses the potential for changes in river flows under project

Letter-Comment Number	Comment	Response
	"The primary mechanism by which the project alternatives could affect water quality within study area rivers is through changes in flow rates." Section 3.2 excludes pesticides as constituents that can be impacted by the project alternatives because their significance is not related to river flows, but that is incorrect. River flows are the primary mechanism for dilution of these contaminants to reduce their detectability to nondetectable or below water quality objectives. Pesticide discharge can occur throughout the year and will have variable impacts based on seasonality of flows.	operations to affect dilution of pesticide concentrations and concludes, based on the small modeled changes in flows, that there would be negligible effect on pesticides.
611-90	[ATT 1:] The discussion of TSS [Total Suspended Solids] /turbidity in Section 3.5 is inaccurate in that it refers to a lack of impact to reservoirs as evaluated in Section 2.2, which did not sufficiently evaluate the potential for increased winter turbidity levels in reservoir releases due to increased mountain runoff released for capture at the downstream DCP.	Please see responses to comments 611-29, 611-87, and 611-88 regarding project operations effects on reservoir total suspended solids (TSS) and turbidity levels. Based on the small modeled changes in reservoir storage and river flows, project operations would not substantially affect TSS and turbidity levels in rivers upstream of the Delta.
611-91	[ATT 1:] Section 3.6 discusses trace metals and incorrectly presents a correlation of dissolved metals to river flows. Metals analysis must be evaluated using total concentrations to compare to water quality objectives and assess impacts to drinking water.	Please see response to comment 611-71 regarding the use of dissolved metals data and water quality objectives considered in the trace metals analysis in the EIR. Trace metals objectives in the Central Valley Regional Water Quality Control Board's Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin contain site-specific trace metals objectives for the Sacramento River and American River expressed as dissolved. Furthermore, the federal California Toxics Rule criteria for protection of aquatic life for the assessed trace metals are expressed as dissolved. Finally, as described in the technical memorandum, modeled changes in reservoir storage are small, thus trace metals concentrations in the reservoir releases to the downstream rivers would

Letter-Comment Number	Comment	Response
		not be substantially affected by project operations.
611-92	[ATT 1:] The assessment of CHABs in Section 3.7 depends almost entirely on the use of average monthly flow output from CalSim and average monthly temperature from HEC-SQ. The flow data is intended to represent both velocity/water column stability and residence time upstream of the Delta, with no justification as to why that is a valid technical assumption. The use of flow to represent velocity is an oversimplification that doesn't account for localized areas of asymmetrical bathymetry. In both cases, average monthly values are invalid for CHAB analysis because they impeded the ability to identify short-term periods of potential risk to CHAB development, which can occur in just a few days, peak values, and duration of those occurrences. This assessment is entirely insufficient to represent risk of CHAB formation in the study area rivers. The discussion on the Lower American River in Section 3.7.2 inaccurately represents hydrodynamic conditions as: "Historical operations of the lower American River have maintained hydrodynamic conditions (i.e., swift moving, turbulent, non-stratified flowing waters) that have prevented the formation of stagnant areas that are favorable to cyanobacteria blooms within the main channel throughout most of this river's length." The known detectability of cyanotoxins in the Lower American River, as documented previously by the City [of Sacramento] as part of the SWRCB Petition for Change for California WaterFix comments (Exhibit CITYSAC-30), disproves this statement	Please see response to comment 611-10 regarding adequacy of the water quality analysis for the areas upstream of the Delta. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the use of CalSim 3 as the best available tool for modeling hydrologic changes under project alternatives. Similarly, HEC-SQ is the best available tool for modeling water temperatures. Please see Common Response 10, Surface Water and Groundwater Resources, regarding the use of monthly average modeling results in the water quality impact analysis. CalSim 3-modeled river flow output was the best available information to determine if velocities in the Lower American River would change due to implementation of the project alternatives. In June through October, when formation of CHABs is of concern, CalSim 3 modeling results show that monthly average flow rates at Nimbus Dam less than 1,000 cubic feet per second (cfs) would not increase in frequency relative to existing conditions. Similarly, modeled monthly average flow rates at Nimbus Dam less than 500 cfs also do not increase in frequency under project alternatives relative to existing conditions. Thus, velocities in the Lower American River would remain sufficiently high to maintain a turbulent, well-mixed, flowing water column that would not be conducive to CHAB formation. Turbulent water mixes all algae throughout the photic zone of the water column and reduces light through turbidity, which allows faster growing chlorophytes (green algae) and diatoms to outcompete the slower growing cyanobacteria, including Microcystis. Past cyanotoxin detections in the Lower American River have been attributed to backwater areas or side channels. These are shallow, warm, very slow-moving areas that are more conducive to the formation of cyanobacteria mats or planktonic cyanobacteria blooms. Because river flow rates would be similar under both the project alternatives and existing conditions, the presence of cyanobacteria in backwater areas and side

Letter-Comment Number	Comment	Response
	based on factual data. The same section documents potential temperature increases in the Lower American River "In the few years when modeled water temperatures are higher under the project alternatives temperatures, the increases are less than 2.5° F higher.", which would occur in June of dry and critical years. In reality, CHAB formation doesn't depend on a discrete degree increase in water temperature, rather it relies on exceedance of a specific numeric threshold. The text of this section qualitatively dismisses the significance of the increase without presenting any technical analysis of actual data. When, in fact it is very possible that during dry or critical years river flows would be lower than normal, thus exacerbating CHAB formation potential.	channels would also be similar under both project alternatives and existing conditions. As such, it is not necessary to consider the bathymetry of different areas of the Lower American River. Furthermore, Delta Conveyance Project would not affect the bathymetry of rivers downstream of reservoirs.
611-93	[ATT 1:] Requested Actions: The City [of Sacramento] requests that DWR incorporate the area upstream of the Delta into the water quality assessment considered in the Draft EIR.	Please see response to comment 611-10 regarding substantial evidence regarding the areas upstream of the Delta, which is part of the administrative record for the EIR and the water quality analysis for the areas upstream of the Delta.
611-94	[ATT 1:] The City [of Sacramento] requests the following items be conducted to more accurately evaluate impacts to water quality upstream of the Delta: Conduct quantitative analyses, using available data and computational models, to verify that potential impacts to water quality do not cause or contribute to exceedances of water quality objectives or trends in degradation as the City requested in the NOP Comments dated April 16, 2020. Ensure	This comment is a duplicate of comment 611-20. Please refer to response to comment 611-20.

Letter-Comment Number	Comment	Response
	that appropriate time-step basis is applied during the analysis, based on water quality constituent vulnerability.	
611-95	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Add temperature to the list of constituents included in the evaluation since this is significantly impacted by both reservoir storage and river flows that will be affected by the DCP. Temperature is a driver to other water quality impacts (such as CHABs and formation of disinfection by-products). In addition, correct the list of constituents in Section 1 to consider water quality upstream of the Delta to add "trace metals", as this was included in the subsequent analysis.	This comment is a duplicate of comment 611-21. Please refer to response to comment 611-21.
611-96	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Conduct oil trace metals evaluations using total concentrations, in order to accurately assess potential for	This comment is a duplicate of comment 611-23. Please refer to response to comment 611-23.

Letter-Comment Number	Comment	Response
	exceedance of municipal water quality objectives or trends of degradation.	
611-97	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Provide quantitative analysis for the water quality evaluation conducted for both study area reservoirs and rivers. There is sufficient data available in the Sacramento River watershed upstream of the Delta, in bath the main reservoirs and rivers, to allow for more specific and accurate consideration of potential water quality impacts.	This comment is a duplicate of comment 611-24. Please refer to response to comment 611-24.
611-98	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Provide a method and limits for determination of qualitative findings related to assessment of the Ca/Sim3 modeling output significance.	This comment is a duplicate of comment 611-25. Please refer to response to comment 611-25.

Letter-Comment Number	Comment	Response
611-99	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Provide expanded discussion for justification of qualitative water quality determinations, especially the assertion regarding the relationship between small changes in average end-of-month reservoir storage or average monthly/annual river flows and water quality and the findings of significance related to frequency of exceedance of water quality objectives.	This comment is a duplicate of comment 611-26. Please refer to response to comment 611-26.
611-100	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Provide specific evaluations for periods of greatest potential water quality vulnerability (usually late summer or early fall to account for low storage volumes, low river flows, and warmer temperatures) to verify and validate determinations regarding expected frequency of exceedance of water quality objectives and trends of degradation.	This comment is a duplicate of comment 611-27. Please refer to response to comment 611-27.

Letter-Comment Number	Comment	Response
611-101	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Revise the methodology for the CHAB evaluation upstream of the Delta to more accurately assess impacts to factors such as velocity and temperature, and account for shorter periods of interest. This should be more similar to the Delta analysis presented in Appendix 9E.	This comment is a duplicate of comment 611-28. Please refer to response to comment 611-28.
611-102	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Expand Section 2 on Study Area Reservoirs to include separate evaluation of organic carbon, trace metals, TSS/turbidity, and temperature since these have the potential to be impacted by internal reservoir physical and chemical processes. The trace metals evaluation should include a comparison to upstream reservoir storage. This section also needs to include quantitative analysis for periods of greatest vulnerability,	This comment is a duplicate of comment 611-29. Please refer to response to comment 611-29.

Letter-Comment Number	Comment	Response
	specifically in dry or critical years when reservoir storage is below normal for extended periods.	
611-103	[ATT 1:] Update the Upstream of Delta Water Quality Analysis technical memorandum to address significant deficiencies in evaluation. This document is central to the exclusion of consideration of these impacts in the Draft EIR and must be formally incorporated into the Draft EIR and be significantly more detailed in its evaluation to determine the accuracy of the findings of no significance. Expand Section 3 on Study Area Rivers to include separate evaluation of pesticides and temperature since these have the potential to be impacted by river flows and dilution capacity. The TSS/turbidity evaluation needs to consider the potential for increased river turbidity levels during winter months if "excess flows" are released without being held in reservoirs. This section also needs to include quantitative analysis for periods of greatest vulnerability, specifically periods with projected reductions in river flow such as summer and fall months of dry and critical years.	This comment is a duplicate of comment 611-30. Please refer to response to comment 611-30.
611-104	[ATT 1:] The City [of Sacramento] requests that DWR update its water quality evaluation in Chapter 26 - Public Health to incorporate temperature impacts to disinfection by-product formation, revise metals analysis based on total concentrations, and consider lower dilution capacity effects on pesticide concentrations.	This comment is a duplicate of comment 611-31. Please refer to response to comment 611-31.
611-105	[ATT 1:] The City [of Sacramento] requests that DWR reconsider the Less than Significant determinations for impacts associated	This comment is a duplicate of comment 611-32. Please refer to response to comment 611-32.

Letter-Comment Number	Comment	Response
	with water quality in areas upstream of the Delta Water; Quality (WQ-8, WQ-11, WQ-12, WQ-13, WQ-14), Utility (UT-2), and Public Health (PH-2 and PH-5), based on updated water quality evaluations.	
611-106	[ATT 1:] Comment 4 - Insufficient Demonstration of Consistency with Anti-Degradation The limited water quality analysis conducted related to constituents of interest for drinking water as part of the Chapters 9, 21, and 26, as well as the Upstream of Delta Water Quality Analysis technical memorandum, did not include any consideration of degradation trends over time. The analysis was largely qualitative and quantitative evaluations only looked at discrete comparisons to existing numerical water quality objectives. When determining significance of the findings related to water quality, there was only a comparative analysis to exceedances of water quality objectives. Requested Actions: The City [of Sacramento] requests that DWR specifically include trends of degradation as part of the threshold of significance for water quality and prepare an antidegradation analysis as part of the water quality evaluation to verify that trends of degradation are not caused by implementation of the project throughout the Study Area, including areas upstream of the Delta.	The purpose of the water quality analysis in Chapter 9, Water Quality, is to identify potential impacts of the project alternatives per the requirements of CEQA. Impacts are evaluated and identified using a comparative analysis, in which conditions under each alternative are compared to the baseline. Water quality degradation (or improvements) over time due to factors unrelated to the project alternatives are addressed within the cumulative analysis in Chapter 9, in the section titled Cumulative Analysis. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding an antidegradation analysis and the relationship to the project.

Letter-Comment Number	Comment	Response
611-107	[ATT 1:] Comment 5 - Insufficient Proposed Monitoring and Mitigation Related to Water Quality Upstream of the Delta A lack of a complete and comprehensive water quality assessment has eliminated any impacts from being identified as part of this Draft EIR. Therefore, there are no proposed mitigation actions in the Draft EIR that are related to water quality in areas upstream of the Delta, or specifically addressing the municipal use. The substantial amount of uncertainty employed in the conduct of this Draft EIR, and future operation of the DCP, necessitates a plan to monitor, track, and evaluate the validity of these assumptions and the lack of water quality impacts caused by future operation of the DCP. This plan should also involve a strategy to adaptively manage identified impacts through mitigation efforts. DWR intends to develop a Real-Time Operational Decision-Making Process for the NDI [North Delta Intakes] (Chapter 3.17) to ensure operating criteria that are protective of aquatic life. It is possible that this process could be expanded to address key water quality variables upstream of the Delta. DWR will also implement an Adaptive Management and Monitoring Program (AMMP) to ensure that all required mitigation measures are implemented (Chapter 3.18). If the revised water quality analyses result in identification of any significant findings, then this would be an appropriate tool to incorporate actions.	Please see response to comment 611-10 regarding the adequacy of the water quality assessment and responses to comments 611-37 and 611-38 regarding the request for a mitigation monitoring and program. Chapter 3, Description of the Proposed Project and Alternatives, presents the approach to adaptive management and monitoring overall for project operations.
611-108	[ATT 1:] The Draft EIR also presents a Community Benefits Program (Chapter 3.19, Appendix 3G, and Chapter 34). Currently, this is structured to only apply to entities located	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the identification of the study area for each resource analyzed in Chapters 5

Letter-Comment Number	Comment	Response
	within the Delta. The purpose will be to address potential impacts that are beyond the CEQA analysis. It is possible that the framework of this program could be modified to specifically include impacted entities in areas located upstream of the Delta.	through 32 and the evaluation of areas upstream of the project. Please refer to Common Response 3, Alternatives Development and Description, regarding Delta Conveyance Project proposed operations, which do not include modifications to State Water Project or Central Valley Project reservoir operations upstream of the project. As described in Appendix 3G, Community Benefits Program Framework, the Community Benefits Program is intended to address local effects from construction of a Delta Conveyance Project, separate from, and in addition to, permit conditions and environmental mitigation through CEQA.
611-109	[ATT 1:] Requested Actions: The City [of Sacramento] requests that DWR consider how it will pion to implement a long-term monitoring program to ensure that the qualitative assessments and determinations of no significant impact to water quality upstream of the Delta are valid during operation of the OCP [DCP]. Given the extreme uncertainty in environmental conditions and operations of the DCP, many of the assumptions should be validated.	Please see response to comment 611-10 regarding the adequacy of the water quality assessment and response to comment 611-36 regarding the request for a mitigation monitoring and reporting program. Chapter 3, Description of the Proposed Project and Alternatives, presents the approach to adaptive management and monitoring overall for project operations.
611-110	[ATT 1:] In addition, DWR should identify a process for other beneficial users upstream of the Delta to be engaged as stakeholders in the DCP.	Please refer to response to comment 611-108 regarding the study area for the EIR analysis and the scope of the Community Benefits Framework. As described in Chapter 3, Description of the Proposed Project and Alternatives, the Ombudsman Program is a program to ensure a single point of contact is available to help address concerns.
611-111	[ATT 1:] Comment 6 - Lack of Operational Detail for DCP The City of Sacramento requested inclusion of operational detail, including development of tools to evaluation potential operating scenarios, as part of the Draft EIR in our comments on the EIR NOP on April 16, 2020. This is not provided in the Draft EIR. DWR justifies this lack of inclusion in the Draft EIR (Section 5.0) by stating:	Please refer to response to comment 611-13 regarding the adequacy of the EIR project description. Also refer to Common Response 3, Alternatives Development and Description, regarding operations, operational criteria, and Delta Conveyance Project integration into the SWP. The cited paragraph from the EIR is not discussing the development of operational criteria, but rather is a discussion of the integration with the SWP system and interactions with the CVP system.

Letter-Comment Number	Comment	Response
	"Existing regulations, operational rules, and water supply allocation procedures governing SWP and CVP system operations would not change because of operation of the project alternatives. However, because of the effect that integration of the proposed north Delta Intakes has on the overall system, their operation could lead to changes in river flows and upstream storages."	
611-112	[ATT 1:] Lack of Definition of "Excess Flows" and Potential for Prioritization of NDI [North Delta Intake] Upstream Reservoir Storage The primary goal of the DCP is to augment DWR's ability to capture "excess flows" during wet weather periods to increase the reliability of deliveries through the SWP/CVP. The term "excess flows" is not formally defined in the Draft EIR, nor the process of how these flows will be identified. It is unclear if the capture of "excess flows" will primarily be achieved through the construction of a new diversion facility (NDI) that will allow the diversion of more excess valley runoff, the storage of more excess mountain runoff in upstream reservoirs, or some balance between the two capture alternatives. The Draft EIR states in Section 5.3.2.2 that "In the CalSim 3 model, increasing exports is always prioritized; however, these savings would remain in storage when sufficient export capacity does not exist", so it appears that prioritization of diversion would occur. This may be a philosophical shift in operation of the SWP/CVP system and yet, DWR repeats frequently in the Draft EIR that there are no proposed changes in the system operation. The major upstream reservoirs (Shasta, Oroville, Folsom) store	Please refer to response to comment 611-39 regarding project operations and excess flows.

Letter-Comment Number	Comment	Response
	excess mountain runoff, while the SWP/CVP Delta pumping facilities divert excess valley runoff from the Delta for storage in downstream reservoirs. There is no clear definition in the current operations of the SWP on how DWR will decide the balance of where "excess flows" will be kept (i.e., upstream storage or NDI diversion for downstream storage). The historic norm has been to maximize upstream storage for later release and diversion, but this is not formally mandated/obligated in the SWP/CVP system operations (i.e., water control manuals for the various CVP/SWP reservoirs). If NDI diversion is prioritized to capture "excess flows," it could allow increased capacity at the South Delta intakes, which could endanger upstream reservoir storage volumes, river flows, and subsequent water quality.	
611-113	[ATT 1:] Interpretation of Modeled Operations Analysis conducted in Appendix SA-Section B presents CalSim modeling results to compare reservoir storage and river flows between both Existing Conditions (Attachment 3) [Attachment 3 of ATT 1 not included] and the alternatives and the No Project Alternative (Attachment 5) [Attachment 5 of ATT 1 not included] and the alternatives. The results of these model outputs provide some insight on how the DCP would be operated under the various alternatives and the potential impacts to both upstream reservoir storage and river flows. Of interest is the projected reservoir storage for Folsom Lake and river flows along the Lower American River and the Lower Sacramento River in the vicinity of the City's water treatment plants.	This comment is confirmation of information provided in Appendix 5A, Technical Modeling Appendix, and does not include a comment on the content of the EIR or CEQA process. No further response is necessary.
611-114	[ATT 1:] Attachment 3 [Attachment 3 of ATT 1 not included]presents	Please refer to Common Response 3, Alternatives Development and Description, regarding operations of the project including information regarding upstream of the proposed north Delta intakes. Please note that

Letter-Comment Number	Comment	Response
	comparison of Existing Conditions (2020) to the Alternatives. Tables SA-8.3.1.4.4-C and D present the difference between Alternative 5 and Existing Conditions for Folsom Lake storage, showing that there is frequently lower end-of-month storage due to the DCP. This often occurs in November and May of dry and critical years, which are shoulder season for heightened water quality impacts. Tables SA-8.3.2.6.4-C and D present the difference between Alternative 5 and Existing Conditions for Sacramento River flows at Verona, showing there are much lower flows during the summer months and higher flows during the winter months. The same phenomenon was seen downstream at Freeport. Tables SA-8.3.2.18.4-C and D present the difference between Alternative 5 and Existing Conditions for American River flows below Nimbus, showing reduced flows in July and August and slightly increased flows in November. The same phenomenon was seen downstream at Watt, H Street, and 16th Street. These analysis show that operation of the DCP in accordance with Alternative 5 has the potential to result in increased flows in the Sacramento River during winter months, decreased flows in the Sacramento and American Rivers during summer months, and reduced spring storage and carryover storage in Folsom Lake.	end-of-month storage levels and river flows, as other results presented in Chapter 5, Surface Water, and Chapter 6, Water Supply, provide a basis for understanding the impact assessments associated with other resource chapters, but potential changes in surface water or water supply themselves are not considered impacts under CEQA. (Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for additional information regarding water-dependent resource evaluations [e.g., fish and aquatic resources] and the selection of study area[s]). While the proposed project may offer opportunities to capture and divert excess water when available (within the limits allowed by the applicable existing water right and consistent with all regulatory requirements), potentially resulting in changes in surface water flows, those changes were determined to result in less-than-significant impacts with mitigation measures implemented throughout the EIR where appropriate. For example, please refer to the impact analyses presented in Chapter 12, Fish and Aquatic Resources, for more details.
611-115	[ATT 1:] Attachment 5 [Attachment 5 of ATT 1 not included] presents comparison of the No Project Alternative (2040) to the Alternatives. Tables SA-8.5.1.4.4-C and D present the difference between Alternative 5 and No Project Alternative for Folsom Lake storage, showing that there is frequently lower end-of-month storage due to the DCP. This more frequently than the 2020 analysis, from May through December of all year types. Tables SA-8.5.2.6.4-C and D present the difference between Alternative 5 and No Project Alternative for Sacramento River flows at Verona, showing mixed results in	Please refer to Common Response 3, Alternatives Development and Description, regarding operations of the project including information regarding upstream of the proposed north Delta intakes. Please note that end-of-month storage levels and river flows, as other results presented in Chapter 5, Surface Water, and Chapter 6, Water Supply, provide a basis for understanding the impact assessments associated with other resource chapters, but potential changes in surface water or water supply themselves are not considered impacts under CEQA. (Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for additional information regarding water-

Letter-Comment Number	Comment	Response
	flow changes, with some months higher (October, December, and May) and other months lower (January -April, June -July, and September). The same phenomenon was seen downstream at Freeport. Tables SA-8.5.2.18.4-C and D present the difference between Alternative 5 and Existing Conditions for American River flows below Nimbus, also showing mixed results in flow changes, with some months higher (May and July) and some months lower (February-April and August). The same phenomenon was seen downstream at Watt, H Street, and 16th Street. These analysis show that operation of the DCP in accordance with Alternative 5 in the future (2040) has the potential to result in decreased flows in the Sacramento and American Rivers during winter and spring months, increased flows in the Sacramento and American Rivers during May, and more significant reduced spring, summer, and carryover storage in Folsom Lake.	dependent resource evaluations [e.g., fish and aquatic resources] and the selection of study area[s]). While the proposed project may offer opportunities to capture and divert excess water when available (within the limits allowed by the applicable existing water right and consistent with all regulatory requirements), potentially resulting in changes in surface water flows, those changes were determined to result in less-than-significant impacts with mitigation measures implemented throughout the EIR where appropriate. For example, please refer to the impact analyses presented in Chapter 12, Fish and Aquatic Resources, for more details.
611-116	[ATT 1:] Requested Actions: The City [of Sacramento] requests that DWR acknowledge that they anticipate the SWP/CVP system will be operated differently in the future with construction of the NDI [North Delta Intake] and they prepare a general framework presenting programmatic goals and conditions as part of the SWP/CVP system. This should also include development of a plan or tool to comprehensively evaluate and manage the potential impacts of operational changes on upstream reservoir storage, river flows, and water quality.	As described in Chapter 3, Description of the Proposed Project and Alternatives, in the Intake Operations and Maintenance section, proposed Delta Conveyance Project facilities would be operated in conjunction with existing SWP and CVP facilities and according to the State Board's Bay Delta Plan. The Delta Conveyance Project does not propose to change upstream reservoir storage operational criteria or water rights. The Integration of North Delta Intakes with South Delta facilities section in Chapter 3 includes additional clarification regarding project operations. Please also refer to Common Response 3, Alternatives Development and Description, regarding facility operations.
611-117	[ATT 1:] In addition, the City [of Sacramento] requests that DWR formally define "excess flows" as well as a process for how those will be identified and stored, including consideration of setting adequate minimum storage volumes in upstream	Please see Common Response 3, Alternatives Development and Description, regarding operational criteria, upstream reservoir operations, and definitions for balanced water conditions and excess water conditions.

Letter-Comment Number	Comment	Response
	reservoirs, especially during dry and critical years, to ensure protection of upstream Beneficial Uses, including water quality for municipal use.	
611-118	[ATT 1:] Comment 7 - Technical Errors and Omissions The Draft EIR has numerous technical errors and omissions related to the evaluation of the impacts of the DCP related to drinking water quality. These errors and omissions are related to several general topics. Requested Actions: The City [of Sacramento] requests that these errors and omissions be reviewed and addressed.	Please see response to comment 611-47 regarding potential errors and omissions.
611-119	[ATT 1:] Incorrect application of the drinking water regulatory requirements in California Incorrect drinking water standards provided in Appendix 9A-Screening Analysis on Table 9A-6: Aluminum (should also include the primary MCL [maximum contaminant level] of 1000 ug/L), Chlorobenzene (monochlorobenzene has a primary MCL of 70 ug/L), TTHM (represents chloroform, bromoform, bromodichloromethane, and dibromochloromethane and is set at 80 ug/L), HAAS (represents monochloroacetic acid, dichloroacetic acid, trichloroacetic	This comment is a duplicate of comment 611-48. Please refer to response to comment 611-48.

Letter-Comment Number	Comment	Response
	acid, bromoacetic acid, and dibromoacetic acid and is set at 60 ug/L), Color (should include California Maximum Contaminant Levels footnote "b" to represent a secondary MCL), Gross Beta (primary MCL is 4 millirems/year), and Thiobencarb (should also include the primary MCL of 70 ug/L)).	
611-120	[ATT 1:] Incomplete depiction of CVRWQCB (Central Valley RWQCB) Basin Plan metals water quality objectives in Appendix 9A-Screening Analysis on Table 9A-6, Central Valley Regional Water Quality Control Board (RWQCB) Water Quality Control Plan (WQCP) footnote "a" does not address the MUN [municipal] beneficial use, which must use total metals analysis for primary MCLs [maximum contaminant levels] and filtered metals analysis in accordance with the Secondary MCL Policy for secondary MCLs.	This comment is a duplicate of comment 611-49. Please refer to response to comment 611-49.
611-121	[ATT 1:] Incorrect determination of compliance with drinking water standards and misrepresentation of the regulatory requirements and enforceability of secondary drinking water standards in California for drinking water agencies in Appendix 9A. Screening Analysis: All metals moving on from Step 2 analysis in Appendix 9A-Screening Analysis were limited to the rows representing the	This comment is a duplicate of comment 611-50. Please refer to response to comment 611-50.

Letter-Comment Number	Comment	Response
	dissolved metals analysis, rather than the total metals analysis. Use of dissolved metals data is not permissible to evaluate compliance with water quality objectives. This is incorrect as compliance with all constituents with primary MCLs [maximum contaminant levels] must use total concentrations for determining compliance with a Primary MCL, and only allow total concentrations of filtered samples (at 2um) for secondary MCLs (as per CVRWQCB's [Central Valley Regional Water Quality Control Board] Secondary MCL Policy), and In the evaluation of color (9A.8.2), which has a secondary MCL, there is an incorrect reference to drinking water objectives compliance in California. The text states, "Secondary MCLs are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations." In California, the Department of Drinking Water (DDW) mandates compliance with all secondary MCLs, these are not guidelines.	
611-122	[ATT 1:] Add DDW [Department of Drinking Water] Recommended Acute/Short-Term Notification Levels for Cyanotoxins into Appendix 9E, Cyanobacteria Harmful Algal Blooms, as shown in the table below [Exhibit 1 of ATT 1].	This comment is a duplicate of comment 611-51. Please refer to response to comment 611-51.
611-123	[ATT 1:] Incorrect technical assumptions on the treatability of various water sources by conventional filtration -Incorrect assumption that temperature is not significant to drinking water supply, -Incorrect assumption that conventional filtration is not impacted by increased loads and concentrations of constituents, and -Incorrect use of long-term averages for determination of significance of impact.	This comment is a duplicate of comment 611-52. Please refer to response to comment 611-52.

Letter-Comment Number	Comment	Response
611-124	[ATT 1:] Inadequate representation of ambient water quality Insufficient data query for constituents of interest upstream of the Delta.	This comment is a duplicate of comment 611-53. Please refer to response to comment 611-53.
611-125	[ATT 1:] [Exhibit 1 of ATT 1: Table titled "Recommended Acute and Short-Term NLs for Cyanotoxins"]	This comment is a duplicate of comment 611-54. Please refer to response to comment 611-54.
611-126	[ATT 2: SACRAMENTO STORMWATER QUALITY PARTNERSHIP COMMENTS ON THE DELTA CONVEYANCE PROJECT ENVIRONMENTAL IMPACT REPORT PUBLIC REVIEW	The commenter provided this attachment for reference purposes in support of their comments. This attachment is a duplicate of the comment letter prepared and submitted by the Sacramento Stormwater Quality Partnership. The letter submitted by the Sacramento Stormwater Quality Partnership is included and responded to in letter 435. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate responses to letter 435.
612-1	The Suisun Resource Conservation District (SRCD) is a special district created by the California Legislature as a legal subdivision of the State of California (Public Resources Code, §§ 9003, 9960 et seq.). SRCD has the primary local responsibility for promoting wetland conservation of the Suisun Marsh through improvements in water management practices on private lands within the primary management area of the Suisun Marsh (Id. at § 9962). As a resource conservation district, SRCD is also empowered to coordinate resource management efforts for purposes of watershed restoration and enhancement (Id. at §§ 900l(b)(l) and (3). Historically, SRCD has taken a leadership role to ensure adequate water quality in the Suisun Marsh - a condition necessary to promote a diversity of productive waterfowl habitat, enhance the wetland resource values through	This information describes the background of the organization or individual commenter. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	appropriate management practices, and ensure the wetland and wildlife values of the Suisun Marsh are sustained and protected. This fact makes SRCD and its staff of professional wildlife biologists uniquely qualified to evaluate the adequacy of the proposed Delta Conveyance Project (Project) operations and DEIR effects analysis, which identifies increased Suisun Marsh salinities, impacts on Suisun Marsh managed wetlands habitats, wetland and wildlife resources, and inconsistency with the Water Quality Control Plan Protection of Fish and Wildlife beneficial uses. The landowners and SRCD have been stewards of the Suisun Marsh wetland and wildlife resources for over a century. They advocated for passage of the 1977 Suisun Marsh Preservation Act to protect these wetland resources from development and degradation associated with salinity intrusion from reduced upstream freshwater flows.	
612-2	Additionally, SRCD [Suisun Resource Conservation District] is a signatory to the 1987 Suisun Marsh Preservation Agreement (a contractual framework for implementing the 1984 Plan of Protection for Suisun Marsh - see SWRCB D-1641, p. 50) and the subsequent 2015 Suisun Marsh Preservation Agreement, Monitoring Agreement, and Mitigation Agreement (SMPA). The primary objective of the SMPA is, "to assure that Department of Water Resources (DWR) and the United States Bureau of Reclamation (USBR) maintain a dependable water supply of adequate quantity and quality within the Marsh to mitigate the adverse effects on the Suisun Marsh of the Central Valley Project and State Water Project and a portion of adverse effects of other upstream diversions". To achieve this objective, DWR and USBR implemented the 1984 Plan of Protection for the Suisun Marsh and DWR continues to operate and maintain DWR' s initial facilities, the Suisun Marsh Salinity Control Gate Structure, and conduct water quality monitoring	As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, the project facilities would be operated to meet Bay-Delta Water Quality Control Plan objectives, as implemented through D-1641. The modeling supporting the analyses in Chapter 9, Water Quality, includes operating the project according to D-1641 in the modeled baseline and alternatives. As such, any change in water quality represents a change from baseline and D-1641 requirements. As discussed in Chapter 9, compliance by DWR with D-1641 is required, and the modeled assumptions account for this compliance, and therefore account for the SMPA salinity standards. Please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the use of DSM2 to evaluate water quality and modeled assumptions associated with the use of this model.

Letter-Comment Number	Comment	Response
	at compliance, control. and monitoring stations throughout the Marsh. The following statements from the SMPA acknowledge the importance of water quality to the health of the Marsh and its wildlife resources, and the threat posed by higher salinity levels: "A supply of adequate quality water is necessary to protect wildlife habitat in the Marsh. The Parties consider it to be in the public interest to manage the wetlands of the Marsh to produce adequate quality waterfowl habitat and grow certain waterfowl food plants." (2005 Revised SMPA Agreement, p. 2) "Upstream water use, including diversions by the Central Valley Project ("CVP") and the State Water Project ("SWP") has, at times, reduced outflow from the Delta, resulting in increased salinity in the Marsh. The higher salinity levels have, at times, degraded waterfowl habitat in the Marsh. The Marsh has a salinity gradient between its western portion and its eastern portion, with ocean-derived salinity being greatest in the westerly portion." (Id.) The 1977 Suisun Marsh Preservation Act is intended "to preserve the integrity and assure continued wildlife use of the Suisun Marsh, including the preservation of its waterfowl-carrying capacity and retention of the diversity of its flora and fauna". To achieve the objectives of the Suisun Marsh Preservation Act, the Bay Conservation and Development Commission (BCDC) established policies and regulations in the Suisun Marsh Protection Plan, and DWR also developed the 1984 Plan of Protection for the Suisun Marsh to mitigate the	

Letter-Comment Number	Comment	Response
	effects of the CVP and the SWP on the Marsh. To protect fish and wildlife beneficial uses in eastern and western Suisun Marsh, the State Water Resources Control Board (SWRCB) has required USBR and DWR to meet quantitative and qualitative salinity standards for Suisun Marsh in Water Rights Decision 1485 (D1485), Interim Order 95-6, and Water Rights Decision 1641 (D1641). These salinity standards were further reinforced with execution of the SMPA by DWR, USBR, Department of Fish and Wildlife (DFW) and SRCD. Any action of the Delta Conveyance Project and its operations that reduces existing Delta outflows or causes an exceedance of the D1641 or SMPA salinity standards would be detrimental to the existing ecological values of the Marsh. If a violation of D1641 occurs, the SMPA salinity standards and these contractual agreements must be analyzed and fully disclosed with adequate mitigation proposed in the DEIR.	
612-3	SRCD [Suisun Resource Conservation District] has reviewed the Delta Conveyance Project DEIR and evaluated the proposed project's future operations analysis which will have significant and unavoidable negative impacts to the wetland and wildlife resources of Suisun Marsh from further degradation of water quality conditions (increased salinity) that may arise with climate change effects and persistent drought. The SRCD Board of Directors, representing the private landowners of Suisun Marsh, cannot support the proposed Delta Conveyance Project, because it has not identified and disclosed likely significant increases in Suisun Marsh channel water salinity, degradation of Suisun Marsh water quality, and impacts to existing habitat conditions from the project. Not only does the DEIR fail to adequately evaluate and disclose significant Project specific and cumulative salinity impacts to the Marsh, but it also offers no commitment or regulatory assurances how these	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments stating their opinions regarding general opposition of the project. The assertion that the EIR does not adequately evaluate and disclose potential water quality impacts on the Suisun Marsh is not consistent with the EIR. The EIR Chapter 9, Water Quality, study area includes the Suisun Marsh. Please refer to response to comment 612-5 regarding impacts on marsh salinity.

Letter-Comment Number	Comment	Response
	impacts will be avoided, minimized, or adequately mitigated. These undisclosed project-specific and/or cumulative impacts include modification of the Suisun Marsh salinity regime, the degradation of the water quality conditions, and the potential degradation of the existing ecological characteristics of over 58,000 acres of tidal and managed wetlands in the Suisun Marsh.	
612-4	With this in mind, SRCD submits the following specific comments:	This information describes the structure or organization of the comment letter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
612-5	A. Delta Conveyance Project Will Result in Unacceptable Increases in Suisun Marsh Salinities that are Not Adequately Disclosed in the DEIR The DEIR is inadequate because it fails to disclose the impacts of the project on the salinity of water diverted into Suisun Marsh managed wetlands. In brackish and freshwater tidal marshes, changes in salinity of a few parts per thousand will have substantial adverse effects because the growth, productivity, and survival of most species are highly sensitive to any salinity (Parker 2011). Small changes in salinity could significantly affect the diversity and composition of these wetlands. Increases in soil salinity and inundation will differentially affect germination and the physiological limits of species (Parker 2011). A primary effect of salinity is that it delays germination and seedling development. Plant loss during this seedling stage can reduce the plant population density to suboptimal levels and significantly reduce yields (Maas 1993). The DEIR effects analysis repeatedly demonstrates increases in Suisun Marsh salinities from existing	Chapter 9, Water Quality, Impact WQ-5 (electrical conductivity) provides a quantitative assessment of the potential effects of the alternatives on Suisun Marsh salinities. The modeled average increases in EC at the marsh assessment locations are less than 0.5 mmhos/cm (i.e., less than 0.3 parts per thousand). As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, the project facilities would be operated to meet Bay-Delta Water Quality Control Plan salinity objectives for protection of fish and wildlife beneficial uses, as implemented through D-1641. The State Water Resources Control Board has adopted the water quality objectives to protect designated beneficial uses in the Delta and Suisun Marsh, and the D-1641 requirements meet those objectives. Thus, substantial evidence supports DWR's determination that the small increases in salinity would be less than significant.

Letter-Comment Number	Comment	Response
	baseline conditions for chloride and electrical conductivity (EC) but claims these changes are not substantial. However, any increases in salinity will degrade existing wetland habitats in the Suisun Marsh.	
612-6	I. The DEIR Fails to Quantitatively Analyze Project Impacts to the Suisun Marsh salinities The DEIR modeling approach and discussion of salinity increases is insufficient to properly evaluate impacts to the Suisun Marsh due to fundamental insufficiencies and flaws in the modeling approach. Appendix 9G Electrical Conductivity page 9G -1, line 17-18 states: "EC was modeled quantitatively for the Sacramento-San Joaquin Delta (Delta) and qualitatively for all other study area regions." Chapter 9 Water Quality Page 9-35 Suisun Marsh lines 4-6 states, "The assessment of effects to these waterbodies was conducted qualitatively based on projected changes in constituent concentration/levels that would occur in the Delta and CalSim 3-modeled changes in Delta outflow under the alternatives". Additionally, Chapter 9 Water Quality Page 9-103 lines 7-10 states that the modeling used monthly average EC for the full simulation period. Thus, the DEIR relies on an insufficient qualitative analysis of the project's salinity and EC impacts but fails to perform crucial quantitative analysis. A quantitative analysis is imperative to presenting a reasoned analysis of the environmental impacts associated with the project, and DWR and USBR both have Suisun Marsh water quality monitoring data available for that analysis since 1977 as required under D1485.	The Suisun Marsh EC assessment did rely, in part, on quantitative, modeled changes in EC. Please refer to response to comment 612-5 regarding further explanation.
612-7	2. The Salinity Modeling Improperly Relies on Monthly Averages. The modeling approach presents salinity as the average	The use of average modeled electrical conductivity (EC) changes at Suisun Marsh assessment locations represents best available information for this region. As explained in Appendix 5A, Modeling Technical Appendix, Section C, One Dimensional Delta Hydrodynamics and Water Quality Modeling

Letter-Comment Number	Comment	Response
	monthly salinities (as represented by electrical conductivity [EC]). This provides a very coarse level of evaluation which is inadequate to assess daily, monthly, and seasonal impacts of the proposed project operations on the Suisun Marsh salinities and on water users. California water quality regulators have determined that protection of beneficial uses from salinity impacts requires assessment high tide salinities, and in this regard, the Water Quality Objectives For Fish and Wildlife Beneficial Uses measure the Suisun Marsh salinity objective's compliance as the "maximum monthly average of both daily high tide EC values" (Water Rights D1641 - Table 3, emphasis added). D1641 requires measuring salinity compliance at high tide because this is the period when channel water salinities are the highest and when managed wetlands are diverting water (by gravity) to perform leaching cycles and reduce soil salinities for habitat management during the spring growing season. In most regions of the Suisun Marsh, the channel water salinity is lowest at low tide with highest channel water salinity at high tide. Therefore, impact analysis using monthly average salinity (EC) underrepresents impacts of the proposed Delta Conveyance Project on Suisun Marsh water users and habitat management capabilities.	Results, inputs to DSM2, which was used to model Suisun Marsh EC, included monthly mean inflows from CalSim 3. Thus, using and interpreting EC output from DSM2 on a daily or sub-daily time-step would not be appropriate. The average modeled EC differences provide are an appropriate use of DSM2 output and sufficiently provide information regarding the direction in which the project alternatives could move EC in the marsh. Also, please refer to response to comment 612-5 regarding the analysis of EC.
612-8	Additionally, use of average salinity does not provide a way to compare the ability of the Project to meet regulatory compliance requirements or to determine the potential extent of violation of the D1641 and the SMPA [Suisun Marsh Preservation Agreement] numeric salinity standards. The decision to qualitatively assess the Suisun Marsh salinities and present the data as average salinities suggests a strategy to diminish, conceal, and underreport the direct, indirect, and cumulative impacts of the project on the Suisun Marsh salinities and existing wetland habitats.	Please see Common Response 10, Surface Water Quality and Groundwater Resources, and response to comment 612-7 regarding the use of monthly average modeling results in the water quality impact analysis. Furthermore, compliance with D-1641 salinity objectives was a component of the chloride and EC impact analyses in Chapter 9, Water Quality, Impacts WQ-4 and WQ-5, respectively. The compliance assessment was conducted at the time-step corresponding to each objective type (e.g., 14-day running average), with tabular results for chloride provided in the following tables found in Appendix 9F, Chloride: Percent of Days in Calendar Years 1923–2014 That Chloride Concentrations Exceeded the Municipal and Industrial

Letter-Comment Number	Comment	Response
		Uses Water Quality Objective, Existing Conditions, and the Project Alternatives; and Number of Years in Calendar Years 1923–2014 That the 150 Milligrams per Liter Chloride Objective for Contra Costa Pumping Plant #1 Was Exceeded, Existing Conditions and the Project Alternatives. The compliance assessment was conducted at the time-step corresponding to each objective type (e.g., 14-day running average), with tabular results for EC provided in the following tables found in Appendix 9G, Electrical Conductivity: Percent of Days in Water Years 1923–2015 That Electrical Conductivity Exceeded the Agricultural Beneficial Uses Water Quality Objective, Existing Conditions and the Project Alternatives; and Percent of Days in Water Years 1923–2015 That Electrical Conductivity Exceeded the Fish and Wildlife Beneficial Uses Water Quality Objective, Existing Conditions and the Project Alternatives.
612-9	3. The DEIR Fails to Provide Reasonable Salinity Thresholds of Significance for evaluating Suisun Marsh salinity impacts. Chapter 9.3.2 Thresholds of Significance - page 9-36, lines 24-28 of the DEIR states for water quality effects, the thresholds of significance would be significant if it will: A) cause long-term degradation of water quality in affected waterbodies that would result insubstantially increased risk for adverse effects on one or more beneficial uses. B) further degrade water quality by measurable levels, on a long-term basis, for one or more parameters that is already impaired, and thus included on the State's CWA Section 303(d) list for the waterbody, such that beneficial use impairment would be made discernibly worse. The DEIR Chapter 9, page 9-103, lines 16-18 states: "The greatest increases in modeled monthly average EC occurred in	As described further in Common Response 10, Surface Water Quality and Groundwater Resources, the thresholds of significance in Chapter 9, Water Quality, are based on the State CEQA Guidelines Appendix G Environmental Checklist thresholds for hydrology and water quality. The Appendix G Environmental Checklist thresholds were refined to reflect the project and potential impact mechanisms. Percent increase in a constituent level is not a sole predictor of impacts. Percent increases can seem large, but the absolute increases may not be. Hence, Impact WQ-5 (EC) discusses both the percent increases in EC at marsh assessment locations with absolute modeled increases. The combined percentage and absolute increases were considered relative to the thresholds to make impact determinations. Because the modeling shows the project and alternatives will meet D-1641 water quality objectives, and those objectives were established by the State Water Resources Control Board to protect designated beneficial uses, substantial evidence in the record supports DWR's determination that the impacts are less than significant.

Letter-Comment Number	Comment	Response
	March at Collinsville (14%), National Steel (11%), and Beldon Landing (13%)." All other increases in monthly average EC were 10% or less. A 10-14% increase in salinity is significant, especially when the modeling is only using monthly average of salinity conditions and omits considering salinity measurements from the western Suisun Marsh salinity control stations at Morrow Island (S-35) and Ibis (S-97). DEIR provides no threshold of significance against which to measure and assess the severity and spatial extent of the Project impacts. As noted previously, changes in salinity of a few parts per thousand will have considerable effects on the Suisun Marsh wetland habitats, because the growth, productivity, and survival of plant and animal species are highly sensitive to any salinity increases (Parker 2011).	
612-10	4. The DEIR omits using salinity data from the western Suisun Marsh salinity monitoring stations. The absence of this analysis provides false conclusions, and the disclosure of significant and unavoidable and unmitigated salinity increases from the project. The salinity analysis fails to disclose or evaluate the significance of the modeled increases in salinities, and a fundamental assumption underlying the impact analysis in Chapter 9 Water Quality and Appendix 9G EC Suisun Marsh salinities is flawed and inaccurate. The DEIR conclusion that the project impacts on the salinity in the Suisun Marsh will be less than significant and will not contribute to additional impairment of beneficial uses is incorrect. The DEIR omits using salinity data from the western Suisun Marsh salinity monitoring stations -- salinity control stations S-35 and S-97 and salinity monitoring stations S-54 and S-37.	Please see response to comment 612-13 regarding further information about the location selected for the analysis and the data used.

Letter-Comment Number	Comment	Response
612-11	[Exhibit 1: Figure showing Suisun Marsh Preservation Agreement Compliance, Control, and Monitoring Stations.]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
612-12	DWR has extensive salinity monitoring stations throughout the Suisun Marsh including: Compliance Stations (C-2, S-64, S-49, S-21, and S-42) Control Stations (S-35 and S-97) Monitoring Stations (A-96, S-4, S-28, S-33, S-37, S-54, and S-71). Of these 14 long-term Suisun Marsh salinity monitoring stations, the DEIR only modeled 5 Compliance Stations: C-2 Collinsville, S-64 National Steel, S-49 Beldons Landing, S-21 Sunrise Club, and S-42 Volanti. The modeling supporting the DEIR conclusions did not evaluate locations representing a significant portion of the western Suisun Marsh. Omitting this water quality monitoring data effectively underestimates and minimizes the project's potentially significant effects on Suisun Marsh salinities (EC and chloride). This is particularly critical because it in widely known that the Montezuma Salinity Control Structure operations is ineffective at reducing salinity in this region of the Marsh. These omissions result in modeling that significantly underrepresents the effects of the proposed project on the central and western region of the Suisun Marsh, an area ranging between approximately 8,000 and 11,000 acres of prime wetland habitats.	Please see response to comment 612-13 regarding further information about the location selected for the analysis and the data used.
612-13	The DEIR failure to evaluate salinity impacts at salinity monitoring stations S-35 and S-97 is inexplicable. Operation of the Montezuma Salinity Control Structure does not effectively control channel water salinity in the Marsh at those locations, and effects of project operations would be significant and	The focus of the EC assessment is Bay-Delta Water Quality Control Plan compliance locations, and EC modeling output is summarized and presented for all five Suisun Marsh assessment locations. Because S-97 and S-35 are not compliance locations, they were not included in the assessment. As described in Chapter 3, Description of the Proposed Project

Letter-Comment Number	Comment	Response
	unavoidable in this region. The effects of project operations on salinities in the western Suisun Marsh is acknowledged by DWR which prepared the Suisun Marsh Preservation Agreement Amendment Three Actions as a means to provide Equivalent or Better Protection than Channel Water Salinity Standards at the Suisun Marsh Stations S-35 and S-97. Page 40 of the DWR- 30 Appendix B Demonstration Document states: "The action of converting compliance stations S-35 and S-97 to monitoring stations is proposed because SMSCG operation is not an effective control of channel water salinity in the Marsh at these locations."	and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, the project facilities would be operated to meet Bay-Delta Water Quality Control Plan salinity objectives for protection of fish and wildlife beneficial uses, as implemented through D-1641. The EC objectives for Suisun Marsh in the Bay-Delta Water Quality Control Plan are expressed as the "Maximum monthly average of both daily high tide EC values (mmhos/cm), or demonstrate that equivalent or better protection will be provided at the location." DWR will continue to support the ecological values of the Suisun Marsh to meet the obligations under the Suisun Marsh Preservation Agreement, in addition to complying with applicable water quality standards.
612-14	These facts refute the DEIR conclusions that the project is expected to have no adverse effect on the Marsh beneficial uses from increases in long-term average EC under Alternatives 1 and 3 relative to existing conditions. The project will have adverse impacts on Marsh beneficial uses by degrading existing wetland conditions and reducing habitat values and functions for resident and migratory wildlife, and these types of impacts are well documented in published literature and summarized in Maas 1993). The most likely effects of salinity on plants is stunting of growth, because increased salinity requires plants to expend more energy to obtain water from the soil, thereby reducing the amount of energy available for vegetative growth. At high levels, salinity can cause physical damage and mortality. Plant loss during this seedling stage can reduce the plant population density to suboptimal levels and significantly reduce yields. An increase in salinity or modification of Delta outflow that increases Suisun Marsh channel water salinity would be detrimental and result in unmitigated impacts to existing beneficial uses and Suisun Marsh wetland habitats.	As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, the project facilities would be operated to meet Bay-Delta Water Quality Control Plan salinity objectives for protection of fish and wildlife beneficial uses, as implemented through D-1641. As described in response to comment 612-8, the project would have a less than significant impact on EC and as described in response to comment 612-13, DWR will continue to support the ecological values of the Suisun Marsh to meet the obligations under the Suisun Marsh Preservation Agreement, in addition to complying with applicable water quality standards.

Letter-Comment Number	Comment	Response
612-15	These anticipated impacts of an average increase of Suisun Marsh channel water salinities will seriously impair the ability of Suisun Marsh landowners to effectively manage wetland habitats, will adversely impact fish and wildlife beneficial uses, and reduce wetland diversity and habitat conditions. Small changes in salinity could significantly affect the diversity and composition of these wetlands (Parker 2011). The quality of water plants are exposed to has a direct impact on their survival, growth, and overall health. This is particularly true in regard to salinity. (Warrence et al. 2002). In addition, climate effects including increased salinity in the upper estuary and extended drought may result in reduced growth and mortality of breeding waterfowl (Schacter et al. 2021). However, climate effects related to the project are inadequately addressed in the DEIR.	The EIR contains multiple evaluations of climate change and exceeds CEQA requirements regarding evaluations related to climate change as described in Common Response 6, Climate Resilience and Adaptation. For example, Appendix 9L, Water Quality 2040 Analysis, presents analysis of project operations at 2040 (with climate change) relative to the No Project Alternative at 2040; the analyses show that the impacts of project operations on water quality at 2040 would be similar to those described in Chapter 9, Water Quality. Please also see responses to comments 612-13 and 612-14 regarding the effects of the project on Suisun Marsh, operation of the project to meet Delta Water Quality Control Plan salinity objectives for protection of fish and wildlife beneficial uses, as implemented through D-1641, and DWR's continued support of the ecological values of the Suisun Marsh to meet the obligations under the Suisun Marsh Preservation Agreement.
612-16	In conclusion, the DEIR has not fully disclosed or mitigated the project adverse impacts on salinity in the Suisun Marsh. Qualitatively assessing Suisun Marsh salinities and averaging salinities (EC) fails to disclose significant salinity increases in individual months and on individual days. Large salinity increases in a given year must not be considered insignificant -- these salinity increases must be avoided or fully mitigated by the project. The impacts of increased salinity must be fully disclosed with a proposed course of mitigation offered in the Final EIR.	Please refer to responses to comments 612-5, 612-6, 612-7, 612-8, 612-9, 612-10, 612-13, 612-14, and 612-15, regarding the analysis of salinity, use of locations, and thresholds of the analysis. A full disclosure of changes to salinity in Suisun Marsh is provided in Chapter 9, Water Quality, Impacts WQ-4 (chloride) and WQ-5 (EC), and the described impacts would be less than significant, hence no mitigation is required or proposed to address Suisun Marsh EC.
612-17	B. The DEIR Inadequately Addresses the Project's Cumulative Impacts from Increased Local and Regional Actions Affecting Salinity This project threatens to significantly increase salinity levels in Suisun Marsh (especially the salinity increases in the western Marsh) where salinity is already an acknowledged problem.	Chapter 9, Water Quality, in the section titled Cumulative Analysis, provides a complete assessment of the cumulative impacts of the alternatives on Suisun Marsh salinities. No mitigation is provided because the project alternatives would not have a cumulatively considerable and thus significant contribution to the significant cumulative chloride, electrical conductivity (EC), and total dissolved solids (TDS) conditions in Suisun Marsh.

Letter-Comment Number	Comment	Response
	These impacts analysis in the DEIR fails not only to adequately evaluate and disclose project-level effects, but it also fails to identify or mitigate for the project's considerable contribution to significant cumulative impact. Brackish wetlands are floristically distinctive and contain a greater diversity of plant species than either the salt marshes of San Francisco Bay or the freshwater wetlands of the Sacramento-San Joaquin Delta (Byrne 2001). Since 1978, the SWRCB has maintained Suisun Marsh salinity objectives to "provide water of sufficient quality to the managed wetlands to achieve soil water salinities capable of supporting the plants characteristic of a brackish marsh." (SWRCB D1641, Section 7, p. 40). At all sampling scales, sites in the more saline San Pablo Bay supported roughly half the number of species as sites in the Suisun-Delta (Vasey 2012). Additionally, the SMPA [Suisun Marsh Preservation Agreement] was signed to protect the brackish characteristics of the Suisun Marsh from increased salinities from the CVP and SWP and other upstream diverters. Brackish wetland communities are sensitive to increased salinity, and the project operations and cumulative impacts likely will reduce wetland diversity and species richness of the Suisun Marsh.	
612-18	C. Conclusion Throughout the public review of the Delta Conveyance Project and DEIR development, it has been repeatedly stated that BDCP implementation would continue to comply with existing D1641 water quality standards and not materially change existing spring and fall Delta outflow requirements. As SRCD [Suisun Resource Conservation Group] has identified in the detailed comments listed above, the Delta Conveyance Project	This comment summarizes comments 612-2 through 612-17. Please refer to responses to those comments.

Letter-Comment Number	Comment	Response
	and DEIR modeling results are flawed, and the effects analysis demonstrate that salinity levels in the Suisun Marsh will increase which directly contradicts the claim that water quality objectives will continue to be met under D1641 water quality standards or the Suisun Marsh Preservation Agreement contractual obligations. Implementing a Project that systematically degrades and reduces the existing Suisun Marsh values and water quality is unsupportable by SRCD. The DEIR simply fails to address the project impacts on Suisun Marsh salinity. Additional quantitative analysis modeling and the inclusion of Suisun Marsh salinity Control and Monitoring stations in the western Marsh must be included in the project effects analysis. Insufficient information has been provided to demonstrate that the project will not have substantia l adverse impacts on the Marsh, and SRCD requests that DWR not take any further action towards approving the Delta Conveyance Project unless and until it has revised and recirculated the DEIR. The revision should provide water quality modeling for the entire region of the Suisun Marsh to fully address the issues and inadequacies that SRCD has identified in this comment letter.	
612-19	References: Byrne A.R., B. L. Ingram, S. Starratt, M. E. Conrad, and F. Malamud-Roam. 2001. Carbon isotopes, pollen, and diatom evidence for late Holocene paleoenvironmental change in San Francisco Bay, California. Quaternary Research 55:66-76. DWR - 30 Appendix B: Suisun Marsh Preservation Agreement Amendment Three Actions as a means to provide equivalent or Better Protection than Channel Water Salinity Standards at the Suisun Marsh Stations S-35 and S-97. April 1998. DWR Suisun Marsh Branch, Page 40. Maas, E.V. 1993. Testing crops for salinity tolerance.	The commenter provided this list for reference purposes in support of its comments. Those comments are addressed in these responses to the commenter's letter. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	Proceeding of the Workshop on Adaptation of Plants to Soil Stresses. University of Nebraska. Lincoln, Nebraska. Parker V.T., J.C. Callaway, L. M. Schile, M. C. Vasey, and E. R. Herbert. 2011. Climate change and San Francisco Bay- Delta tidal wetlands. San Francisco Estuary and Watershed Science. Revised Suisun Marsh Preservation Agreement, Signed June 20, 2005. By USBR, DWR, DFW, and SRCD Department of Fish and Wildlife. 2011. Suisun Marsh Habitat Management, Preservation and Restoration Plan Final EIR/EIS. Schacter, C.R., S. H. Peterson, M. P. Herzog, C. A. Hartman, M. L. Casazza, and J. T. Ackerman. 2021. Wetland availability and salinity concentrations for breeding waterfowl in Suisun Marsh, California. San Francisco Estuary and Watershed Science. Https://doi .org/10.15447 /sfews.2021 vl 9iss3art5 SWRCB D-1641. State Water Resources Control Board Revised Water Rights Decision 1641, Revised March 15, 2000 in accordance with Order WR2000-02. 49-56 and 183. Vasey M. C., V. T. Parker, J. C. Callaway, E. R. Herbert, and L. C. Schile. 2012. Tidal wetland vegetation in the San Francisco Bay-Delta estuary. San Francisco Estuary and Watershed Science. Warrence N.J., J. W. Bauder, and K. E. Pearson. 2002. Salinity, sodicity, and flooding tolerances of selected plant species of the Northern Cheyenne Reservation. Montana State University Extension Report, Bozeman, Montana.	
613-1	The DEIR is legally deficient and sadly reflects a predetermination to circumvent the obligation to provide salinity control for the Delta and the promises and law to limit exports to water which is truly surplus to the present and future needs within the watersheds of origin. The plan to isolate the Sacramento River flow from the Delta Pool, the excessive transfer and export of water to areas outside the watersheds of origin and the use of emergency authority to	The comment assertion that the Delta Conveyance Project would result in excessive transfer and export of water to outside the watersheds of origin and use emergency authority to take vested senior water rights is not supported by the project description contained in Chapter 3, Description of the Proposed Project and Alternatives, nor the impact analysis throughout the EIR. As described in Chapter 3 and further reinforced in Common Response 3, Alternatives Development and Description, the Delta Conveyance Project is seeking a new point of diversion and is not seeking

Letter-Comment Number	Comment	Response
	take vested senior water rights while at the same time facilitating exports of water from the Delta all reflect the bad faith incorporated in the DEIR process. The problem to be addressed is the huge deficiency in the ability of the CVP and SWP to supply water to meet senior obligations and still meet permanent demand to contractors during a series of dry years. The failure of the CVP and SWP to carryout the plans for water development while facilitating development of desert and arid areas for urban and agricultural use thereby increasing permanent demand has been deliberate and irresponsible. Diverting and exporting water needed in the Sacramento-San Joaquin Delta Watershed to facilitate urban development including golf courses, lakes and swimming pools in the desert and the planting of permanent crops on arid lands is contrary to law and not sustainable. The planning for the CVP and SWP recognized the limitation of the hydrology of the Delta watershed to provide sufficient water to meet needs within the watershed and provide surplus water for export particularly during a series of dry years such as occurred in 1929 through 1934. See Attachment 1 [Attachment 1]. The plan, promises and law were not to deprive the Delta and other areas of origin to the first right to water but to continue to develop surplus water at contractor expense to meet increasing needs within the areas of origin and the growing needs of export contractors. It was expected starting in 1990 there would be a need for surplus water from the North Coast to be supplied to the Delta so that by the year 2000 the annual amount would be 5 million acre feet. See Attachment 2 [Attachment 2]. It was expected that desalination would eventually become	to expand the water right quantity. The Delta Conveyance Project is not proposing to affect existing senior water rights. Please also refer to Common Response 3 regarding Delta Conveyance Project proposed operations, which do not include modifications to State Water Project reservoir operations upstream of the project. DWR would not increase storage withdrawal for exports, except flood releases, even though the proposed Delta Conveyance Project may provide additional diversion capacity. The project would not include modifications to Central Valley Project reservoir operations upstream of the project because Reclamation is not a participant in the project. Please see Chapter 1, Introduction, for a description of the State Water Project and background information regarding how water supply has been developed and managed in California. Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose of the project. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. The Delta Conveyance Project would be a part of the State Water Project, and Common Response 5, Public Water Agencies Water Management Practices, describes existing efforts and future actions to be undertaken by State Water Project contractors and users to ensure California's water resources are being used efficiently and sustainably. Please refer to Appendix 3E, Delta Reform Act Considerations, and Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship of the Delta Conveyance Project with the Delta Reform Act.

Letter-Comment Number	Comment	Response
	competitive with traditional water development and some of the planned development would be replaced by Desalination. The five million acre feet were never developed and more water is likely needed.	
613-2	THE FAILURE OF THE CVP AND SWP TO DEVELOP SUFFICIENT SURFACE WATER AND TO CURT AIL EXPORT DEMAND TO MATCH REAL SUPPLY DOES NOT ALLOW THE DELTA TO BE ABANDONED. IT IS THE DIVERSION FOR EXPORT THAT MUST BE CURTAILED The promises and law reflect the clear intent to limit project exports to water which is surplus to the present and future needs of the Delta and other areas of origin. Whether more water is needed for salinity control or adequate Delta water supply due to sea level rise, climate change or levee failure there will be less water available for export. As conditions change so as to induce greater salinity intrusion greater amounts of water will be needed for flushing flows to protect the Delta and less will be available for other purposes. The failure of the Projects to develop the 5 million acre feet from the North Coast or other projects will result in substantially less and in some periods no water for export. There are lawful alternatives excluded from the DEIR that could help but the DEIR preferred plan to abandon the Delta to facilitate exports is not compliant with law. The law is clear. In the June 1969 Memorandum Report titled The Delta And The State Water Project (Attachment 3 [Attachment 3]). DWR listed the then applicable protections for the Delta as follows:	The comment assertion that the Delta Conveyance Project would abandon the Delta and not comply with environmental laws is not supported by the project description contained in Chapter 3, Description of the Proposed Project and Alternatives. The EIR evaluates changed conditions, not only for the CEQA impact analysis contained in Chapters 7 through 32 whereby the comparison is between baseline and the project alternatives, but also in a series of other chapters and appendices. Please refer to the section titled Additional Analyses of Potential Future Conditions in Chapter 4, Framework for the Environmental Analysis, which summarizes and points to information throughout the EIR for such issues such as climate change, sea level rise, and available water for exports. Please refer to Common Response 3, Alternatives Development and Description, regarding the reasonable range of feasible alternatives considered in the EIR and why limiting or removing exports does not meet the Delta Conveyance Project objectives. As described in Common Response 4, No Project Alternative Description and Analysis, the No Project Alternative includes an evaluation of reasonably foreseeable projects that would occur if the Delta Conveyance Project or a project alternative were not approved. This includes an increased need for public water agencies (PWAs) to improve local water supply sources through other projects. These projects would likely be in the same vein as other water reliability projects already being developed by PWAs. DWR incorporated the requirements of D-1641 into the hydrologic modeling of the baseline and project alternatives as represented by CalSim 3. The impact analysis contained in the EIR provides an accurate representation of implementing D-1641. Please see Common Response 9,

Letter-Comment Number	Comment	Response
	"Protection is based upon the fundamental law of riparian and appropriative water rights, the County of Origin Act, the Area of Origin Law (sometimes referred to as the Watershed Protection Act), the Delta Protection Act, and the Bums Porter Act." The Sacramento- San Joaquin Delta Reform Act of 2009 added additional protections. THE DELTA PROTECTION ACT The Delta Protection Act of 1959 (Water Code, section 12200 et seq.) requires that the water needs of the Delta be given priority over exports by the SWP and CVP. In DWR's December 1960 Bulletin No. 76 Report to the Legislature DWR interpreted the Act to provide: "In 1959 the State Legislature directed that water shall not be diverted from the Delta for use elsewhere unless adequate supplies for the Delta are first provided." The Delta Protection Act of 1959 requires the SWP and CVP to provide salinity control and "an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban and recreational development in the Delta area as set forth in Section 12220, Chapter 2, of this part, and to provide a common source of fresh water for export to areas of water deficiency….." (Water Code, section 12201; see also, Water Code, section 12202.) In 1959 fishing was the predominant recreational use of the Delta. Since the commencement of SWP operation in the late	Hydrologic Modeling and Approach, regarding the modeled assumptions related to baseline and the project alternatives. The project is consistent with the 1959 Delta Protection Act and the Watershed Protection Statutes. DWR is required to respect senior water rights when operating the SWP. The project would not change current regulatory requirements that protect the beneficial use of water. When exporting water from the Delta, DWR must comply with all applicable state and federal regulatory requirements, including environmental standards, laws, and regulations relating to Delta inflow and outflow, Delta water quality, fish protection, environmental needs, and water rights, including in-Delta water right holders. The State Water Board has also established water quality and flow requirements and limits on the rate of export of water that can be pumped by the state and federal pumping plants and is currently reviewing those requirements in its Bay-Delta Water Quality Control Plan to ensure beneficial uses are protected. Furthermore, the State Water Board considered consistency with the 1959 Delta Protection Act in adopting D-1641 and, if approved, the project will be operated in accordance with D-1641 unless a new water rights decision is adopted by the State Water Board in the future. The project is also consistent with the 1992 Delta Protection Act and California Water Code Section 12980 et seq. because the project “can be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.” Please see Appendix 3E, Delta Reform Act Considerations, for a discussion of the Act’s coequal goals and how the practical effect of many of the proposed mitigation measures in the EIR and environmental commitments in the EIR would protect Delta values. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for

Letter-Comment Number	Comment	Response
	1960's, fish populations in the Delta have plummeted. The Delta water quality objectives define what is adequate salinity control and an adequate supply. In 1978 the SWRCB in D-1485 (See Attachment 4 [Attachment 4]) at page 9 concluded: "The Delta Protection Act accords first priority to satisfaction of vested rights and public interest needs for water in the Delta and relegates to lesser priority all exports of water from the Delta to other areas for any purpose." At page 13 the SWRCB provided: "To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the project export pumps." The SWRCB also concluded in D-1485 at page 14 that: "Full protection of Suisun Marsh now could be accomplished only by requiring up to 2 million acre feet of fresh water outflow in dry and critical years in addition to that required to meet other standards." In 2000 the SWRCB in D-1641 (Revised) (See Attachment 6 [typo; referring to Attachment 5 and corresponds with Attachment 5 to this letter.]), at pages 181-184, the SWRCB imposed the obligation on the Projects to maintain numerous salinity standards throughout the Delta for the purposes of protecting the following beneficial uses: (1) municipal and industrial; (2) agricultural; and (3) fish and wildlife. The agricultural standards, for example, consist of salinity	information on the relationship of the project to, and consistency with, the Delta Reform Act.

Letter-Comment Number	Comment	Response
	standards at various locations within the "western," "interior" and "southern" Delta, as well as at the Projects' export intakes in the southern Delta. Those standards were first established in the SWRCB's 1995 WQCP and then subsequently implemented in D-1641. As explained in the "Racanelli Decision," United States v. State Water Resources Control Bd. (1986) 182 Cal.App.3d 82, 116: "In its water quality role of setting the level of water quality protection, the Board's task is not to protect water rights, but to protect 'beneficial uses.'" (Emphasis added.)	
613-3	A. SWP and CVP Obligations Include Protection and Enhancement of Water Quality in the Legal Delta The purpose of the "salinity control" obligation imposed on the SWP and CVP was clearly to prevent the salinity intrusion into the Delta such as occurred in September of 1931. The obligation clearly followed and was intended to also mitigate induced salinity intrusion caused by: ship channel construction, lower Delta flood control channel enlargement, export pumping and other Project impacts including those from Project inducement of upstream water use. The purpose was also to enhance Delta water quality to avoid the detriment from previously experienced droughts. Water Code section 12202 provides: "Among the functions to be provided by the State Water Resources Development System, in coordination with the activities of the United States in providing salinity control for the Delta through operation of the Federal Central Valley	This comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. DWR has followed, and will continue to follow, the applicable provisions in the California Water Code. Please see Chapter 1, Introduction, for a description of the State Water Project and background information regarding how water supply has been developed and managed in California. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Integration of North Delta Intakes with South Delta Facilities, the proposed intakes would augment the ability to capture excess flows and improve the flexibility of the SWP operations such as for meeting the State Water Board D-1641 Delta salinity requirements. The Delta Conveyance Project would not change operational criteria associated with upstream reservoirs as demonstrated throughout the EIR. Upstream of Delta facilities will continue to be operated to meet regulatory,

Letter-Comment Number	Comment	Response
	Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta. If it is determined to be in the public interest to provide a substitute water supply to the users in said Delta in lieu of that which would be provided as a result of salinity control no added financial burden shall be placed upon said Delta water users solely by virtue of such substitution. Delivery of said substitute water supply shall be subject to the provisions of Section 10505 and Sections 11460 to 1146 3, inclusive, of this code." (Emphasis Added.) The contract between DWR and the North Delta Water Agency "for the Assurance of a Dependable Water Supply of Suitable Quality," dated January 28, 1981 (See Attachment 6 [Attachment 6]), provides: "(d) The construction and operation of the FCVP and SWP at times have changed and will further change the regimen of rivers tributary to the Sacramento-San Joaquin Delta (Delta) and the regimen of the Delta channels from unregulated flow to regulated flow. This regulation at times improves the quality of water in the Delta and at times diminishes the quality from that which would exist in the absence of the FCVP and SWP. The regulation at times also alters the elevation of water in some Delta channels ...." "(f) The general welfare, as well as the rights and requirements of the water users in the Delta, require that there be maintained in the Delta an adequate supply of good quality water for agricultural, municipal and industrial uses." "(g) The law of the State of California requires protection of the	environmental, and contractual obligations consistent with existing operations. Furthermore, as described in detail in the Chapter 3 sections titled Bypass Flow Requirements and Delta Outflow Criteria and summarized in table titled Delta Conveyance Project Preliminary Proposed Operations Criteria, the project would divert flows during excess conditions in the Delta and allow bypasses and flows to continue into and through the Delta. Common Response 3, Alternatives Development and Description, provides additional clarification regarding the operations of the project and defines terms such as excess conditions. Please also refer to Chapter 38, Glossary, for definitions of terms used throughout the EIR, including excess.

Letter-Comment Number	Comment	Response
	areas within which water originates and the watersheds in which water is developed. The Delta is such an area and within such a watershed. Part 4.5 of Division 6 of the California Water Code affords a first priority to provision of salinity control and maintenance of an adequate water supply in the Delta for reasonable and beneficial uses of water and relegates to lesser priority all exports of water from the Delta to other areas for any purpose." As explained in United States v. State Water Resources Control Ed. (1986) 182 Cal.App.3d 82: "In 1959, when the SWP was authorized, the Legislature enacted the Delta Protection Act. (sections 12200-12220.) The Legislature recognized the unique water problems in the Delta, particularly 'salinity intrusion,' which mandates the need for such special legislation 'for the protection, conservation, development, control and use of the waters in the Delta for the public good.'(section 12200.) The act prohibits project exports from the Delta of water necessary to provide water to which the Delta users are 'entitled' and water which is needed for salinity control and an adequate supply for Delta users. (sections 12202, 12203, 12204.) But the crucial question left unanswered by the protective legislation is exactly what level of salinity control the projects must provide. As noted, the Board concluded that the projects are responsible only for maintaining that level of salinity which would exist in the Delta had the projects never been constructed, the so-called 'without project' level. The board declared that if the Delta water users desire a higher level of protection (a greater amount of outflow water), they can purchase such 'enhancement water' from the projects." (Id. pp. 139-140,	

Letter-Comment Number	Comment	Response
	emphasis added.) The court did not agree with the SWRCB's position. The court concluded: "Whatever final conclusion is to be drawn from Antioch regarding the nature and extent of common law riparian rights to salinity control, existing constitutional and legislative authorities encompass the Board's obligation to protect the quality of the Delta waters from saltwater intrusion. As mentioned above, the water quality legislation unmistakably requires the Board to formulate water quality standards to provide salinity control to 'ensure the reasonable protection of beneficial uses' (section 13241), a statutory classification earlier noted as wide ranging (section 13050, subd. (f)). Though there can be no doubt concerning the Board's authority to take action to protect the consumptive uses (agricultural, industrial and municipal) in the Delta, its approach to that task was seriously flawed by equating its water quality planning function with protection of existing water rights." (Id. pp. 117 & 118, emphasis added.) As the court further explains: "Thus, the Board's authority in setting water quality standards is not limited to the protection of water rights but extends to the protection of all beneficial uses from degradation of water quality, even if the resulting level of water quality exceeds that provided by water rights." (Id. p. 141, emphasis in original.) The court confirmed that providing salinity control in the Delta was also a major purpose of the Projects:	

Letter-Comment Number	Comment	Response
	"Salinity control in the Delta was unquestionably contemplated by state and federal authorities as one of the purposes to be fulfilled by the statewide water projects: ...." (Id. p. 128.) In furtherance of the determination that protection of the Delta has priority over Project Contractors, including exports from the Delta, the court further explains: "Thus, both substantively and conceptually, the contractors cannot justify any reasonable expectation of a certain or guaranteed water supply for delivery." (Id. p. 148.) The trial court in the above case determined that there is no obligation on the part of Delta water users to pay for the incidental benefit from the Projects' provision of salinity control for other purposes including fish and wildlife, maintenance of quality at export pumps and meeting public trust needs. The payment obligation only arises from the release of Project developed truly surplus waters specifically for the enhancement of Delta water user supply. Eight separate cases were coordinated into said case, Judicial Council Coordination Proceeding No. 548. The parties fell into nine groups: (1) the SWRCB, (2) Delta industries, (3) the Central Delta riparians, (4) the South Delta riparians, (5) the U. S. Bureau of Reclamation (the U.S.), (6) the federal contractors, (7) DWR, (8) the state contractors, and (9) the Contra Costa municipal users. The court addressed the Delta water users' "inchoate right to 'recapture' water being exported by the state and federal projects" under the Watershed of Origin Statute and Delta Protection Act of 1959. The court generally	

Letter-Comment Number	Comment	Response
	concluded that perfection of the right to recapture water being exported would require a Delta user to obtain an appropriation permit and a contract to pay for the recaptured water that was "developed by the projects and that was released specifically for his benefit." Specific to the payment issues, the court provided that “Delta users need not pay for salinity control water even if they are incidentally benefited unless the water is released specifically for their benefit,” "Delta water users need not pay for the enhanced water quality that results from water released by the projects to maintain adequate water quality at the export pumping stations," "Delta users need not pay for the enhanced water quality resulting from the release of abandoned water," and "Delta users need not pay for the enhanced water quality resulting from water released to preserve or enhance fish or wildlife.	
613-4	THE WATERSHED PROTECTION ACT (Water Code Section 11460) The Watershed Protection Act (Water Code, section 11460 et seq.) prohibits the Projects from directly or indirectly depriving the Delta and other areas of origin of an adequate present and future water supply. Water Code section 11460 provides: "In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department 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." (Emphasis added.)	This comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. The project is consistent with the Watershed Protection Statutes. DWR is required to respect senior water rights when operating the SWP. The project would not change current regulatory requirements that protect the beneficial use of water. When exporting water from the Delta, DWR must comply with all applicable state and federal regulatory requirements, including environmental standards, laws, and regulations relating to Delta inflow and outflow, Delta water quality, fish protection, environmental needs, and water rights, including those of in-Delta water right holders. The State Water Board has also established water quality and flow requirements and limits on the rate of export of water that can be pumped by the state and federal pumping plants and is currently reviewing those requirements in its Bay-Delta Water Quality Control Plan to ensure beneficial uses are protected.

Letter-Comment Number	Comment	Response
	The Act also applies to the United States Department of Interior, Bureau of Reclamation. (See Wat. Code,§ 11128.) The interpretation of Water Code section 11460 was explained in a letter dated February 17, 1945, to the Joint Committee on Rivers and Flood Control of the California State Legislature from the Acting Regional Director of the Bureau of Reclamation. The letter provided: "The committee had asked the question, 'What is your policy in connection with the amount of water that can be diverted from one watershed to another in proposed diversions?' In stating the Bureau's policy, Mr. Calland quoted section 11460 of the State water code, which is sometimes referred to as the county of origin act, and then he said: 'As viewed by the Bureau, it is the intent of this statute that no water shall be diverted from any watershed which is or will be needed for beneficial uses within that watershed. The Bureau of Reclamation, in its studies for water resources development in the Central Valley, consistently has given full recognition to the policy expressed in this statute by the legislature and the people. The Bureau has attempted to estimate in these studies, and will continue to do so in future studies, what the present and future needs of each watershed will be. The Bureau will not divert from any watershed any water which is needed to satisfy the existing or potential needs within that watershed. For example, no water will be diverted which will be needed for the full development of all of the irrigable lands within the watershed, nor would there be water needed for municipal and industrial purposes or future maintenance of fish and	

Letter-Comment Number	Comment	Response
	wildlife resources.'" (Emphasis added). To the extent diverters in the Delta watershed including those in the legal Delta need more quantity of water (which they do not) or additional water rights they are entitled under the Watershed Protection Act to acquire senior water rights over the Projects to natural flow and recaptured Project stored water. The recapture of Project stored water includes the need to resolve the question of payment for water provided over and above Project obligations and incidental benefit. For the CVP the recapture appears to require that an appropriative right be obtained from the SWRCB and resolution of payment. For the recapture of SWP water, resolution by contract without the need for a new appropriative right appears sufficient. The appropriative right process subject to resolution of payment for recaptured Project water over and above Project obligations and incidental benefit should be available for recapture of Project water. Delta appropriation of natural flow, now wrongfully obstructed by the SWRCB application of Term 91, does not require payment and should be allowed. The planning for the CVP and SWP was to limit exports to water which is truly surplus to the present and future needs within the watersheds and to progressively continue with additional development of surplus water to meet increasing water needs within the watershed and increasing Project contractor demands. It was expected that the increasing needs in the Delta watershed would exceed the available natural flow and Project developed surplus water such that by the year 2000 it would be necessary to supplement water in the Delta annually with 5-million acre-feet of surplus water from Project development in North Coast watersheds. Such development	

Letter-Comment Number	Comment	Response
	did not take place and currently curtailment within and transfer of senior water rights from the Delta watershed is the predetermined outcome for the DEIR.	
613-5	The DEIR reflects the current administration dedication to reverse the promises and law and shift the burden and shortage onto the Delta and other areas of origin rather than curtail exports which fuel the runaway development of permanent water demand in desert and arid areas for which there is no permanent supply. The isolation the Sacramento River flow from the Delta by way of a tunnel is simply a tool to facilitate such illicit plan. There are no outlets to maintain Delta channel water quality. There are no facilities to provide substitute supplies to Delta users. There is no plan to operate and manage releases from storage into the Delta for use outside the Delta so as to integrate to the maximum extent possible the provision of salinity control and an adequate water supply for the Delta. There is no plan to provide a substitute water supply to the users in the Delta in lieu of that which would be provided as a result of the provision of salinity control. As determined by the California Appellate in United States vs. State Water Resources Control Board cited above: "The act prohibits project exports from the Delta of water necessary to provide water to which the Delta users are 'entitled' and water which is needed for salinity control and an adequate supply for Delta users. (§§ 12202, 12203, 12204.)" The DEIR process including project description and scoping is an attempt to preclude consideration of alternatives which protect the Delta and do not include an isolated Delta conveyance tunnel project which is intended to facilitate exports in lieu of Delta protection. THE OBJECTIVE OF MAKING PROJECT SUPPLY MORE RELIABLE SHOULD BE BY WAY OF DEVELOPING PROJECTS THAT PRODUCE REAL SURPLUS WATER,	DWR has not predetermined to approve the project. The decision maker will consider the project as well as the project alternatives, including the No Project Alternative, in light of their environmental impacts as part of the administrative process. Please refer to Common Response 3, Alternatives Development and Description, for an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed project. The purposes and project objectives of the Delta Conveyance Project are presented in Chapter 2, Purpose and Project Objectives, of the EIR. The primary purpose of the project is to increase water supply reliability, not increase water supplies. Alternatives that would reduce water supply reliability do not meet most of the basic project objectives, so were properly not carried forward for environmental review. The project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for, and would not preclude, increased commitments to other water supply solutions, including demand management, recycling, desalination, water conservation, and storage that may be undertaken by DWR or other entities. Project objectives did not include protecting the Delta as an explicit objective. The EIR identifies potential impacts of the project and proposes mitigation to reduce significant impacts. Appendix 3A, Identification of Water Conveyance Alternatives, describes the screening process to identify potentially feasible alternatives that would meet most of the project objectives while minimizing environmental impacts.

Letter-Comment Number	Comment	Response
	HONORING THE PRIORITIES IN LAW AND CONTROLLING THE CREATION OF NEW PERMANENT DEMAND FOR WICH [WHICH] THERE IS NO [NOT] ALREADY IN PLACE, ASSURED PERMANENT SUPPLY. THE ADMINISTRATION HAS PREDETERMINED THAT AN ISOLATED DELTA CONVEYANCE TUNNEL IS TO BE APPROVED REGARDLESS OF THE RESULTS OF ENVIRONMENT AL REVIEW THEREBY CONSTRAINING ENVIROMENTAL REVIEW. CEQA WAS INTENDED TO BE INTERPRETED IN SUCH A MANNER AS TO AFFORD THE FULLEST POSSIBLE PROTECTION TO THE ENVIRONMENT WITHIN THE SCOPE OF THE STATUTORY LANGUAGE (14 CCR 15003(£)). CEQA DOES NOT REQUIRE TECHNICAL PERFECTION IN AN EIR, BUT RATHER ADEQUACY, COMPLETENESS, AND A GOOD -FAITH EFFORT AT FULL DISCLOSURE (14 CCR 15003(i)).	Please refer to Common Response 3 regarding water rights, contracts, and use of water. Please see EIR Chapter 6, Water Supply describing how the project would not modify water rights of any water rights holder including in-Delta water rights holders. A key assumption is that operation of a new conveyance facility would comply with applicable existing and future laws and Delta regulatory requirements including the Bay-Delta Water Quality Control Plan water quality and flow objectives that protect in-Delta beneficial uses of water, including municipal and agricultural beneficial uses. Because the Delta Conveyance Project is proposed as a dual conveyance facility operated in conjunction with existing Delta SWP facilities, compliance with current and future requirements to maintain Delta flow and salinity conditions as well as south Delta pumping limitations would occur to protect Delta beneficial uses. A new conveyance facility would improve SWP operational flexibility, water supply reliability and Delta conditions. Chapter 9, Water Quality, concludes that all of the water quality effects of the proposed project and alternatives operations and maintenance, including salinity impacts would be less than significant. As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Proposed Project and Alternatives Overview, identification of proposed project for the Draft EIR does not indicate that DWR has decided to move forward with the Delta Conveyance Project. DWR will not make a decision on the project until after addressing public comments on the Draft EIR, certifying the Final EIR, making all necessary findings, and taking any other actions required to comply with CEQA. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal

Letter-Comment Number	Comment	Response
		water quality and environmental laws.
613-6	PREDETERMINATION In 1999 when Governor Newsom announced a brand-new approach that focusses on securing safe and resilient water supplies many erroneously thought that the supply for the Delta and other areas of origin might be included. The release from the Department of Water Resources of the document titled Modernizing Delta Conveyance Infrastructure Q&A (Attachment 7 [Attachment 7]) made it clear that the concern was the threat to the State's ability to deliver clean water supplies that flow through the Delta. At Page 2 section 4 the statement is made: "The state will begin environmental permitting, engineering and stakeholder engagement to pursue a single tunnel solution to modernize Delta Conveyance." In Section 8 the assurance for protection of the Delta is: "DWR's ability to divert from the Delta is regulated by the State Water Resources Control Board (SWRCB) which sets parameters for protections of the beneficial uses in the Delta”" DWR describes the pattern and practice of its sister state agency (SWRCB) granting Temporary Urgency Changes which allowed export of water that could have been used to meet the protective parameters as "in all but the most extreme circumstances”" No mention is made of the SWRCB improper curtailment of senior vested water rights and changes to water quality standards which degrade preexisting water quality. It is common knowledge that isolated conveyance of Sacramento River water to the export pumps will degrade Delta water quality. There are no outlets for releases to be made to maintain delta supply or quality The intent is made clear that no alternative will be considered unless it contains an isolated conveyance facility. In Section 12 it is stated; "Yes, Decades of study, coupled with updated understanding of sea level rise,	DWR has not predetermined to approve the project. The decision maker will consider the proposed project as well as the project alternatives, including the No Project Alternative, in light of their environmental impacts as part of the administrative process. DWR followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, Alternatives Development and Description, CEQA requires lead agencies to develop project objectives to inform the identification of the project and a reasonable range of potentially feasible alternatives. CEQA requires an EIR to include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the project. Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3 provide an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed project. Common Response 3 also explains how the screened-out alternatives do not meet project objectives or are not potentially feasible alternatives to the proposed project. A through-Delta alternative alone would not meet the sea-level rise and seismic resiliency objectives and would not substantively improve Delta SWP operational flexibility. As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Proposed Project and Alternatives Overview, identification of project for the Draft EIR does not indicate that DWR has decided to move forward with the Delta Conveyance Project. DWR will not make a decision on the project until after addressing public comments on the Draft EIR, certifying the Final EIR, making all necessary findings, and taking any other actions required to comply with CEQA. The suggestion that only an isolated conveyance facility is considered in the EIR is not supported by the analysis in Appendix 3A, which considers many alternatives to the proposed project, and by the description of the

Letter-Comment Number	Comment	Response
	make it clear that conveyance in the Delta must be modernized." The justification provided is 10 feet of Sea level rise by 2100. Sea Level rise at the Golden Gate is dissipated as it reaches the Delta. DWR habitat projects such as Lookout Slough plan for 1 foot of sea level rise. Delta levee standards provide for 18 inches of freeboard and plans related to the Freshwater Corridor levee program address levee raising as sea level rise is manifested. Water has been diverted through the channels of the Delta to the export pumps for over 70 years while sea level has risen at the Golden Gate over the last 150 years by about 8.5 inches. Note: The 10 ft of Sea level rise by 2100 was deleted in a September 4, 2019 update also included in Attachment 7 [Attachment 7]. In section 1. A statement is made that: "there's a 72% chance a 6.7 or greater magnitude earthquake occurring in the Bay Area by 2043 that could cause levees in the Delta to fail”" There has been no confirmation of a Delta levee failure due to earthquake. Analysis provides that some slumping and deformation could have occurred at some location in the past but confirmation is lacking. The more significant earthquake risk would appear to be the export pumps, aqueducts, pipelines and other facilities extending hundreds of miles along and over major earthquake faults to serve southern urban areas. Even as to sea level rise it appears that the overstatements are intentional. See Attachment 8 [Attachment 8] which reflects the variability of sea level rise as to location and the reality as to earthquake risk. Honest analysis of Alternatives for actions outside the Delta without the damages associated with a tunnel cannot in good faith be precluded. Significant efforts are underway to provide additional resilience for both in Delta and export needs through improvement of Delta levees and emergency operations to further address the risk of climate change, sea	proposed project and alternatives, which propose dual conveyance alternatives in which existing south Delta SWP facilities and Delta Conveyance Project facilities would be operated together to meet stated project objectives. Flows in the Delta would be maintained in a similar manner as currently and in a manner that would not significantly impact Delta water quality as presented in Chapter 9, Water Quality. Implementation of the Delta Conveyance Project would not preclude actions by others to improve Delta and water system resilience through levee improvements or other means. Refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for a discussion about entity responsibilities to maintain and repair levees. The comment’s reference to the document “Modernizing Delta Conveyance Infrastructure Q&A” is not a comment on the content of the EIR. Please refer to Common Response 3 regarding how the Delta Conveyance Project would not modify water deliveries to any water rights holders and regarding temporary urgency change petitions. The approach to sea level rise analysis is summarized in Chapter 3, section titled Design for Climate Change and Sea Level Rise. Also please refer to Chapter 30, Climate Change, regarding how project alternatives may improve the study area’s resiliency and adaptability to climate change; Appendix 30A regarding climate change and sea level rise projections; and Appendix 5A-F regarding sea level rise and water quality modeling. Regarding documentation of Delta levee failure in an earthquake, Finch 1985 cited in Appendix 3A, documents reports of levee damage on Webb Tract after the May 2, 1983 Coalinga earthquake, reported by witnesses on the levee at the time, and 14 other reports of potentially earthquake-related damage to Delta levees (Finch 1985:40-42).

Letter-Comment Number	Comment	Response
	level rise and earthquakes. (See Attachment 9-Freshwater Corridor [Attachment 9]). The administration plan mentions levee improvements and that the cost of conveyance infrastructure will not be funded by California Taxpayers yet they have used Proposition 1 Bond funds earmarked for Delta Levee programs to facilitate construction of the Lookout Slough habitat project to partially satisfy a biological opinion requirement for continued export of water from the Delta. (See Section 13 of Attachment 7 [Attachment 7])	Regarding the source of funding for the Delta Conveyance Project, please refer to Common Response 7, Implementation Considerations, regarding project costs and funding sources. Participating public water agencies would fund the project, not the state of California. Analysis of actions outside the Delta is outside the scope of this EIR. Common Response 1 addresses the level and scope of analysis contained in the EIR. The No Project Alternative is evaluated in each resource section. Please refer to Common Response 4, No Project Alternative Description and Analysis, regarding reasonably foreseeable actions that are considered part of the No Project Alternative.
613-7	In March of 2020 DWR initiated USACE Permit review on a specific range of configurations of Delta Tunnel Projects confirming their predetermination for a Delta Conveyance Isolated Tunnel facility. Such premature submittal further constrains an objective consideration of alternatives that don't include an isolated conveyance facility. (See Attachment 10 [Attachment 10]) Such action in advance of completion of the EIR does not reflect good faith and certainly is inconsistent with the 14 CCR 15003 (d) Policy "The EIR is to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." The July 2020 Administration Water Resilience Portfolio directs DWR to: "Plan, permit and build new diversion and conveyance facilities (such as a tunnel) in the Sacramento-San Joaquin Delta to safeguard State Water Project, and, potentially, Central Valley Project deliveries drawn from the Sacramento and San Joaquin river systems" (See Attachment 11 [Attachment 11] item 19.2) The direction to permit and build in advance of completion of the EIR is inconsistent with good faith compliance with CEQA and certainly constrains the objective analysis of alternatives.	Please refer to Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives evaluated in the EIR. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding permitting processes. Permit applications are frequently prepared and submitted to permitting agencies prior to the completion of CEQA and the planning process and prior to the lead agency making a decision regarding approval of a specific alternative. A permit application does not commit the lead agency to approving the proposed project or any project alternative. DWR submitted its Section 404 permit application for the project in order to formally engage USACE in early coordination with DWR's CEQA process regarding environmental review under USACE's process for compliance with the NEPA, as well as Clean Water Act and Rivers and Harbors Act. The USACE permit process will not be concluded until NEPA and all other relevant environmental compliance efforts are complete. The submittal of a permit to a permitting agency does not preclude the decision by a lead agency to select and approve an alternative analyzed in the EIR, nor does it preclude the lead agency from modifying an alternative analyzed in an EIR or described in a permitting application or not approving any project.

Letter-Comment Number	Comment	Response
		Therefore, the submittal of a permitting application to a permitting agency is not a predetermination of a project approval. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding information about the Water Resilience Portfolio.
613-8	THE DEIR FAILS TO SET FORTH THE ENVIRONMENTAL IMPACTS OF DIVERTING WATER THROUGH THE TUNNEL THAT WOULD OTHERWISE FLOW INTO AND THROUGH THE DELTA The DEIR plan is to build the isolated Delta conveyance tunnel to divert fresh water through the tunnel for export rather than through the Delta or rather than allowing the water to flow without any diversion for export. The diversion could include natural flow, Project water, and flow from other sources. The resulting environmental impacts to the Delta and Bay must be set forth and considered. Sea level rise and earthquake impacts could vary over a wide range and the impacts of operation of the tunnel will vary accordingly. The prospect of regulation by the SWRCB could vary from protection of the Delta and other areas of origin to no protection resulting from temporary urgency changes or even legislative determinations of unreasonableness.	The analysis contained in the EIR is not consistent with the assertion by the comment that environmental impacts on the Delta and Bay have not been considered. The EIR discloses the impacts of the proposed project and all the alternatives through the course of numerous chapters and appendices. For example, Chapter 9, Water Quality, analyzes water quality impacts associated with operating the project (i.e., diverting water at the north Delta intakes and through a tunnel). Chapter 2, Purpose and Project Objectives, outlines details of the Delta Conveyance Project (to restore and protect the reliability of State Water Project water deliveries and, potentially, Central Valley Project water deliveries south of the Delta) consistent with the State's Water Resilience Portfolio (California Natural Resources Agency et al. 2020) by addressing seismic risks, sea level rise, and other reasonably foreseeable consequences of climate change and extreme weather events in a cost-effective manner. Refer to Chapter 4, Framework for the Environmental Analysis, which describes the approach to resource impact evaluations presented throughout the EIR, as well as the regulatory environment, particularly as it relates to the Clean Water Act and the SWRCB. The Delta Conveyance Project is not proposing changes to operations, water right quantity, or amount of storage provided by upstream facilities and also does not preclude future changes to the state's water supply either through modifications of the operation of existing facilities or increasing water storage.
613-9	THE DEIR FAILS TO INCLUDE AND IN GOOD FAITH ADDRESS THE IMPACTS TO WETLANDS. The DEIR delineation of wetlands fails to include much of the wetlands contained in the numerous ditches and canals and winter flooded farmland impacted by construction, operation, maintenance and monitoring of the proposed tunnel, shafts,	The analysis contained in the EIR does not support the assertion by the comment that the Draft EIR fails to address impacts on wetlands. As described in Chapter 13, Terrestrial Biological Resources, the EIR analyzes impacts on state- and federally regulated wetlands and other waters (aquatic resources). Temporarily flooding farmland does not mean these lands meet the regulatory or biological definition of a wetland. Wetland

Letter-Comment Number	Comment	Response
	soil storage areas and other related facilities. (See Attachment 12 USF&W [U.S. Fish and Wildlife Service] Wetland delineation Maps [Attachment 12]) The impacts include the direct impacts of construction, the disturbance during the construction, operation, maintenance and monitoring of the tunnel related facilities and the resulting degradation of water quality. The requirement to minimize impacts to wetlands is not adequately addressed.	features were identified based on the Corps of Engineers Wetlands Delineation Manual (U.S. Army Corps of Engineers 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Army Corps of Engineers 2008), technical guidance documents that describe and define the characteristics of wetlands. In these guidance documents, wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (U.S. Army Corps of Engineers 2008:2). Numerous sources of data were used in the analysis, including the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (U.S. Fish and Wildlife Service 2020) cited in the comment. Agricultural ditches are one of three types of nontidal waters addressed in the analysis, and the acreages of affected agricultural ditches are provided in Chapter 13 in the table titled Estimated Discharge of Dredged or Fill Material into Aquatic Resources Associated with the Construction of Project Facilities (acres) and Appendix 13C, Impact Tables. Impact BIO-51 describes the environmental commitments and Mitigation Measure BIO-2b, which minimize impacts on wetlands. Compensation for unavoidable impacts is described in Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources).
613-10	THE DEIR PROPOSED ALIGNMENTS UNECESSARILY ADVERSELY IMP ACT THE PRIMARY WINTERING AREA AND WETLANDS FOR WATERFOWL OF THE PACIFIC FLYWAY The Delta is an important wintering ground for waterfowl of the Pacific Flyway including Sandhill Cranes. Sandhill cranes currently frequent a much greater area than that considered as critical in the DEIR analysis. The proposed tunnel alignment areas pass through the heart of the wintering grounds for such waterfowl much of which is delineated by the USF&W as	Chapter 13, Terrestrial Biological Resources, describes and quantifies impacts on breeding and wintering birds, including sandhill cranes (see for example Impact BIO-33), from the proposed project alternatives and provides mitigation measures to reduce, avoid, and minimize potential construction effects associated with construction, operations, and maintenance of the proposed project. Regarding the commenter's claim that sandhill cranes may occur in a greater area than analyzed in the EIR, please see Common Response 11, Terrestrial Biological Resources and Compensatory Mitigation Plan,

Letter-Comment Number	Comment	Response
	Palustrine Farmed Wetland. The years of construction activity, maintenance and monitoring access and the presence of shafts, soil deposit and treatment areas and other project related facilities will result in short-term and long-term adverse impacts. Suggested avoidance and minimization measures and mitigation has not been demonstrated to be adequate. Land use in the Delta primary zone is highly restricted and much of the land is not suitable for vineyards and orchards. The lands are already available habitat much of which is delineated wetland. The mitigating effect of so-called compensation for the loss of foraging and nesting habitat has not been demonstrated. Replacement of wintering habitat values is near impossible and avoidance of degradation by altering alignment and avoiding water quality degradation is the only real solution. Water quality is critical to the growing of crops which are a major part of the food source for wintering waterfowl. Table ES-11 does not show an impact on Palustrine Farmed wetland and the largest acreage shown is 1805.05 acres as impacted for Sandhill Cranes and 3,432.44 acres for Swainson's Hawk. Impacts to both are listed as LTS, Less Than Significant. The tunnel construction disturbance and maintenance and monitoring access will singularly and cumulatively be hugely detrimental to waterfowl and other terrestrial species. Using just some of the areas along the alignments shown in Map Book 13-1, 13-2 and 13-3 we see 45,329 acres or more for 13-1, 78,145 acres or more for 13-2 and 85,518 acres or more for 13-3 adversely impact migrating waterfowl, including Sandhill Cranes during the winter and likely adversely impacting a significant acreage of important nesting areas. (See	regarding the use of habitat models and how survey data will be used to assess suitable and occupied habitat within the study area. Regarding impacts on Palustrine Farmed Wetland, please see response to comment 613-9. The table titled Comparison of Impacts on Terrestrial Biological Resources by Alternative (acres/CEQA findings after mitigation) includes a summary comparison of quantitative impacts on some of the more sensitive terrestrial biological resources in the study area by alternative prior to mitigation and the significance of the impact after mitigation. The examples that the commenter provides present potential impact acres on lesser sandhill crane and Swainson's hawk habitat prior to mitigation and include the impact conclusion of less than significant after mitigation, as indicated in the table title. Attachment 13 to the comment letter presents information about the natural communities and cultivated lands that are managed on Mandeville Island and avian and mammal species that were documented on the island in 1992 and 1993. Permanent and temporary impacts from project alternatives on the natural communities and species habitat within the study area, including those referenced in Attachment 13, are quantified and analyzed in Chapter 13. Attachment 17 provided by the commenter presents a list of the tracts and islands in the Delta that intersect with the project footprints for the Central, Eastern, and Bethany Alignments. Attachment 17 also lists the size of those tracts and islands in acres; however, the project footprint under any Alternative would only impact a portion of these lands. As stated above, the acres of natural communities and species habitat impacted are presented in Chapter 13. Mitigation for natural community and species habitat impacts, including performance standards and mitigation land protection assurances, are described in Appendix 3F. This mitigation meets CEQA requirements.

Letter-Comment Number	Comment	Response
	Attachment 17 [Attachment 17]). See Attachment 13 [Attachment 13] Mandeville Island Biological Surveys (1993) which describes the typical beneficial habitat values found in such areas. Alternative tunnel locations away from the important waterfowl wintering and nesting areas in the Delta have not been adequately considered. Tunnel locations closer to I-5 and with portions beneath portions of the I-5 and/or 205 highway rights of way would greatly reduce the adverse impacts to wetlands and to waterfowl including Sandhill Cranes. Much of such area is already owned by the State and the boring material [would] be of value in expanding and raising the highways portions of which are already below the 100 year flood level without consideration of climate change, sea level rise, earthquake failures or abandonment of the Delta as intended with the tunnel. With such alternatives, impacts to traffic, roads and agriculture lands could also be reduced. Improvement of conveyance through the existing Delta channels coupled with limiting exports to truly surplus water consistent with the mandates of law is also an alternative not given objective consideration. Such impacts can be greatly reduced with more easterly alignments improperly excluded from consideration.	Please also see Common Response 11, Terrestrial Biological Resources and Compensatory Mitigation Plan, regarding the adequacy of mitigation and Common Response 3, Alternatives Development and Description, regarding the alternatives evaluated and the reasonable range of feasible alternatives evaluated in the EIR. See response to comment 613-11 regarding more easterly alignments as suggested by the commenter.
613-11	The ITC Recommendation with realignment from a New Stockton Shaft [Attachment 18] to I-5 and thence southerly to the aqueducts should be evaluated. The analysis in the ITC recommendation does not reflect the bad faith obvious in the recommended alternatives. Much of the northern tunnel could	The assertion that the New Stockton Shaft alternative should be analyzed in the EIR is not consistent with CEQA or supported by the EIR. Attachment 18 to the comment references the Independent Technical Review (ITR) Panel Report submitted to the Delta Conveyance Design and Construction Authority (DCA) prior to start of the Delta Conveyance Project Notice of

Letter-Comment Number	Comment	Response
	run beneath I-5 and or the borrow pits which are already owned by the State.	Preparation (NOP) scoping period that started January 15, 2020. The ITR report evaluated early technical material related to tunnel design in December 2019. DCA carefully considered the ITR recommendations for an eastern tunnel alignment with a shaft near Stockton and determined that using a tunnel shaft near Stockton was not viable because of a range of issues (Delta Conveyance Design and Construction Authority 2020:1). Meeting minutes of the February 26, 2020, Stakeholder Engagement Committee meeting indicate that (1) the ITR report did not consider environmental factors (Delta Conveyance Design and Construction Authority Engagement Committee 2020:4), and (2) despite the location's advantages from a logistical perspective, DCA considered that there would be air quality and environmental justice issues (Delta Conveyance Design and Construction Authority Engagement Committee 2020:5). Accordingly, the eastern corridor recommended by the ITR does not meet the alternatives screening criterion to minimize environmental impacts or reduce or avoid the project's other significant unavoidable impacts, and as a result, is not carried forward for further analysis in the EIR. Attachment 18 of the comment appears to be an excerpt of the December 2019 ITR report. The map on page 8, Figure 4, Recommended Far East Alignment Corridor, showing the commenter's suggested route, includes a label for an intermediate forebay. The intermediate forebay was included in the project description of the January 2020 NOP but was subsequently found to be unnecessary and was removed from the project design to reduce project impacts. The current Delta Conveyance Project does not require or include an intermediate forebay or a New Stockton Shaft. The Bethany Reservoir alternative that was subsequently developed follows the proposed eastern alignment as far as Lower Roberts Island, then diverges to the east, via maintenance shafts at Upper Jones Tract and Union Island, to deliver water to the proposed new Bethany Reservoir Pumping Plant without the use of a Southern Forebay.

Letter-Comment Number	Comment	Response
		Please refer to Common Response 3, Alternatives Development and Descriptions, regarding the approach to alternatives screening and the description of facilities and construction. Refer also to the Engineering Project Report Shaft Siting Study technical memorandum (Delta Conveyance Design and Construction Authority 2022k:2) and the Tunnel Excavation and Drive Assessment technical memorandum (Delta Conveyance Design and Construction Authority 2022n:2) regarding the process for selecting the tunnel alignment and shaft sites for the proposed project and project alternatives.
613-12	THE DEIR ANALYSIS OF IMPACTS TO RECREATION FAILS TO INCLUDE ADEQUATE CONSIDERATION OF THE ALIGNMENT IMPACTS ON HUNTING INCLUDING THE NUMEROUS WATERFOWL AND OTHER HUNTING CLUBS AND GROUPS The disturbance from planning, construction, operation and maintenance together with the adverse impacts to wetlands, wildlife friendly agriculture, access and water quality is separately and cumulatively significant.	The comment assertions regarding impacts are not supported by the analysis contained in the EIR as the EIR provides impact analysis of environmental resources raised. Hunting activities are addressed in the EIR including consideration of locations near the project alternatives facilities. These can be found in Chapter 16, Recreation, and Chapter 17, Socioeconomics. See in particular Table 16-1, Developed Recreation Areas Nearest to Proposed Project Features; Figure 16-1, Existing Developed Recreation Facilities and Areas; Figure 16-2, Existing Dispersed/Informal Recreation Use Areas; and Table 17-25, Dispersed and Developed Recreational Resources with Activities that Could Experience Disruptions or Quality Losses during Construction, which provide a list and maps of developed recreational facilities in the project study area and include hunting use areas. These areas were considered during impact analysis in Chapters 16 and 17.
613-13	THE DEIR PROJECT PURPOSE AND OBJECTIVES IMPROPERLY PLACES PRIORITY ON SWP DELIVERIES AND POTENTIALLY CVP DELIVERIES SOUTH OF THE DELTA The DEIR provides: "DWR's fundamental purpose in proposing to develop new diversion and conveyance facilities in the Delta is to restore and protect the reliability of SWP water deliveries and,	The EIR appropriately considers and evaluates SWP deliveries, or potentially CVP deliveries, within the context of the existing water rights priority system and existing contracts. The EIR is clear in that the project would be operated consistent with regulatory requirements, specifically State Water Board Water Right Decision 1641 (D-1641) (see Chapter 3, Description of the Proposed Project and Alternatives, section Key Existing Delta Operations Criteria) and that DWR is not seeking to modify water rights quantities, but rather to petition the State Water Board to change the point of diversion to add new points of diversion in the north Delta.

Letter-Comment Number	Comment	Response
	potentially, CVP water deliveries south of the Delta, consistent with the State's Water Resilience Portfolio in a cost-effective manner." The reliability of the SWP to deliver water is and was entirely dependent upon the ongoing construction of projects to capture sufficient surplus water to meet Project priority obligations and provide deliveries to its contractors. As explained above DWR confirmed: "In 1959 the State Legislature directed that water shall not be diverted from the Delta for use elsewhere unless adequate supplies for the Delta are first provided." The development of the 5 million acre feet of surplus water from the North Coast by the Year 2000 did not occur and even from the start of the SWP in 1960 there was no reliable supply for exports and there is none to be restored. The SWP rights to Feather River water for Oroville Dam overlapped the prior CVP rights to divert Feather River water at the Delta. The SWP is obligated to provide salinity control for the Delta and its rights remain subject to recapture for needs within the watershed. The CVP did develop significant quantities of water but it also has the obligation to provide salinity control for the Delta and its rights are also subject to recapture for needs within the watershed. The DEIR purpose is in reality to circumvent priorities and elevate the priority to diversion of water through the tunnel for export. As the Court stated in United States vs State Water Resources Control Board cited above:	Furthermore, please refer to Common Response 3, Alternatives Development and Description, regarding Delta Conveyance Project's operations, which do not include changes to State Water Project or Central Valley Project operations upstream of the proposed north Delta intakes. Please also refer to Common Response 3 regarding water rights, contracts, and use of water. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws as well as the scope of the purpose and objectives statements for the purposes of CEQA and the lead agency's discretion in identifying the purpose and objectives. Please see Chapter 1, Introduction, for a description of the State Water Project and background information regarding how water supply has been developed and managed in California. Please also refer to Chapter 9, Water Quality, Impact WQ-5, which analyzes the effects on electrical conductivity resulting from facility operations and maintenance. Electrical conductivity is a measure of salinity. Chapter 9 also evaluates consistency with water quality control plans under Impact WQ-17.

Letter-Comment Number	Comment	Response
	"Thus, both substantively and conceptually, the contractors cannot justify any reasonable expectation of a certain or guaranteed water supply for delivery." (Id. P. 148.)	
613-14	The DEIR is Incomplete and Does Not Provide a Good Faith Effort at Full Disclosure by Limiting Consideration of Alternatives Contrary to NEPA Requirements. CVP and SWP water rights overlap, USACE [U.S. Army Corps of Engineers] permits are required and the project operations are coordinated. CVP and SWP water is comingled at the proposed intakes to the tunnel, at the points of diversion in the south Delta, in the aqueducts and in San Luis Reservoir. Points of diversion in the south Delta are joint points, places of use overlap and there are joint facilities such as the intertie, San Luis Reservoir and other facilities. The premature and piecemeal permit application to the USACE brings forth additional NEPA concerns including circumvention by the USACE. The complicity of the USACE in the predetermination of approval of the action to construct new SWP/CVP intakes on the Sacramento River with isolated conveyance tunnels is confirmed by the USACE NOI and effort to prematurely move forward with permitting of a particular alternative to the exclusion of others in advance of a record of decision on a NEPA compliant EIS. The NOI provides: "The USACE's jurisdiction is limited to construction activities resulting in the discharge of dredge or fill material within waters of the U.S., work or structures within navigable waters, and modifications to the federal levees and navigation projects. The scope of the USACE NEPA review for operations of the new facilities is limited to potential effects to navigation and long-term operations and maintenance of the	The comment is about the USACE permitting and NEPA, not about the adequacy of the Draft EIR. Please see response to comment 613-7 regarding the role of USACE and permitting. DWR and Reclamation have separate water rights. They individually store and convey diverted water through the facilities of the SWP and CVP. Depending on hydrologic conditions and other factors, DWR and Reclamation may use existing facilities jointly. The scope of the Draft EIS and the permits that USACE issues are the responsibility of USACE and are dependent upon their authorities and roles/responsibilities toward the project (refer to Chapter 4, Framework for the Environmental Analysis, and Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues).

Letter-Comment Number	Comment	Response
	modifications to federal levees. The scope does not extend to the potential downstream effects from the diversion of water through new intakes or to the overall SWP and water deliveries." "The future operation of the intakes after completion of construction would not be within control or responsibility of the Corps." The USACE jurisdiction is not so limited. Operation of large diversion facilities that can substantially alter water elevations and directions of flow in navigable channels clearly can affect navigation and are within the jurisdiction of the USACE. Such impacts clearly occur both upstream and downstream of the diversion facilities. The impact of dewatering wetlands through water transfers based on groundwater substitution and fallowing to supply water that is not truly surplus to the needs in the areas of origin and the impact of degradation of water quality which destroys the value of wetlands which are part of "waters of the United States must be included in the analysis. The federal obligation for maintenance of salinity control in the Delta is interrelated with the need for flows for navigation. In the case of Sierra Club v Morton (1975) 400 F. Sup 610 the court confirmed that Section 10 of the Rivers and Harbors Act applied not only to obstruction caused by the construction of a structure itself but by the operation. At page 630 the court provided: "The Supreme Court has defined 'obstruction to the navigable capacity' to mean to interfere with or diminish the navigable capacity of the waterway in question" In addressing Delta export pumping and the proposed Peripheral Canal the court found operations which tend to lower water levels and cause reverse flows or decrease water velocities downstream to constitute obstruction to the navigable capacity. At page	

Letter-Comment Number	Comment	Response
	632 the court concluded: "Accordingly, the Court concludes that the operation of the Tracy and Delta Plants presently obstructs the navigable capacity of various navigable waters in the Delta. The Court further concludes that as presently proposed, the Peripheral will also result in an obstruction to navigable capacity of the Sacramento River. More specifically, the Court finds that, in the case of each of the three facilities, the obstruction is the result of the modification or alteration of the condition or capacity of the channel of navigable water of the United States and hence is governed by the third clause of Section 10. The approval of discharge of fill and wetland impacts in connection with construction and operation of the project cannot be separated from approval of the project itself without in reality limiting the choice of reasonable alternatives as to routing, facilities and mitigation. The subject application by DWR inappropriately attempts to limit the scope of its project.	
613-15	The DWR Modernizing Delta Conveyance Infrastructure Q&A paper issued as a part of Governor Newsom's water plan clearly shows that it has been predetermined that construction of a tunnel will be included in any alternative. The DCA report to the stakeholder committee on July 22, 2020 included the No Tunnel Screening Discussion slide attached as Attachment 14 [Attachment 14]. An artificial Filter 2 was apparently contrived to eliminate consideration of a reasonable range of no tunnel alternatives. Conservation, reclamation, desalination of brackish groundwater or salty surface water coupled with surface and groundwater conjunctive use and development in the areas of origin can reduce or eliminate the need for an additional isolated conveyance facility across the Delta. Such	DWR has not predetermined to approve the project. The decision maker will consider the proposed project as well as the project alternatives, including the No Project Alternative, in light of the environmental impacts as part of the administrative process. The assertion that DWR did not consider a reasonable range of alternatives and that the project is dependent upon water transfers is not supported by the EIR nor is it consistent with statewide planning efforts. Regional water supply strategies were not considered to be alternatives to the proposed project because they would not meet most of the project objectives, including for water supply resiliency and operational flexibility of SWP Delta facilities.

Letter-Comment Number	Comment	Response
	would be consistent with reduction of reliance on the delta, honor the priority for areas of origin including salinity control for the Delta and develop new supply. Floodwaters from the eastside of the San Joaquin can be moved south through the Madera and Friant Kem canals for direct supply or groundwater storage rather than add to the flood flow of the San Joaquin River. The supply for the tunnel is greatly dependent on water transfers which simply transfer the economy from one area of the State to another.	The Department of Water Resources followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, Alternatives Development and Description, CEQA requires lead agencies to develop project objectives to inform the identification of the project and a reasonable range of potentially feasible alternatives. CEQA does not require consideration of every variation of every alternative; CEQA requires an EIR to include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the project. Common Response 3 provides an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed project. The project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for increased commitments to other water supply solutions, including recycling, desalination, water conservation and storage. Alternatives that would reduce water supply reliability were determined to not meet most of the basic project objectives. Because the Delta Conveyance Project relies on dual conveyance, flow through the Delta to the south Delta export facilities would continue, if DWR approves the project. DWR has existing water rights and contracts to store, divert, and convey water via existing SWP facilities. The water supply of the SWP is not dependent on water transfers, nor would it be if the Delta Conveyance Project were approved and built. Please see Appendix 3H, Non-Project Water Transfer Analysis for Delta Conveyance, regarding the consideration of water transfers and an analysis of water transfers at the north Delta intakes.

Letter-Comment Number	Comment	Response
613-16	NEPA requires full disclosure of the potential effects of major actions proposed by federal agencies and accompanying alternatives, impacts and possible mitigation. NEPA also requires that environmental concerns and impacts be considered during planning and decision making so that steps may be more easily taken to correct or mitigate the impacts of an action. Compliance with NEPA should result in more informed decisions and the opportunity to avoid or mitigate for potential environmental effects before an action is implemented. The NEPA process is intended to identify and evaluate alternatives in an impartial manner. (See Reclamation's NEPA Handbook dated February 2012.) The requirements for NEPA are different. The requirements of 40 CFR section 1502.14 provide: "§ 1502.14 Alternatives including the proposed action. This Section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (§1502.15) and the Environmental Consequences (§1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall: (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits. (b) Include reasonable alternatives not within the jurisdiction	This comment does not raise a significant environmental issue associated with the Delta Conveyance Project and CEQA compliance. The comment primarily is focused on and provides a summary of the NEPA requirements. The EIR is not an EIS, is not meant to satisfy the requirements of NEPA, and as such, this discussion is beyond the scope of the EIR. Please refer to responses to comments 613-7 and 613-14 regarding the role and responsibilities of USACE. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	of the lead agency. (c) Include the alternative of no action. (d) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference. € Include appropriate mitigation measures not already included in the proposed action or alternatives." (Emphasis added.)	
613-17	CEQA requires adequacy, completeness and a good faith effort at full disclosure. The EIR is to inform the decision makers and the public of the environmental impact of proposed actions. (See CEQA Guidelines sections 15002 and 15003.) The purposes need to include identifying ways to avoid or significantly reduce environmental damage and preventing significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures. Under CEQA the Purpose and Need (Here Project Purpose and Objectives) cannot be artificially narrowed to limit objective consideration of reasonable alternatives. The DEIR has done just that. "A reasonable definition of underlying purpose and need" should not be used to circumvent legal requirements. The Project Purpose and Objectives are not reasonable.	The project objectives are not too narrow. CEQA does not restrict an agency's discretion to identify and pursue a particular project designed to meet a particular set of objectives. The statement that the project purpose must include ways to avoid environmental damage is false. Rather, in consideration of the project objectives, a lead agency must identify a reasonable range of alternatives with the potential to avoid or substantially lessen one or more of the significant effects of the proposed project. The EIR complies fully with the requirements of CEQA. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the purpose of the objective statements and the application of the objectives to identify alternatives that may avoid or significantly reduce environmental impacts. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives evaluated in the EIR, which applied the project objectives to different potential alternatives. The EIR Chapters 7-32 evaluate and disclose potentially significant physical

Letter-Comment Number	Comment	Response
		environmental impacts and provide potential mitigation measures to reduce impacts where applicable. DWR has refined the design of the project to reduce environmental impacts which is discussed in Chapter 33, Other CEQA Required Analyses, section titled Environmentally Superior Alternative.
613-18	The Delta Reform Act of 2009 includes provisions intended to provide additional protection for the Delta. Such provisions include Water Code section 85054 which provides: "section 85054. Coequal goals 'Coequal goals' means the two goals of providing a more reliable water supply for California and protecting restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." Water Code section 85021: "section 85021. Reduction of reliance on Delta for future water supply needs. The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply	Neither CEQA nor the Delta Reform Act require DWR to study alternatives that reduce SWP exports or improve the quality and reliability of water supplies for other diverters in the Delta. The Delta Conveyance Project is not ignoring laws regarding establishing the priorities for water. Please see Appendix 3E, Delta Reform Act Considerations, for a discussion of the Act's coequal goals and how the practical effect of many of the proposed mitigation measures in the EIR and environmental commitments in the EIR would protect Delta values. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for information on the relationship of the project to the Delta Reform Act and consistency with the Delta Reform Act and reduced reliance on the Delta. As mentioned in the response to comment 613-4, when exporting water from the Delta, DWR must comply with all applicable state and federal regulatory requirements, including environmental standards, laws, and regulations relating to Delta inflow and outflow, Delta water quality, fish protection, environmental needs, and water rights, including those of in-Delta water rights holders. The State Water Board has also established water quality and flow requirements and limits on the rate of export of water that can be pumped by the state and federal pumping plants and is currently reviewing those requirements in its Bay-Delta Water Quality Control Plan to ensure beneficial uses are protected.

Letter-Comment Number	Comment	Response
	efforts." The Delta and other areas of origin both upstream and downstream are part of California and also need a more reliable water supply. The Project Purpose and Objectives are clearly directed only at the ability of the SWP and CVP to export water from the Delta. Restoration and protection of Delta water quality and flows including flushing flows are part of a more reliable water supply for California. Non-degradation of water quality and the statutory obligations to provide enhancement of water quality and an adequate supply are also absent from the purposes. Alternatives which require that the SWP and CVP be operated to reduce reliance on the Delta and limit exports to water which is truly surplus to the present and future needs of the Delta and other areas of origin in accordance with current law are reasonable alternatives which must be rigorously and objectively evaluated. The Delta Conveyance Project clearly ignores the law establishing the priorities for meeting needs within the Delta and other areas of origin including the needs of fish and wildlife. The expenditure of billions of dollars in a conveyance facility without a firm surplus water supply will clearly increase reliance on the Delta and damage rather than enhance the resources of the Delta.	
613-19	There must be a comprehensive review of significant impacts and consideration of the least damaging alternatives which necessarily would not involve the hugely damaging construction and operation of a tunnel. A range of reasonable alternatives must be considered including substantially reduced and at times no exports from the Delta and continuation of through Delta channel conveyance as required by California Water Code section 12205.	Please refer to the EIR, Executive Summary, table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures, for a list of CEQA impact determinations on all resources evaluated. As shown in that table and the supporting analyses in the corresponding resource chapters in the EIR, the analysis in the EIR demonstrates that most potentially significant impacts would be mitigated to a less-than-significant level, including all potentially significant impacts on water quality. Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose and objectives of the Delta Conveyance Project and Common Response 3, Alternatives

Letter-Comment Number	Comment	Response
		Development and Description, which describes the approach for screening and selecting alternatives to be included for detailed analysis in the EIR. Alternatives that would reduce water supply reliability and would not improve climate change and seismic resiliency or offer operational flexibility such as through-Delta alternatives were determined to not meet most of the basic project objectives. Water Code Section 12205 does not require conveyance of water through the Delta. Regardless, because the Delta Conveyance Project would rely on dual conveyance, flow through the Delta to the south Delta export facilities would continue, if DWR approves the project.
613-20	Export of water from the Delta which is not truly surplus to the needs of the Delta is counter-productive to improving the ecosystem. The constrained description of the Delta Conveyance Water Project is being used to preclude presentation of the environmental impacts and alternatives in a manner providing a clear basis for choice among options by the decision maker and the public as required by 40 CFR section 1502.14. The proposition that removal of natural flows into and through the Bay-Delta Estuary will improve the ecosystem is unique, bold and unsupportable.	The EIR fully analyzes the effects of the proposed project and alternatives and provides evidence that impacts on the ecosystem would either be less than significant or could be reduced to a less-than-significant level with implementation of mitigation measures. Please refer to the impact analyses in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources. Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose and objectives of the project. The basic purpose of the project is to restore and protect the reliability of SWP water deliveries and, potentially, CVP water deliveries south of the Delta, consistent with the State's Water Resilience Portfolio in a cost-effective manner. The basic purpose is not to improve the ecosystem; the EIR does not claim the project would improve the ecosystem. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, and Common Response 3, Alternatives Development and Description, regarding the purpose and objectives of the proposed project. As described in Chapter 3, Description of the Proposed Project and Alternatives, the Delta Conveyance Project will be subject to operational criteria requiring bypass flows, pulse protections, a real-time operational

Letter-Comment Number	Comment	Response
		decision-making process, and an Operations Adaptive Management and Monitoring Plan (OAMMP) to ensure effects on fish species and the ecosystem are less than significant or less than significant with implementation of mitigation measures. Furthermore, the Delta Conveyance Project is a dual conveyance project. South Delta diversions are prioritized, with use of the north Delta diversions during excess flow conditions or when environmental conditions in the south Delta would benefit from use of north Delta diversions. Please also refer to Common Response 3 for additional information about use of the proposed north Delta diversion facilities.
613-21	Reliability of water supply for exports from the Delta must be junior to the needs and obligations requiring water in the Delta and other areas of origin including fish and wildlife needs. The modeling and analysis should provide a clear confirmation of the types and numbers of years when no water will be available for export and provide estimates of the amounts that might be available in other years. Care should be taken to model carryover storage requirements with due consideration of meeting temperature, flow and statutory requirements to determine the firm yield available for export. Reliability of water supply for Northern California requires that water to meet the needs of and obligations to restore and enhance fish not be exported.	As described in Chapter 2, Purpose and Project Objectives, the basic objective of the Delta Conveyance Project is to restore and protect the reliability of SWP water deliveries. As described throughout the EIR, the project would divert and export water to the SWP service area depending on hydrologic conditions, regulatory requirements, and operational criteria. When exporting water from the Delta, DWR must comply with all applicable state and federal regulatory requirements, including environmental standards, laws, and regulations relating to Delta inflow and outflow, Delta water quality, fish protection, environmental needs, and water rights, including those of in-Delta water right holders. Therefore, as described in Common Response 3, Alternatives Development and Description, proposed intakes would only be permitted to operate with regulatory protections of standards and as prescribed by the federal and state environmental permitting process. Additionally, as explained in Appendix 5A, Modeling Technical Appendix, Section A, Modeling Overview, inputs to CalSim 3 include unimpaired inflows and rainfall runoff, agricultural, urban, and wetland water demands, return flows, and groundwater recharge from precipitation and irrigation. CalSim 3 outputs include river and stream flows, water diversions and return flows, reservoir storage, Delta channel flows, Delta diversions and exports, Delta outflow, deliveries to project and non-project

Letter-Comment Number	Comment	Response
		users, and controlling factors on project operations. Limits on Delta diversions to Clifton Court Forebay and constraints limiting flows through the Banks Pumping Plant are discussed in Appendix 5A, Section B, Hydrology and Systems Operations Modeling, Attachment 2, CalSim 3 Regulatory Assumptions and State Water Project/Central Valley Project Operations Criteria. For additional information related to the modeling that was used for the Delta Conveyance Project, please also see Common Response 9, Hydrologic Modeling and Approach.
613-22	Both State and Federal laws seek to prevent degradation of water quality. Isolated conveyance will remove the higher quality Sacramento River water from the Delta pool thereby reducing the dilution of the poorer quality water returning to the Delta by way of the San Joaquin River from SWP and CVP operations which deliver water to the west side of the San Joaquin Valley. The delivery of such water to the San Luis Unit was prohibited by the San Luis Act of 1960 unless there was a Valley Drain with an outlet to the ocean. (See Attachment 15 [Attachment 15]). The prohibition was circumvented. Even the promise that "A much needed drainage system and water supply will be provided in the San Joaquin Valley" included in ballot argument in favor of the California Water Resources Development Act (SWP) was not kept. (See Attachment 16 [Attachment 16]). The Project Purpose and Objectives unreasonably seek to maintain and increase exports from the Delta to the west side of the San Joaquin Valley which degrade Delta water quality. The commitment to isolated conveyance aggravates such degradation. The provision of salinity control and an adequate supply for the Delta was deemed to be of utmost importance and is a critical feature of a reliable supply for the Delta. Table ES-7 shows water quality impacts as less than significant. The	The comment assertions regarding degraded water quality are not consistent with the analysis contained in the EIR. The effects of the Delta Conveyance Project on water quality are analyzed in Chapter 9, Water Quality, where impacts from facility operations and maintenance were determined to be less than significant. Please see Chapter 1, Introduction, for a description of the State Water Project and background information regarding how water supply has been developed and managed in California. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Common Response 1 also contains information regarding the adequacy of the purpose and objectives statements for the purposes of CEQA as well as the agency's discretion in developing the objectives. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives development process and the range and scope of alternatives considered.

Letter-Comment Number	Comment	Response
	diversion capacity of all alternatives equal or exceed the minimum critical year Delta outflow standard of 3,000 cfs. (See Attachment 5 [Attachment 5]) It is crystal clear the project is intended to take all the water possible for export in the event of climate change, sea level rise or earthquake impacting export water quality. There is no analysis of resulting water quality in the Delta for the range of possible conditions and operations. The planned shift of legal priority is unlawful.	The comment assertion that the intent of the project is to export "all the water possible" is not consistent with the description of proposed operations in Chapter 3, Description of the Proposed Project and Alternatives, and Common Response 3. Please refer to Common Response 3 regarding how the project would be operated to shift diversions from the south Delta to the north Delta (during the summer and fall) or divert water in the north Delta during excess flow conditions while meeting regulatory requirements (during the winter and spring). The analyses provided in Chapters 5–32 evaluate the potential impacts of the proposed operations for all alternatives. Please also refer to Chapter 4, Framework for the Environmental Analysis, for a list of additional information provided that presents longer-term analyses that incorporate changes that would be expected as a result of climate change and sea level rise under the 2040 scenario. That scenario assumes an extreme high level of sea level rise but has no probability assigned for the year 2040 because it assumes the total loss of the West Antarctic ice sheet. Please also refer to Chapter 4 for a list of additional analyses of potential future conditions that consider conditions at the under a year 2070 scenario and for a description of a sensitivity analysis of a scenario that prioritizes north Delta intakes during certain times of the year. While these additional analyses are not required by CEQA, they are intended to provide additional information about how the project's proposed operations might impact the environment and provide water supply resilience in the future.
613-23	The DEIR reflects bad faith and is far from a reasonable analysis and disclosure of impacts. The alternatives presented don't even meet the DEIR screening criteria. There is no compliance with regulatory constraints including statutes and court decisions and there is no minimization of health and safety risks to the public in the Delta and surrounding region.	Please see Common Response 3, Alternatives Development and Description, regarding the reasonable range of feasible alternatives evaluated in the EIR and the type of screening criteria used to evaluate the range of alternatives. Chapter 1, Introduction, in the section titled Overview of Approval Process, describes the state, local, and federal laws that DWR must comply with for the project and related decisions by DWR.

Letter-Comment Number	Comment	Response
		The analysis of potential impacts on public health is included in Chapter 26, Public Health. The CEQA findings after all mitigation is applied were less than significant. CEQA does not require minimization of health and safety risks, although DWR and its contractors will comply with all health and safety laws and regulations.
613-24	Attachment 1: Weber Foundation Studies graphs of seasonal natural runoff with labels for a North Coast Area surplus and a Central Valley shortage.	The commenter provided this attachment for reference purposes in support of its comments. Those comments are addressed in these responses to the commenter's letter.
613-25	Attachment 2: Excerpt from DWR Bulletin No. 76 (December 1960) on the Delta Water Facilities.	The commenter provided this attachment for reference purposes in support of its comments. Those comments are addressed in these responses to the commenter's letter.
613-26	Attachment 3: Excerpt from June 1969 Memorandum Report titled The Delta and the State Water Project.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-27	Attachment 4: Excerpt from page 9 of the August 1978 SWRCB Water Right Decision 1485 that contains the quote provided in comment 2.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-28	Attachment 5: March 15, 2000 Revised Water Right Decision 1641.	The commenter is providing this attachment in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-29	Attachment 6: Excerpt from the January 28, 1981, "Contract Between the State of California Department of Water Resources and the North Delta Water Agency For the Assurance of a Dependable Water Supply of Suitable Quality",	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-30	Attachment 7: DWR's Modernizing Delta Conveyance Infrastructure Q&A documents.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. See response to comment 613-6 regarding Attachment 7.

Letter-Comment Number	Comment	Response
613-31	Attachment 8: Supplemental information regarding sea level rise, climate change, and seismic risk.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. See response to comment 613-6 regarding Attachment 8.
613-32	Attachment 9: Bay Delta Committee for Metropolitan Water District of Southern California's Presentation of update on the In Delta Freshwater Pathway dated January 26, 2021.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. See response to comment 613-6 regarding Attachment 9.
613-33	Attachment 10: March 17, 2020 letter from DWR to CVFPB regarding Section 408 Written Request for the U.S. Army Corps of Engineers to Initiate Project Review for the Proposed Delta Conveyance Project.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-34	Attachment 11: 2020 Water Resilience Portfolio in Response to Exec. Order N-10-19.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding information about the Water Resilience Portfolio.
613-35	[Attachment 12: National Wetlands Inventory Mapping from USFWS.]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-36	Attachment 13: 1993 Mandeville Island Biological Surveys Report.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-37	Attachment 14: PowerPoint presentation slide titled "No Tunnel Screening Discussion".	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter (e.g., see response to comment 613-15 regarding Attachment 14).
613-38	Attachment 15: Public Law 86-488, enacted June 3, 1960.	The commenter is providing this attachment in support of its comments. Those comments are addressed in these responses to the commenter's letter.

Letter-Comment Number	Comment	Response
613-39	Attachment 16: Argument in Favor of the 1960 California Water Resources Development Bond Act.	The commenter is providing this attachment in support of its comments. Those comments are addressed in these responses to the commenter's letter.
613-40	Attachment 17: Three copies of a table titled "Improvements on Delta Islands" (no source identified on table) that have been annotated with alignment names, checkmarks, and acreage totals.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter.
613-41	Attachment 18: Excerpt of January 2020 ITR Report Regarding Tunnel Alignment or Realignment.	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenter's letter (e.g., see response to comment 613-11 regarding the role of Attachment 18 in pre-NOP design and planning).
613-42	[ATT 19:] Delta Conveyance DEIR Comments[.] Appendix 1A[.] Note: Page #'s referenced related to comments are to the page # of the pdf document, not the page # on the footer of the page. 1.3.1 "The purpose of the project is to develop new diversion and conveyance facilities in the Delta….." The Delta Conveyance EIR conflates "Purpose" with "Objective". The EIR purpose proposes a pre-decisional project solution and an artificially constrained geographic boundary as part of the purpose. Building a conveyance is not a purpose, it is a potential solution. "Restoring and protecting SWP water deliveries" is a potentially viable project purpose if the terms like "restoring" and "protecting" are defined. By making the conveyance part of the definition of the purpose and even specifying the geographic location it must occur, it presupposes that no other alternatives can be allowed to meet the project	The commenter is referencing Appendix 1A of the Draft EIR, July 2020 Delta Conveyance Project Scoping Summary Report and Addenda. The section titled Purpose and Project Objectives of Appendix 1A lists the purpose and objectives of the project. The Scoping Summary Report was prepared following the scoping period for the Draft EIR, which was held from January 15, 2020, through April 17, 2020. The purpose and objective included in the Scoping Summary Report and referenced by the commenter are taken from the NOP for the EIR, which was issued on January 15, 2020. The responses provided herein are provided from the perspective of the Draft EIR which has been prepared in compliance with CEQA requirements. The assertions made by the commenter regarding the adequacy of the scoping summary report do not mean that the issues raised were not considered or addressed in the Draft EIR. Regardless of how DWR categorized comments in the Scoping Summary Report, scoping comments were considered in the development of the Draft EIR, as required by CEQA. To respond to comments in this letter table (i.e., responses to comments 613-43 through 613-82) DWR re-reviewed the scoping letter and reviewed this comment letter. The responses to comments provided on the Draft EIR comment letter (i.e., responses to comments 613-43 through 613-82) demonstrate that all comments are considered by DWR and responded to

Letter-Comment Number	Comment	Response
	purpose to "restore and protect SWP water deliveries". By specifying the "Delta" the purpose presumes that the only geographic area relevant to "restoring and protecting SWP water supplies" occurs only in the delta the project is arbitrarily and capriciously denying any possibility of a project alternative in another geographic area. As an example of a correct EIR purpose, a project purpose could be to "convey people and commerce from one side of a tributary to the other". If building a bridge is included as the project purpose, it preemptively and pre-decisionally forecloses the legitimate options to consider a ferry or a tunnel as an option to provide passage to the other side of the tributary. If the project purpose defines a specific and arbitrarily constrained geographic area as part of the purpose, the project forecloses on the options of routing people and commerce via a different geographic route. If a project purpose was, in this example, defined that it must occur within a 1-mile reach of the river, it would be no less wrong than the arbitrary and capricious constraint this project is attempting to enforce by only allowing project solutions that occur within the "Delta" even though the issue of reliability of the SWP is literally a statewide infrastructure issue. Even the EIR use of the term "Delta" is not defined as it does not refer to a specific geographic boundary such as the "statutory" Delta.	from the perspective of the EIR. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, regarding the EIR's approach to screening alternatives. Please refer to Common Response 3, Alternatives Development and Description, for additional information regarding the EIR's approach to alternatives screening. Please refer to Chapter 2, Purpose and Project Objectives, as well as Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives. Please also refer to Common Response 1 regarding the scope of the purposes and objectives statements for the purposes of CEQA related to the SWP water deliveries. Under CEQA, DWR has discretion to define the purpose and objectives, and neither CEQA nor any other law requires DWR to propose to address water supply reliability statewide or even throughout the service area of the SWP. The comment does not accurately capture or reflect the project objectives, which are identified and defined in Chapter 2, Purpose and Project Objectives. The project objectives focus on improving water supply reliability of the SWP. The terms restore and protect are used in the context of DWR's continuing commitment to operate the SWP as modified by the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. As described in Chapter 1, Introduction, section titled Water Supply Development and Management, the Delta is the hub of the state's water supply. Therefore, the commitment to continue to operate the SWP necessarily includes restoring and protecting infrastructure facilities in Delta. No decisions have been made regarding the selection of a project and no decisions will be made until the conclusion of the environmental review process.

Letter-Comment Number	Comment	Response
613-43	[ATT 19: Appendix 1A.] - "…..necessary to restore….." DWR's purpose to "Restore" is an open-ended proposition as the EIR fails to define "restore" in the context of as compared to what or when? DWR must define what "restore" is in the Project Purpose. Achieving the purpose of "restoring" is obviously a criteria for the suitability of alternatives, but with the failure of the EIR to define it, it is not a criteria that can be evaluated. "Restore" strongly implies water supply quantity to D1641 or earlier statutory and hydrologic condition. If that is the case, then there are project alternative and project impact implications. "Restore" in the context of the EIR could mean unimpaired hydrology as it is not defined in the EIR. "Restore" could also mean the hydrologic condition and water supply demand based at the initiation of the SWP. What is it? Because defining "restore" is pivotal in the project purpose, the definition of it will be a material change to the project that will require rescoping and reissuing the EIR with the new resulting appropriate restorative alternatives. Further with regards to the term, "restore", climate change is a global problem and cited as the primary driver for the need to "restore and protect SWP water supplies"" This defines the project as a response to a problem which is global in scope and yet the project attempts to (incorrectly) limit the range of appropriate project alternatives to be implemented only in the "Delta"" If climate change is a global problem, the Delta consists of only 0.0005% of the surface area of it. Surely the SWP's water supply reliability "and restoration" cannot be solely dependent upon the Delta 0.0005% geographic area as the sole solution to the global problem of climate change.	Please see response to comment 613-42 regarding the scope of the purpose and objectives. As noted in EIR Chapter 1, Introduction, the California State Legislature adopted the coequal goals for the Delta in the Sacramento–San Joaquin Delta Reform Act of 2009 to provide a more reliable water supply for California and protect, restore, and enhance the Delta ecosystem because of the recognized linkage between ecosystem decline in the Delta, which serves as the hub of California's water supply (Wat. Code § 85002) and reduced reliability of water exported from the Delta by the SWP and CVP (Wat. Code §§ 85001, 85002, 85004), which the Legislature found serves "[m]ore than two-thirds of the residents of the state and more than two million acres of highly productive farmland . . ." (Wat. Code § 85004 (a)). The Delta Conveyance Project is consistent with and furthers the achievement of the coequal goals by increasing opportunities to divert water during high-outflow events and making such supplies more resilient to adverse impacts of climate change and associated sea level rise. The project would provide operational flexibility to improve aquatic conditions in the Delta and better manage risks of further regulatory constraints on project operations. The project also seeks to minimize the potential for public health and safety impacts from reduced quantity and quality of SWP water deliveries, and potentially CVP water deliveries, south of the Delta as a result of a major earthquake that could cause breaching of Delta levees and the inundation of brackish water into the areas where existing SWP and CVP pumping plants operate in the southern Delta. Nothing in CEQA or any other law requires DWR to identify a solution to the global problem of climate change; instead, one of the project objectives seeks to address potential impacts of climate change on SWP water deliveries. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, regarding the EIR's approach to screening alternatives. As described in Appendix 3A, project conveyance alternatives were combined

Letter-Comment Number	Comment	Response
	In the face of reality of climate change impacts to water supplies all over the world, why would it be a reasonable proposition for the project to "restore water supplies" to some unspecified earlier unaffected date and time when everyone else in the world is being forced to adapt to our new climate and precipitation patterns.	into similar groups for first-level screening and screened against the project objectives to determine whether they would be carried forward to the next level of screening. Water supply reliability is included as one of the four criteria under the first-level screening. This criterion screens for alternatives that provide water when all in-basin water right demands and environmental requirements have been met and there is water above those amounts in the Delta available, consistent with all applicable regulatory requirements, for diversion under DWR's existing water rights. Please refer to Common Response 3, Alternatives Development and Description, for additional information regarding the EIR's approach to alternatives screening. Please refer to Chapter 2, Purpose, and Project Objectives, as well as Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the purpose and objectives of the project, including to help address reasonably foreseeable consequences of climate change and extreme weather events. The project would increase reliability of the State Water Project to provide water supply to a host of water contractors and individuals, households, businesses, and farms in their respective service areas in the Bay Area, San Joaquin Valley, Central Coast, and Southern California. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change.
613-44	[ATT 19: Appendix 1A.] - "…and protect the reliability of SWP water deliveries and, potentially, Central Valley Project (CVP) water deliveries south of the Delta" The term "reliability" was also not defined in the EIR so it also cannot defensibly be utilized as alternatives screening criteria. As an example, the SWP could reliably deliver 1 gallon every	Please see response to comment 613-42 regarding the project purpose and objectives. Please refer to response to comment 614-43 regarding the EIR's approach to screening alternatives and the project's anticipated water supply reliability benefits.

Letter-Comment Number	Comment	Response
	year. Alternatively, the SWP could reliably be counted on up to 50% deliveries happening at least once every 100 years. Given this range of conditions in which SWP reliability could be accomplished in the absence of a definition of "reliability" in the EIR, the EIR may not dismiss any alternatives for the reason of "lack of reliability”"	
613-45	[ATT 19: Appendix 1A.] - "…..consistent with the State’s Water Resilience Portfolio….." DWR's NOP notice declares (https://water.ca.gov/Programs/State-Water-Project/Delta-Conveyance/Environmental-Planning), "Modernizing Delta conveyance is part of the state’s Water Resilience Portfolio, which describes the framework to address California’s water challenges and support long-term water resilience and ecosystem health." (emphasis added). The EIR Project Purpose conspicuously leaves out any reference to "ecosystem heath" even though it is specified in the Executive Order (EO) as a co-equal objective of the Resilience Portfolio. In order for DWR claim that this project is "consistent" with the EO it must add "ecosystem health" a project objective so that it actually is consistent with the Governor's EO. Currently, the project is less than half consistent with the EO.	Please refer to Chapter 2, Purpose and Project Objectives, as well as Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the purpose of the project, including to provide operational flexibility to improve aquatic conditions in the Delta and better manage risks of further regulatory constraints on project operations. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the project’s relationship to Executive Order N-10-19 and the California Water Resilience Portfolio. Furthermore, CEQA project objectives are not required to include every goal from applicable plans in order for a proposed project to be found consistent with those plans.
613-46	[ATT 19: Appendix 1A.] - "To minimize the potential for public health and safety impacts from reduced quantity and quality of SWP water deliveries, and potentially CVP water deliveries, south of the Delta resulting from a major earthquake that causes breaching of Delta levees and the inundation of brackish water into the areas in which the existing SWP and CVP pumping plants operate in the southern Delta." DWR is a public trust resource agency. It has an obligation to	Please see response to comment 613-42 regarding the project’s purpose and objectives. Chapter 1, Introduction, in the section titled Intended Uses of this Final EIR and Agency Roles and Responsibilities, describes the relevant review, approval, and consultation requirements that may be necessary to implement the project. Please refer to Chapter 33, Other CEQA-Required Analyses, and Common

Letter-Comment Number	Comment	Response
	provide water supply to SWP customers, but as a public trust resource agency it also has an obligation to the rest of California residents to protect and ensure safe water supplies, regardless of if they are SWP customers or not. An objective of the project should also be to protect Delta residents and ecosystems from brackish water intrusions which occur from SWP operations. DWR will claim that the project will operate to water quality standards which will protect the delta. There have been many, many documented occurrences where this has not been true so the project and DWR cannot be relied upon in this regard. DWR must not prioritize their public trust responsibility to their SWP customers over the harm and well-being of the residents of the rest of California, especially the Delta residents and ecosystem which will be most directly adversely affected by the proposed project.	Response 17, Public Trust, regarding public trust considerations and disclosure of potential impacts on public trust resources, including water quality and fish and aquatic resources. The public trust doctrine does not require DWR to protect and ensure safe water supplies to all residents in California. DWR's authority and legal obligations are constrained by statute and other requirements. As described in Chapter 3, Description of the Proposed Project and Alternatives, section titled Key Existing Delta Operations Criteria, the project would be operated consistent with regulatory requirements, including State Water Board Water Right Decision 1641 (D-1641). Please also refer to Chapter 9, Water Quality, Impact WQ-5, which analyzes the effects on electrical conductivity (a measure of salinity) resulting from facility operations and maintenance. Chapter 9 also evaluates consistency with water quality control plans under Impact WQ-17. Please see Appendix 5A, Modeling Technical Appendix, Section F, Sea Level Rise and Delta Water Quality Modeling, regarding the vulnerability of proposed intake areas to future salinity intrusion conditions. Please also refer to Common Response 6, Climate Resilience and Adaptation, regarding protecting the State Water Project from sea level rise.
613-47	[ATT 19: Appendix 1A.] - "To protect the ability of the SWP, and potentially the CVP, to deliver water when hydrologic conditions result in the availability of sufficient amounts, consistent with the requirements of state and federal law, including the California and federal Endangered Species Acts and Delta Reform Act, as well as the terms and conditions of water delivery contracts and other existing applicable agreements." Other than DWR and the project following the law, which they	Please see response to comment 613-42 regarding the project's purpose and objectives. Please refer to response to comment 614-43 regarding the EIR's approach to screening alternatives. Please refer to Chapter 2, Purpose and Project Objectives, as well as Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding project objectives.

Letter-Comment Number	Comment	Response
	are already required to do under the existing project and conditions, this statement means nothing and does not provide any criteria for screening alternatives as all alternatives must follow the law and honor existing agreements.	
613-48	[ATT 19: Appendix 1A.] - "To provide operational flexibility to improve aquatic conditions in the Delta and better manage risks of further regulatory constraints on SWP operations." "Aquatic conditions" is too vague to be useful. To be consistent with the State's Water Resilience Portfolio requirements, this must be "improve ecosystem health'. Further, "ecosystem health" must be defined so it is useful as an alternatives screening criteria. Again, to be consistent with the State's Water Resilience Portfolio requirements the definition of "ecosystem health" must be to protect and enhance Delta water quality and habitat values for Delta residents, water users and wildlife.	Please see response to comment 613-42 regarding the project's purpose and objectives. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, regarding the EIR's approach to screening alternatives against the project objectives. The Appendix 3A table titled Screening Filter Criteria and Project Objectives shows the project objectives associated with the criteria for the first-level screening. Please refer to Common Response 3, Alternatives Development and Description, for additional information regarding the EIR's approach to alternatives screening, which did not include use of the objective to improve aquatic conditions in the screening criteria. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the project's relationship to the California Water Resilience Portfolio. The Delta Conveyance Project is not required to include ecosystem restoration in order to be consistent with the Water Resilience Portfolio. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project objectives and the lead agency's discretion in developing project objectives under CEQA.
613-49	[ATT 19: Appendix 1A.] - 1.3.2, 1-7 – "DWR would operate the proposed north Delta facilities and the existing south Delta facilities in compliance with all state and federal regulatory requirements…" Here is a promise in the DEIR project description that the	DWR analyzed project operations and disclosed potentially significant environmental impacts throughout the EIR, as well as identified and evaluated mitigation measures to reduce impacts, if feasible. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, and Common Response 3, Alternatives Development and Description, regarding project operations and operational criteria descriptions. Chapter 3, section

Letter-Comment Number	Comment	Response
	project would operate the NDD to comply with regulatory requirements. DWR has regulatory requirements at the Oroville Facilities and the South Delta pumps. In both cases, hourly operations are conducted for compliance. Both Oroville and the south delta pumps facilities have hourly operations models and hourly water operations reporting to execute and fulfill their compliance requirements. The DEIR has failed to disclose, describe, analyze or mitigate the north delta diversion operations. The revised DEIR must define how, on an hourly basis (to be consistent with all other SWP operations that are modeled and operated on an hourly time step), the NDD would be operated.	titled Delta Conveyance Project Preliminary Proposed Operations Criteria, provides a description of the proposed operational criteria. Please see the Chapter 3 section titled Real-Time Operational Decision-Making Process, regarding real-time operational decision-making specific to the north Delta intake operations. As described in Chapter 3, in the section titled Key Existing Delta Operations Criteria, the project would be operated consistent with regulatory requirements, including State Water Board Water Right Decision 1641 (D-1641). Please refer to Appendix 5A, Modeling Technical Appendix, regarding the timestep used for the hydrological modeling. Please also refer to Common Response 9, Hydrologic Modeling and Approach, regarding the appropriateness of the modeling tools used.
613-50	[ATT 19: Appendix 1A.] - 1.3.2, 1-7 – "Although initial operating criteria of the proposed project would be formulated during the preparation of the upcoming Draft EIR in order to assess potential environmental impacts and mitigation, final project operations would be determined after completion of the CEQA process, completing the consultation and review requirements of the federal Endangered Species Act, compliance with the California Endangered Species Act." Here in the draft EIR, DWR says that initial operating criteria will be developed during the preparation of the Draft EIR. DWR's future tense promise for operating criteria is unfulfilled. There are NO initial operating criteria described or disclosed here in the project description. Further, there are NO operating criteria described anywhere in the DEIR. There are sections, such as chapter 12 fisheries, that make assumptions about average quantities of NDD diversions that occur during certain	Please refer to response to comment 613-49 regarding project operations, operational criteria and regulatory requirements, real-time operational decision making specific to the north Delta intake operations, and hydrological modeling. The comment is on Appendix 1A, July 2020 Delta Conveyance Project Scoping Summary Report and Addenda, which does not describe the operating criteria. DWR did develop operating criteria, which is described in Chapter 3, Description of the Proposed Project and Alternatives, and the operating criteria is evaluated throughout the entire EIR, as discussed in response to comment 613-49.

Letter-Comment Number	Comment	Response
	flow conditions and that intakes somehow (undescribed, disclosed or mitigated) would not operate in conditions where minimum sweeping velocities did not occur. The DEIR may not just make a blanket statement that it will operate in such a way as to not violate water quality or fisheries-related laws and call it an operating criteria. The DEIR must disclose, analyze and demonstrate how, the facility under its actual operations would result in compliance (not assumed compliance as the DEIR currently does). The DEIR must define hourly operations at the NDD that show how the intake operations would be managed to comply with minimum sweeping velocities and maximum duration of fish exposure at the intake screens. The operating criteria would have to include that intake rates would be ramped up and down (to zero at slack and reverse tributary flows) with the tide. The ramping up and down of actual intake operations affects a number of resources in the DEIR analysis that must be evaluated in the revised DEIR which discloses and analyzes the actual proposed project operating criteria. These operating criteria likely will result in alteration of other proposed project attributes, such as the size and length of the intake screens and facilities, reregulating reservoir size, pumping rates, etc. The affected resource areas and altered impacts from the actual operating criteria would include: surface water, water supply, water quality, fisheries and aquatic resources, agriculture, visual aesthetics, recreation, terrestrial resources, land use, energy, growth inducement, traffic, air quality, and possibly other resource areas.	
613-51	[ATT 19: Appendix 1A.] - 1.3.2.3 "The Intermediate Forebay would provide potential operational benefits…" The reason the DEIR is speculative on whether the intermediate Forebay has operational benefits or not is	The Intermediate Forebay was eliminated from all alternatives and from further evaluation after the EIR scoping process. Please refer to the Capacity Analysis for Preliminary Tunnel Diameter Selection technical memorandum (Delta Conveyance Design and Construction Authority

Letter-Comment Number	Comment	Response
	because the EIR failed to define NDD and tunnel operations. If there were hourly operations defined and disclosed in the DEIR, then the operations could have been modeled and the amount of benefit of the Intermediate Forebay would have been defined and quantified. Since there are no NDD hourly operations, the size required or even the existence of an Intermediate Forebay is unknown and unjustified. As a consequence of the incompleteness of the EIR, land would be condemned and seized that is not supported by any rationale, analysis or disclosure. The NDD operations must be defined and the existence of an Intermediate Forebay (and its size) must be justified by operations modeling in a Revised DEIR.	2022a) for additional information regarding the elimination of the intermediate forebay. Please refer to response to comment 613-49 regarding project operations and hydrological modeling.
613-52	[ATT 19: Appendix 1A.] - 1.3.2.3 "The embankments would be approximately 30 feet above the existing ground surface." Since these structures are intended to hold back flood water, they are not "embankments", they are by USACE defined as levees. As levees, they must be designed to CORPS standards. No plans for USACE flood control compliance levees where included in the project description or elsewhere in the DEIR. The CORPS must not approve construction of flood control levees without complete compliant plans and supporting impact assessment and mitigations. The Intermediate and Southern Forebays would continuously hold back water, which the USACE defines as a dam, not a levee. Design criteria for dams are very specific and they are not included in the DEIR. Therefore, construction-related permits to build dams as part of the proposed project are not supported by the project description or the impact assessment in this EIR.	The comment assertion that the EIR does not support construction-related permits for construction of levees at the Southern Forebay is not a comment on the adequacy, accuracy, or completeness of the Draft EIR. Please refer to Common Response 3, Alternatives Development and Description, regarding why the EIR's approach to describing the project and alternatives is sufficient for the purposes of the CEQA analysis. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, for an overview of the proposed project and alternatives and common features of the alternatives, including the proposed Southern Forebay. As described in Chapter 3, the Southern Forebay would be designed in accordance with the DWR Division of Safety of Dams requirements for jurisdictional dams based on the anticipated maximum embankment height and storage volume. As noted in Chapter 3, field investigations will inform final design and construction of the project. Further, as described in Chapter 1, Introduction, the EIR was prepared in coordination with the NEPA lead agency (USACE) to ensure consistency between the two documents and in anticipation of the fact that the USACE's Draft EIS would reference the Draft EIR as appropriate.

Letter-Comment Number	Comment	Response
613-53	[ATT 19: Appendix 1A.] - NOP page 6 – "Contract Amendment for Delta Conveyance The proposed project may involve modifications to one or more of the State Water Resources Development System (commonly referred to as the SWP) water supply contracts to incorporate the Delta Conveyance Project. Therefore, if modifications move forward, the Delta Conveyance Project EIR will assess, as part of the proposed project, potential environmental impacts associated with reasonably foreseeable potential contract modifications." The DEIR does not include this provision for environmental impact coverage from the amendment of Water Contracts. This DEIR fails to even consider impacts in service areas, so it is very clear those contract amendments are not covered by this EIR. Therefore, the impacts from the contract amendments must be fully disclosed, evaluated, and mitigated in a separate EIR.	The assertion the EIR fails to analyze impacts that may result from the SWP contracts is not consistent with the analyses in the EIR. Please see Chapter 3, Description of the Proposed Project and Alternatives, regarding an analysis and discussion of contract amendments. As stated in Chapter 3, section titled Contract Amendments, the potential for the SWP contract amendments for the Delta Conveyance Project to cause environmental impact are presented and analyzed in the Draft EIR. The contract amendments do not have different impacts from those analyzed for the Delta Conveyance Project.
613-54	[ATT 19: Appendix 1A.] - 1.3.2.5 – "The canals and associated control structures would be located over approximately 125 to 150 acres. Approximately 40 to 60 additional acres would be disturbed temporarily during construction." The acreage range of the construction footprints explicitly define that this EIR is only described (if that) at a programmatic level of detail. Due to this lack of specificity the impact assessments are not specific or accurately assessed. The EIR must not be considered for potential issuance of construction related permits until a complete project level impact assessment has been disclosed and completed the review process.	This comment was provided during the scoping period for the Delta Conveyance Project and is not a comment directly on the contents of the EIR which includes a detailed project description. Some elements of the project have been refined since the issuance of the NOP in January of 2020. The assertion that the EIR does not include an adequate level of detail to fully analyze the impacts of the project is not consistent with the EIR. Please also refer to Common Response 3, Alternatives Development and Description, regarding the level of detail provided for the facility and construction descriptions being adequate for the purposes of the environmental analysis. Please also refer to Chapter 4, Framework for the Environmental Analysis, section titled Analysis Level of Detail, for a discussion of the analytical detail provided in the EIR. As described in this section, the project alternatives in their entirety are analyzed at a project level of detail in the EIR.

Letter-Comment Number	Comment	Response
613-55	[ATT 19: Appendix 1A.] - NOP page 6, Project Area The NOP included areas upstream of the Delta as part of the project area for impact analysis as there would be alterations to upstream facility releases from the proposed project. Now in the EIR, this entire geographic scope of impact is not even discussed. There is no supporting justification for the EIR's lack of analysis of the impacts of changes in water operations that occur upstream of the Delta. There was discussion in Chapter 12 regarding a justification for not considering upstream affects based on a cursory analysis of winter-run Chinook salmon. As commented there, this justification was flawed in its logic and not defensible as a wholesale excuse for not analyzing the full range of direct and indirect impacts. Upstream impacts the EIR failed to address include, but are not limited to: water quality (temperature, DO, turbidity), water supply (flows), agriculture (water temperature suitability impacts to Thermalito afterbay and lower Feather River diversions on rice production – see DWR settlement agreement with Western Canal Water District et al), fisheries (habitat quantity and quality, stranding and nest dewatering, straying and genetic introgression, etc.), and more. Please see related comments submitted on upstream of delta impacts from the BDCP EIR/S and WaterFix EIR/S which we hereby incorporate in their entirety by reference. The incorporation by reference is justifiable as these upstream impact and many other impact topics are missing entirely in this EIR, but were covered in the other preceding related project EIR/S's.	This comment mentions comments submitted on the Bay Delta Conservation Plan/California WaterFix project. DWR is not required to respond to comments on projects that are no longer being pursued. However, DWR has reviewed the comments provided by the commenter and provided responses where comments may still be applicable to the proposed Delta Conveyance Project. The assertion that the project impacts include those to upstream reservoir operations is not consistent with the analyses in the EIR. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the study area for resources analyzed in Chapters 5–32 and areas upstream of the project. Please see Common Response 3, Alternatives Development and Description, regarding upstream operations and storage. The project does not include changes to operational criteria associated with upstream reservoirs. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the modeled representation of upstream effects. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7–32 of the EIR. These chapters include analyses of water quality, water supply, agriculture resources, and fish and aquatic resources.
613-56	[ATT 19: Appendix 1A.] - 3.2.3 – "Consider an alternative that includes construction of a dam in the Carquinez Strait…" This summary of the proposed alternative of an operable flow	The assertion that the EIR must analyze a Carquinez Strait alternative is not supported by the EIR. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process

Letter-Comment Number	Comment	Response
	constriction at Carquinez as a "dam" is a very inaccurate description of our alternative. A "dam" as a concept is a completely non-viable option and that is why DWR has purposely mischaracterized our proposed alternative.	and the range and scope of alternatives considered. CEQA directs that an EIR describe a reasonable range of potentially feasible alternatives to the proposed project that would feasibly attain most of the basic project objectives and avoid or substantially lessen at least one of the significant effects of the proposed project. Western salinity barriers (i.e., operable flow restriction at Carquinez) as an alternative to the proposed project were screened from further consideration because this type of alternative does not meet screening criteria that are reflective of most of the basic project objectives such as the south Delta water supply reliability, climate resiliency, seismic resiliency, and operational flexibility. Barriers would not meet the operational flexibility criterion because they would not provide for an alternate point of diversion or conveyance in the Delta that could be used when conditions at the south Delta SWP facilities would not allow for water supply exports. In addition, to be considered feasible in the future, substantial research for effective fish passage, ecosystem effects of changing tidal patterns and magnitudes upstream and downstream of a barrier, impacts on commercial and recreational navigation, water quality impacts in the Delta, water supply effects and potential downstream of barrier effects associated with sea level rise would need to be understood at a much higher degree of certainty than currently is available. The western barrier concept would also not meet the coequal goal under the 2009 Delta Reform Act of “protecting, restoring, and enhancing the Sacramento–San Joaquin Delta ecosystem and the fish, wildlife and recreation it supports” because this concept, as presented, would fundamentally alter the Delta ecosystem’s brackish water, tidally influenced environment to primarily a freshwater system. The consequences for such a change are not currently fully understood, but could include changes in species types, abundance, and biodiversity as well as effects on migratory fish patterns, recreational fishing, and other water-oriented recreation. While technology has changed in the last 60 years, what also has changed is the passing of federal and state environmental protection laws and policies that constrain solutions that might have been

Letter-Comment Number	Comment	Response
		entertained in prior years.
613-57	[ATT 19: Appendix 1A.] - 3.2.7 Water Quality Conspicuously absent from the summary of comments were the requests for the EIR to analyze Dissolved Oxygen impacts from the project. We specifically requested this water quality analysis as this was not addressed in the previous EIRs and is an obvious significant potential impact of the proposed project. In reviewing the water quality and fisheries chapters, we see that the EIR again failed to quantitatively analyze Dissolved Oxygen water quality and fish habitat suitability. Please see related comments in those chapters for this EIR and in the extensive comments on this topic in the BDCP EIR/S and WaterFix EIR/S which we hereby incorporate by reference.	Please refer to response to comment 613-55 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. As described in Chapter 3, Description of the Proposed Project and Alternatives, section titled Key Existing Delta Operations Criteria, the project would be operated consistent with regulatory requirements. Please refer to Chapter 9, Water Quality, which also evaluates consistency with water quality control plans under Impact WQ-17 and dissolved oxygen is evaluated under Impact WQ-9. Chapter 9 used quantitative data related to channel velocity and temperature from the DSM2 model to inform the evaluation of dissolved oxygen. As described in Chapter 9, potential impacts on water quality from project operations and maintenance, including dissolved oxygen, would be less than significant. Potential significant environmental impacts and proposed mitigation measures related to fish are evaluated in Chapter 12, Fish and Aquatic Resources, of the EIR. This chapter analyzes the effects of water quality, including dissolved oxygen, on fish habitat suitability.
613-58	[ATT 19: Appendix 1A.] - 3.2.9 Soils The EIR failed to identify our comments regarding salt accumulation in soils in the Delta and in the SWP service areas as a consequence of the proposed project. The reduced water quality in the delta from the proposed project means that groundwater recharge in the delta from connected surface water hydrology will result in salt accumulation in Delta ag soils. Similarly, by extending the effective lifespan of the SWP from the No Project condition, the proposed project will continue to deliver salt in the water supplies which will accumulate in the service area soils. Please see our extensive	Please refer to response to comment 613-55 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. The comments are not consistent with the analysis in the EIR. As described in Chapter 3, Description of the Proposed Project and Alternatives, section titled Key Existing Delta Operations Criteria, the project would be operated consistent with regulatory requirements, specifically State Water Board Water Right Decision 1641 (D-1641), including meeting salinity standards established to protect agricultural and other beneficial uses of water in the Delta. Please also refer to Chapter 9, Impact WQ-5, which analyzes the effects on electrical conductivity (a measure of salinity) resulting from facility operations and maintenance, which were determined to be less

Letter-Comment Number	Comment	Response
	comments on this topic in the scoping comments as well as our comments on the BDCP EIR/S and WaterFix EIR/S which we hereby incorporate by reference.	than significant. Chapter 9 also evaluates consistency with water quality control plans under Impact WQ-17. Potential significant environmental impacts, and proposed mitigation measures related to soil are evaluated in Chapter 11, Soils. Additionally, Chapter 15, Agricultural Resources, analyzes potential significant environmental impacts and proposed mitigation measures related to agriculture and salinity. Please also see Common Response 12, Agricultural Resources, regarding crop salinity tolerances.
613-59	[ATT 19: Appendix 1A.] In the following tables we are referencing comments from commenter numbered 753. Table D-5 Project Description 308, third comment – This comment is with regards to project purpose, not project description. This comment is miscategorized here and was not addressed in the DEIR.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the purpose and project objectives. Please also refer to Appendix 3A, Identification of Water Conveyance Alternatives and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process and the range and scope of alternatives considered. The screening criteria are sufficient for the purposes of CEQA. Please refer to Chapter 2, Purpose and Project Objectives, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include, if approved by DWR, the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws.
613-60	[ATT 19: Appendix 1A.] Table D-7 Consistency with Other Plans, Programs or Policies[.] - 363 third and fourth comments These comments are with regards to requirements for alternatives screening criteria, not consistency with the Executive Order which the DEIR cited as its basis for authorization. As a consequence of the miscategorization of	Executive Order N-10-19 called on the California Natural Resources Agency, California Environmental Protection Agency, and California Department of Food and Agriculture to develop a "water resilience portfolio," described as a set of actions to meet California's water needs through the twenty-first century. The Delta Conveyance Project is one action identified in the California Water Resilience Portfolio which includes numerous other local and regional water management and conservation actions. These actions

Letter-Comment Number	Comment	Response
	these comments, the required screening criteria from the EO were not addressed in the alternatives screening process.	are occurring concurrently, recognizing that multiple actions, including local actions, are needed to improve California's water supply resilience. Regarding the comment that Executive Order priorities and objectives should have been considered as alternatives screening criteria in EIR Appendix 3A, Identification of Water Conveyance Alternatives, this suggestion is not supported by CEQA requirements. CEQA Guidelines Section 15124(b) requires a clearly written statement of objectives to help the lead agency develop a reasonable range of alternatives to evaluate in the EIR. The project objectives presented in Chapter 2, Purpose and Project Objectives, address what the Delta Conveyance Project is focused on accomplishing, in part, to further the California Water Resiliency Portfolio action to modernize Delta conveyance infrastructure and improve water supply reliability. The Executive Order criteria and priorities are intended to guide the development of the portfolio of options to improve water resilience in California as a whole and are not intended to be CEQA alternatives screening criteria for project EIRs. Please also refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process and the range and scope of conveyance alternatives considered. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7–32 of the EIR. These chapters include analyses of water quality, flooding, groundwater, public health, agricultural resources, fish and aquatic resources, and water supply.
613-61	[ATT 19: Appendix 1A. Table D-7.] - 364 first comment This comment is in regards to alternatives screening criteria, not consistency with other plans. As a consequence of the miscategorization of this comment, the required screening criteria from the EO were not addressed in the alternatives	Please see response to comment 613-60 regarding the applicability of the criteria set forth in EO-N-10-19 for the purposes of alternatives screening under CEQA, the alternatives screening process, and the range and scope of conveyance alternatives considered in the EIR.

Letter-Comment Number	Comment	Response
	screening process.	Please refer to Chapter 4, Framework for the Environmental Analysis, and Chapter 30, Climate Change, for an explanation regarding how climate change and future hydrology was incorporated into the EIR's analysis. Additionally, please refer to Common Response 6, Climate Resilience and Adaptation, regarding how the project will provide climate change resilience to the State Water Project. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process and the range and scope of conveyance alternatives considered.
613-62	[ATT 19: Appendix 1A. Table D-7.] - 365 first comment This comment is in regards to required alternatives screening criteria, not consistency with other plans. As a consequence of the miscategorization of these comments, the required screening criteria from the EO were not addressed in the alternatives screening process.	Please see response to comment 613-60 regarding the applicability of the criteria set forth in EO-N-10-19 for the purposes of alternatives screening under CEQA, the alternatives screening process, and the range and scope of conveyance alternatives considered in the EIR.
613-63	[ATT 19: Appendix 1A. Table D-7.] - 365 last comment This comment is in regards to water supply, growth inducing and other environmental resource impact scope, not consistency with another plan. As a consequence of the miscategorization of this comment, the required impact analysis of water transfers were not addressed in the DEIR.	The assertion that water transfers were not addressed in the EIR is not supported by the EIR. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7–32 of the EIR which include impacts associated with modifications to water contracts as described in response to comment 613-53. Water transfers are specifically addressed in Appendix 3H, Non-Project Water Transfer Analysis for Delta Conveyance. This analysis found that even though the project may add additional export capacity, it is unlikely to increase the amount of water transfers, since the current capacity is not even fully utilized. For this reason, the proposed project is not anticipated to result in new or increased potential direct or indirect impacts associated

Letter-Comment Number	Comment	Response
		with water transfers. Water supply is evaluated in Chapter 6, Water Supply, and growth inducement is addressed in Chapter 31, Growth Inducement.
613-64	[ATT 19: Appendix 1A.] Table D-13 Comments Regarding Alternatives[.] - 487 last comment This comment is in regards to on-going and incremental direct and indirect impacts of the proposed project as compared to the no project and applies to all environmental resource impact topics in the DEIR. There is an aspect of this comment which is relevant to the definition of the No Project. That aspect of this comment was not addressed in the DEIR either.	The statement in the scoping comment on page 487 of the scoping summary report stating that the SWP becomes unviable in the future as a result of sea level rise is an inaccurate description of the No Project Alternative and the analysis contained in the EIR. Continued operation of the SWP in the future does not represent a change to existing conditions, but rather is part of the existing conditions which is what the CEQA analysis uses for the purposes of comparison and making significance conclusions. The additional analyses provided regarding the 2040 and 2070 timeframes are provided for disclosure purposes. The No Project Alternative assumes some changes could result in surface water (Chapter 5, Surface Water) and water supply (Chapter 6, Water Supply) as a result of climate change but also assumes operation of the SWP would continue in a manner similar to their operations under existing conditions. Please refer to Chapter 4, Framework for the Environmental Analysis, and Chapter 30, Climate Change, for an explanation regarding how climate change and sea level rise was incorporated into the EIR's analysis. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change. Please see Common Response 4, No Project Alternative Description and Analysis, for reference of locations of the No Project Alternative analysis in the EIR and the effects of implementing the No Project Alternative. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7–32 of the EIR. These chapters include analyses on water quality, soil, land use, fish and aquatic

Letter-Comment Number	Comment	Response
		resources, and growth inducement.
613-65	[ATT 19: Appendix 1A. Table D-13.] - 488 last comment The table included in the comment was omitted from the DEIR. This table included a great deal of information relevant to the scoping process and alternatives selection process. This is a material omission from the DEIR.	The omission of this content in the scoping summary report, which is intended to summarize comments, is not a material omission. DWR reviewed and considered all scoping comments in their entirety during the preparation of the EIR. Copies of the original scoping comment letters were posted to the project website with the scoping summary report in the summer of 2020 (https://www.deltaconveyanceproject.com/planning-processes/california-environmental-quality-act#scoping). Further, please see response to comment 613-60 regarding the applicability of the criteria set forth in EO-N-10-19 for the purposes of alternatives screening under CEQA.
613-66	[ATT 19: Appendix 1A. Table D-13.] - 489 first comment - This is a project alternative or an alternative component to be considered for combination with other alternatives or alternatives components, e.g. central and eastern delta distributed intakes, Clifton Court criteria compliant fish screens, Carquinez Straight flow control structure, rapid levee repair response resources, etc.. The alternatives screening process in DEIR Appendix 3A never acknowledged or addressed the proposed reconnection of Sacramento River distributary flows to freshen east, central and south delta water quality and that would have provided an operational tool to recover delta water quality faster in the event of a levee failure. The DEIR did wholesale dismiss any alternative which relied upon delta levee for conveyance. This dismissal is in error for several reasons. First, the NDD relies upon delta levees for conveyance. Second, the screening criteria utilized invented a constriction of seismic SWP reliability to just the delta when the project objective of seismic resiliency referred to the entire SWP, not just the delta. In related comments on Appendix 3A we detail the respective SWP system seismic risks throughout the entire SWP from source to final delivery. The highest SWP conveyance risks are	The assertions made by the commenter that the through-Delta alternatives they recommended, such as reconnecting distributary channels, were not considered, is not supported by the analysis in the EIR. Please refer to Common Response 3, Alternatives Development and Description, for why various through-Delta alternatives proposed did not meet the majority of the basic project objectives to be considered in the EIR. The Department of Water Resources followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, CEQA requires lead agencies to develop project objectives to inform the identification of the project and a reasonable range of potentially feasible alternatives. CEQA does not require consideration of every variation of every alternative; CEQA requires an EIR to include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the project. Appendix 3A, Identification of Water Conveyance Alternatives, describes the consideration given to alternatives proposed during previous iterations of the project. Common Response 3 provides further explanation of the alternatives screening process and how project objectives are used to

Letter-Comment Number	Comment	Response
	not in the delta as compared to the level of seismic reliability risk that exists in the Oroville facility and the California Aqueduct. The DEIR screening criteria also misapplied the definition of "resiliency”" see related comments on Appendix 3A. The operational control of flushing flows in the delta from the reconnected distributary sloughs in this proposal provide much greater "resiliency" than the proposed project, which has no operational response other than to switch from north to south diversions or vice versa. This proposed alternative actually does "restore" delta aquatic habitat as the reconnections would allow water flows in the delta to much more closely approximate those that occurred with the unmodified delta before western development and in flow conditions in which the fish species we are trying to protect evolved. No previous project; not Cal Fed, BDCP, or Water Fix; etc. has ever modeled or evaluated this proposed project alternative. The Delta Conveyance EIR must give this alternative component a fair and equal evaluation as the attributes of the proposal do reasonably satisfy the project objectives better than the proposed project and may at the same time deliver substantial environmental benefits that do not occur under the proposed project. We do concede that there may be adverse consequences to this proposal that are unforeseen until this analysis is conducted. As such, we reserve our opinion of the desirability of this as an alternative until the analysis results are presented in a revised DEIR. In combination with alternative components as listed above, this may be a very viable, and even less expensive alternative to the proposed project.	identify potential alternatives to the proposed project. All of the project alternatives evaluated in the EIR include dual conveyance operations which would involve continuation of water flow through Delta channels to existing south Delta export facilities. North Delta diversions would be used when excess water supply conditions exist and to provide operational flexibility when export regulatory limitations are in effect in the south Delta. Please see response to comment 613-56 regarding western salinity barriers. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the project purpose and objectives statements for the purposes of CEQA.
613-67	[ATT 19: Appendix 1A. Table D-13.] - 489 last comment (continues next page) – This is an alternative component to be combined with the reconnection of the Sacramento River	See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Please refer to Common Response 3, Alternatives Development and Description, regarding why the comment-proposed

Letter-Comment Number	Comment	Response
	Distributaries, Carquinez Straight flow control and/or the criteria compliant fish screens at Clifton Court or others as compatible and synergistic. The alternatives screening in Appendix 3A discussed western delta intakes, but never these proposed central and eastern delta dual operations intakes which do not suffer the shortcomings described in the DEIR treatment of the proposed western delta intakes. These intake options provide a greater operational flexibility and resiliency than the proposed project which puts all of their additional intakes for dual operations in one tributary that could be all vulnerable to one event. This alternative has not been modeled or analyzed and it deserves a full evaluation in the revised and recirculated DEIR.	combined alternatives were screened from consideration in the EIR. Please also see response to comment 613-56 regarding western salinity barriers.
613-68	[ATT 19: Appendix 1A. Table D-13.] - 490 second comment – The proposed system interties address SWP operational flexibility and resiliency. The false constraint the DEIR added to the screening criteria to apply only to the delta portion of the SWP conveyance was used to screen this alternative component from further consideration. This alternative component was never directly addressed in the DEIR so it must be addressed in the revised DEIR.	The assertion that screening criteria specifying “the Delta” is a false constraint is unfounded. See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Please also see responses to comments 613-73 and 613-129 regarding the appropriateness of focusing project objectives and screening criteria on the Delta.
613-69	[ATT 19: Appendix 1A. Table D-13.] - 490 last comment (continued to next page) – This project alternative component was described in the DEIR as a "dam", which is a gross mischaracterization of this flow control structure. In Appendix 3A, page 22 line 5, the DEIR does describe the flow control proposal and then dismisses the alternative based on an analysis by the BDCP project based on criteria that the Delta Conveyance does not share with that project – see comment on Appendix 3A, 22, 5. The Carquinez Straight flow control is not addressed again in the screening assessment and therefore was dismissed for false reasons. This alternative must be	The commenter is referencing Appendix 1A of the Draft EIR, July 2020 Delta Conveyance Project Scoping Summary Report and Addenda. Appendix D of the report does describe the suggested alternative as a “dam” at Carquinez Strait but this summarized characterization is not used in any description or analysis in the EIR. See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Appendix 3A, Identification of Water Conveyance Alternatives, describes that operable salinity barriers would not meet the water supply reliability,

Letter-Comment Number	Comment	Response
	reevaluated in a revised DEIR.	climate resiliency, seismic resiliency, or operational flexibility within the Delta upstream of the barrier. Please also see response to comment 613-56 regarding western salinity barriers.
613-70	[ATT 19: Appendix 1A. Table D-13.] - 491 second comment – Additional water storage downstream of the delta was not addressed in the alternatives screening analysis. This component was acknowledged (in general, not specific to the proposed alternative) in Appendix 3A page 16, line 40. "Storage" is never addressed in the alternatives screening process. Because this alternative was not considered in the project alternatives screening, it must be given full consideration in a revised DEIR.	See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Water storage is not part of the project purpose or objectives. Please refer to Common Response 3, Alternatives Development and Description, regarding why water storage and other components of this comment would not meet the fundamental project purposes.
613-71	[ATT 19: Appendix 1A. Table D-13.] - 491 last comment (continued to next page) – This project alternative component was not addressed in the alternatives screening. This component is key to satisfying the project objectives which require "resiliency" – see related comments on Appendix 3A.	Please see response to comment 613-66 regarding evaluation, screening, and selection of alternatives.
613-72	[ATT 19: Appendix 1A. Table D-13.] - 492 last comment (continued to next page) – This project alternative component was described in Appendix 3A, but was not addressed in the screening process. Preventing SWP conveyance losses in the California Aqueduct has no environmental impacts and is effectively recapturing free water. It also increases SWP conveyance seismic resiliency. There is no justification why this should not be a component of every project alternative.	Please see response to comment 613-66 regarding evaluation, screening, and selection of alternatives. The assertions made by the commenter that the through-Delta alternatives they recommended, including preventing conveyance losses in the California Aqueduct, were not considered, is not supported by the analysis in the EIR. Please refer to Common Response 3, Alternatives Development and Description, for why various through-Delta alternatives and overall system improvements alone did not meet most of the basic project objectives including climate resiliency and operational flexibility. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the project purpose and objectives statements for the purposes of CEQA. Approval of the Delta Conveyance Project would not preclude future actions by DWR or other entities to improve other State Water Project

Letter-Comment Number	Comment	Response
		facilities.
613-73	[ATT 19: Appendix 1A. Table D-13.] - 493 second comment – This alternative addresses SWP system and conveyance risks that are greater than those that occur in the through delta part of the SWP conveyance. Consideration of the SWP conveyance as a whole is consistent with the project objectives. The DEIR use of an additional criteria focused on the delta is contrived and unsupported – see related comments on Appendix 3A.	The assertion that screening criteria specifying "the Delta" is "contrived and unsupported" is unfounded. See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Please see response to comment 613-129 regarding the appropriateness of focusing project objectives and screening criteria on the Delta. The fundamental project purpose is to restore and protect the reliability of SWP water deliveries by developing new diversion and conveyance facilities in the Delta - not to improve the entire SWP system with this project. Please refer to Common Response 3, Alternatives Development and Description, for further discussion regarding screening alternatives in the context of project purpose and objectives.
613-74	[ATT 19: Appendix 1A. Table D-13.] - 493 last comment (continued to next page) – This project alternative component (recommended in combination with the Carquinez Straight flow control, distributed east and central dual operations intakes, reconnected Sacramento River distributary sloughs and rapid response levee repair resources) for Clifton Court criteria compliant fish screens was not represented here in its entirety. The description submitted in our scoping comments was very detailed and 8 pages long. That previously submitted description is hereby incorporated by reference as a comment on this DEIR. The DEIR grossly mischaracterized the proposal as "would be a mile long" which is untrue. As described in our scoping comments, the entire facility fits between the Clifton Court flow control entrance gates and the beginning of the channel to the intakes. The last sentence on that comment presented here in the DEIR says, "see comment for a more detailed description of the each of these elements”" Those were not included in the DEIR and the fish screens as described in the scoping comments were never considered in the DEIR alternatives screening. This alternative component in	Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives development process and the range and scope of alternatives considered, including those that would include screening of the existing SWP and CVP south Delta diversions facilities. Clifton Court Forebay fish screens alone would not meet criteria for water supply reliability, climate changes, and seismic resiliency and would also not potentially reduce any of the project’s significant unavoidable impacts. North Delta diversion facilities would allow for operational flexibility to reduce fish entrainment in the south Delta when sensitive species are present. Please also see response to comment 613-56 regarding western salinity barriers.

Letter-Comment Number	Comment	Response
	combination with the other project components must be given a full and fair assessment in the revised DEIR.	
613-75	[ATT 19:] [Appendix 1A.] Table D-14 Approach to the Analysis[.] - 569 and 570 The comment discusses in detail analysis approaches for the water quality assessment. This comment was miscategorized and was not addressed in the Water Quality section.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available science. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the adequacy of the modeled representation of project operations for the purposes of the CEQA analysis. Please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the DSM2 modeling and the water quality impact analysis. Potential significant environmental impacts and proposed mitigation measures related to water quality—including salinity, dissolved oxygen, and temperature—are evaluated in Chapter 9, Water Quality, of the EIR. Please see Impacts AQUA-2 through AQUA-19 in Chapter 12, Fish and Aquatic Resources, for the analysis of potential impacts of operations and maintenance on fish and aquatic species.
613-76	[ATT 19:] [Appendix 1A. Table D-14.] - 571 – middle comment This water transfer impact analysis comment belongs under water supply and was not addressed in that section.	Please see response to comment 613-63 regarding the analysis of water supply and water transfers. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the adequacy of the modeled representation of project operations for the purposes of the CEQA analysis. Refer to Common Response 3, Alternatives Development and Description, regarding project operations and operational criteria descriptions.

Letter-Comment Number	Comment	Response
613-77	[ATT 19:] [Appendix 1A. Table D-14.] - 571 – last comment This water quality and agricultural resources comment was miscategorized here in the DEIR and was not addressed in those respective sections.	As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Key Existing Delta Operations Criteria, the project operations would be consistent with regulatory requirements, specifically State Water Board Water Right Decision 1641 (D-1641). Please also refer to Impact WQ-5 in Chapter 9, Water Quality, which analyzes the effects on electrical conductivity (a measure of salinity) resulting from facility operations and maintenance; this impact was determined to be less than significant. Chapter 9 also evaluates consistency with water quality control plans under Impact WQ-17. Additionally, please see Impact AG-3 in Chapter 15, Agriculture Resources, regarding potential impacts related to operations and maintenance of the project and analysis of potentially altered quality of irrigation water, primarily potential changes in salinity, which can result in reduced yields. Please see Common Response 12, Agricultural Resources, regarding crop salinity tolerances. Potential environmental impacts related to soils are evaluated in Chapter 11, Soils, of the EIR.
613-78	[ATT 19:] [Appendix 1A. Table D-14.] - 572 – first comment This growth inducement comment was miscategorized here in the DEIR and was not addressed in that section.	Potential significant environmental impacts and proposed mitigation measures related to growth inducement are evaluated in Chapter 31, Growth Inducement, of the EIR. Chapter 31 specifically addresses indirect potential impacts associated with stabilized water deliveries. In addition, the Delta Conveyance Project would be a part of the State Water Project, and Common Response 5, Public Water Agencies Water Management Practices, describes standard practices and additional actions undertaken by State Water Project users to ensure California's water resources are being used efficiently and sustainably.
613-79	[ATT 19:] [Appendix 1A.] Table D-17 Surface Water[.] - 634 first comment This is a project alternative that was mischaracterized and put in the wrong section. This alternative is substantially different	Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process, the range and scope of alternatives considered, and the application of the project objectives to screen out alternatives, including suggestions for alternatives to repair existing levees.

Letter-Comment Number	Comment	Response
	in its details and functions than the simplified concept that was preemptively dismissed in the Appendix 3A alternatives screening. The correct attributes of this alternative must be fully considered in a thorough and fairly conducted screening process in the revised DEIR.	
613-80	[ATT 19:] Final Comments on Appendix 1A[.] Commenter 753 S. Dean Ruiz – all topic sections in Appendix 1A. The comments for "753" submitted and represented here in the DEIR Appendix 1A were detailed, factual and earnestly submitted. In reviewing the various sections of the DEIR, DWR has not addressed any of these submitted scoping comments from Appendix 1A in the other sections of the document. Since the comments represented in Appendix 1A for Commenter 753 were not addressed in the DEIR, then all of the comments under the Commenter 753 are hereby resubmitted as comments on the DEIR.	DWR reviewed scoping comments submitted by scoping Commenter 753, S. Dean Ruiz, and considered the scoping comments in the development of the EIR. The specific comments raised in this Draft EIR comment letter referencing the scoping comments provided in letter 753 are addressed herein (please refer to responses to comments 613-42 through 613-82).
613-81	[ATT 19:] [Appendix 1A] Because of the extreme similarity of the Delta Conveyance issues as the previous BDCP EIR/S and the Water Fix EIR/S, we incorporated our comments on those documents by reference for the scoping process for the Delta Conveyance EIR. Those referenced comments were not listed in the DEIR Appendix 1A or addressed in the DEIR. The DEIR scoping and public draft must be revised to address these submitted referenced	Please refer to response to comment 613-55 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project.

Letter-Comment Number	Comment	Response
	comments.	
613-82	[ATT 19:] [Appendix 1A] A number of potential alternatives and alternatives components were submitted in our scoping comments. Those alternatives were submitted based on many years of water project and experience in the delta. We believe that these alternatives have merit and should be equally earnestly considered in the DEIR in a thorough and fair assessment. Thus far in the DEIR, they were not. That said, we do also know from experience that in deeper analysis that there may be unintended potential consequences from these alternatives. As such we do not endorse these alternatives and reserve our rights to object to them under further analysis which must be included in the revised DEIR which does give due consideration to these proposed alternatives.	Please refer to responses to comments 613-42 through 613-45 and 613-60 through 613-67 regarding the reasonable range of feasible alternatives evaluated in the EIR. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives screening process, the range and scope of alternatives considered, and how the project objectives were applied to the screening criteria for alternatives that include reduction in exports and levee improvements.
613-83	[ATT 19:] Chapter 3 - Project Description - 2, 5 - "This Draft EIR provides the project-level analyses to disclose impacts required for approval of any of the alternatives and provides information to facilitate the proposed project permit decisions." None of this document is defined or evaluated at a project level of detail. The construction footprints are generalized, the volume and timing of earthmoving is not defined, the equipment and time of usage is not defined, disposal of construction dewatering is just described as "on site" with no indication of the volumes of water and if those can be disposed or on site without treatment or other resulting impacts, none	The EIR has been prepared in compliance with CEQA and adequately evaluates and discloses potential impacts on environmental resources. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding project-level analysis. Please also refer to Common Response 3, Alternatives Development and Description, regarding the adequacy of the approach to describing the project and alternatives. Common Response 3 also provides details regarding operations and operational criteria, which are fully and adequately described in Chapter 3, Description of Proposed Project and Alternatives. The construction footprints in the Engineering Concept Drawings included in the Engineering Project Reports (Delta Conveyance Design and

Letter-Comment Number	Comment	Response
	of the operations are set (they are all adaptive), etc.	Construction Authority 2022o, 2022p) show the specific construction footprints. Mapbooks for Chapter 3, Description of the Proposed Project and Alternatives, display temporary (construction period) and permanent areas of disturbance superimposed on satellite imagery, and construction and permanent acreages of major project features are provided in Chapter 3 table titled Summary of Key Project Features by Alternative and in Appendix 3D, Intakes, Roads, and Shafts Summary Tables. The Air Quality Appendices in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022b, 2022c) provide details on quantities and types of construction equipment, duration of use, and other factors. The Soil Balance technical memoranda attached to the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022l, 2022m) provide details on the volume of earth moving. Please refer to response to comment 613-88 regarding dewatering. As described in Chapter 3, all groundwater dewatering flows and stormwater flows would be collected and treated onsite prior to storage, reuse, or discharge. Please also see Common Response 10, Surface Water Quality and Groundwater Resources, for a discussion of the dewatering rates used in the analysis in the EIR and described in the Engineering Project Reports.
613-84	[ATT 19:] [Chapter 3] - 3.2 The DEIR uses the term "resiliency" as a description for climate, seismic and operational objectives. "Resiliency" is defined as "an ability to recover from or adjust easily to misfortune or change”" The DEIR has misused their screening criteria in dismissing potential alternatives for not reducing the SWP risk from seismic or climate change events or operating condition changes. This is a misapplication of the criteria based on	Please refer to responses to comments 613-115, 613-124, 613-125, and 613-126 regarding the appropriateness of the seismic resiliency criteria and the reasons why suggested western Delta salinity barrier or other measures in the western Delta, through-Delta alternatives, and alternate locations of intakes did not meet project objectives and were eliminated from consideration in the EIR. Please also refer to Common Response 3, Alternatives Development and Description, for further details regarding alternatives screening.

Letter-Comment Number	Comment	Response
	"resiliency”" The criteria correctly applied would be to determine if an alternative made the recovery of the SWP after an adverse event recover more quickly or not. In our submitted scoping comments we suggested a number of fast response project alternative components that much more quickly address and contribute to recovery from potential levee failures. Reducing the duration of a levee failure and the magnitude of the inundated area contributes significantly to a reduction of the impact of a levee failure on the SWP and would significantly reduce the amount of time for the SWP to recover from such an event. These proposed rapid response measures were not included in any DEIR project alternative and were dismissed due to misapplication of the screening criteria by DWR in the EIR. These SWP resilience fast response measures must be included in the project alternatives as they were improperly screened out.	
613-85	[ATT 19:] [Chapter 3] - 3.3.1 The DEIR never discloses the planned operational lifespan of the Project. If it is planned to be operated for 100 years, then the climate change assumptions of that period must be evaluated to determine if the project does increase SWP reliability and resiliency under those conditions. If there is a 10’ sea level rise condition, then the south Delta operations would be completely unviable and likely the water quality at the NDDs would also be unviable. Since the proposed project fails to perform under those conditions assumed to occur during its operational lifespan then any other alternative dismissed for being determined to not suitably protect against those changed conditions must be restored as a viable alternative for	The EIR and Engineering Project Reports do not specifically identify a project lifespan for the purposes of CEQA analyses in the EIR, which correctly evaluates the impacts of the project compared to existing conditions. Selection of alternatives for analysis in the EIR were based on the ability to meet most of the project objectives, including climate change resiliency, and the ability to potentially reduce significant impacts of the proposed project, as presented in Appendix 3A, Identification of Water Conveyance Alternatives. Assumptions for sea level rise are used to disclose the potential for changes in impacts in 2040 and 2070 for information purposes only and were not directly used to select alternatives or determine impact significance of the proposed project or alternatives. The comment that other alternatives should have been further considered in the EIR that were eliminated for further review is not supported by the contents of the EIR, including the alternatives screening results. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, regarding design assumptions for climate change and sea level rise.

Letter-Comment Number	Comment	Response
	evaluation as the Proposed Project also fails to meet those criteria.	Please also see Common Response 6, Climate Resilience and Adaptation, regarding protecting the State Water Project from sea level rise. Appendix 4A, Consideration of 2070 Conditions, discusses potential environmental impacts of the project under climate change under a 2070 scenario. This future analysis is not used as a basis for CEQA findings but is provided for informational purposes. Projecting climate change and regulatory assumptions farther into operational life of the project were judged to be speculative and could introduce unnecessary uncertainty into the analyses.
613-86	[ATT 19:] [Chapter 3] - 21, 18 - "These shafts would have an inside diameter of 83 feet." This is an error. There are no TBMs that are 83’ in diameter. The largest TBM in the world is 17.6 meters.	The diameter of the shaft would be larger than the diameter of the TBM itself to accommodate other equipment and safety features and to provide hydraulic storage to mitigate hydraulic surges during operations. The tunnel shafts, including the Intake Outlet shaft referenced in this comment, will not be constructed with TBMs, as described in the Shaft Conceptual Design technical memorandum (Delta Conveyance Design and Construction Authority 2022j).
613-87	[ATT 19:] [Chapter 3] - 23, 3 - "Installing the intake facility would require construction of a temporary cofferdam for in-river portions…" I saw no detailed fish salvage plans described that are required for in-river cofferdam construction. This is a material omission of the DEIR. The salvage plan must be added and recirculated for comment.	Chapter 12, Fish and Aquatic Resources, includes Mitigation Measure AQUA-1c, which describes the fish rescue and salvage plan to be implemented at any in-water construction site where isolation of fish may occur.
613-88	[ATT 19:] [Chapter 3] - 3.4.3 The description of the tunnel shafts and construction do not	Please refer to the discussion of Impacts GW-1 and GW-2 in Chapter 8, Groundwater, regarding changes in groundwater elevation, as well as methods and construction practices that would maintain local surface water and groundwater levels when dewatering is required during construction. Tunnel shafts would be constructed with diaphragm walls

Letter-Comment Number	Comment	Response
	disclose or discuss the enormous amount of dewatering that will be required. The water table in these areas is less than 10' deep. The construction areas are near and adjacent to surface water tributaries which are hydraulically connected to the surrounding groundwater levels. Dewatering for the launch and maintenance shaft construction could each be several hundred cfs for the duration of the construction. This is an enormous amount of water that has to be treated to water quality standards for disposal. The EIR project description never analyzes the volume of dewatering and only indicates that the water would be disposed of on the construction site. The EIR clearly has not thought this through. 100 cfs continuously for months would flood the construction areas many feet deep. The EIR must do a project level analysis of the volumes of dewatering and describe and disclose a real disposal plan that takes into account the water volumes and requirements for discharge water quality/treatment.	and a concrete tremie bottom, and only the water within the shaft would need to be removed during construction, as described in Chapter 8. Mitigation Measure GW-1 would be available to reduce impacts on groundwater by maintaining groundwater supplies in affected areas. DWR would comply with NPDES and Central Valley Regional Water Quality Control Board's water quality permits and requirements. Appendix 3B, Environmental Commitments and Best Management Practices, details environmental commitments related to water quality. As described in Chapter 3, Description of the Proposed Project and Alternatives, all groundwater dewatering flows and stormwater flows would be collected and treated on-site prior to storage, reuse, or discharge.
613-89	[ATT 19:] [Chapter 3] - 33, 9 - "…..the treated flows would be discharged to adjacent waterbodies…" The location, size and impact characteristics of this water treatment have not been disclosed, evaluated or mitigated in this EIR. The discharge water quality must comply with the requirements of a point discharge permit. The location of the discharge has its own environmental impacts which also have not be disclosed or mitigated in this EIR.	Please see response to comment 613-88 regarding dewatering flows.
613-90	[ATT 19:] [Chapter 3] - 33, 13 - "…..some quantity of RTM would be deemed unsuitable for reuse and would be disposed of at a site	Chapter 3, Description of the Proposed Project and Alternatives, provides summary tables of the distinguishing physical characteristics of each alternative that include RTM volumes and anticipated storage areas required at each site where RTM would be processed and/or stored.

Letter-Comment Number	Comment	Response
	approved for disposal of such material. This is expected to apply to less than 1% of the total volume of excavated material." The EIR assertion of an expectation of a 1% reject rate is unsupported by any analysis or rationale. The geotechnical sample data along the proposed tunnel route is vastly insufficient to support this claim or expectation. Additionally, how much volume is 1%? The total quantity of RTM is never disclosed. The RTM volumes at each location and their respective disposal locations must be defined so that the project level impact analysis can be conducted. Where specifically would the unsuitable RTM be disposed? The EIR does not say. Logically, it would have to go to Kettleman City as it is the only class 1 dump in California. The volume of material transported to Kettleman has impacts that the EIR has failed to address.	Volumes of reusable tunnel material are reported in the Reusable Tunnel Material technical memorandum in the Engineering Project Report (Delta Conveyance Design and Construction Authority 2022h). This technical memorandum also discusses RTM generated volumes by alternatives, storage, and transport of the dried RTM for reuse and transport off-site. This technical memorandum also describes that soil conditioners used in the tunnel boring machine will be inert, biodegradable, and non-toxic. Approximately 1% to 5% percent of RTM is estimated to not be available for reuse due to structural characteristics, as described in the Soil Balance technical memoranda in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022l, 2022m). The EIR has been edited to reflect this estimate. This material would be stored at the tunnel shaft site. Based upon the available information at this time, it is anticipated that the RTM would not contain hazardous or toxic materials. However, all RTM would be tested to determine if hazardous or toxic materials are present. Any such materials would be hauled to a licensed off-site disposal facility, such as Kettleman Hills Hazardous Waste Facility. Please refer to Chapter 23, Air Quality and Greenhouse Gases; trips included in the air quality analysis account for material import and export/disposal. Please also refer to Appendix 23B, Air Quality and GHG Analysis Activity Data, for the assumptions used in the air quality analysis. Appendix 3B, Environmental Commitments and Best Management Practices, describes measures included in the project to reduce dust, criteria pollutants, and GHG emissions, including Environmental Commitments EC-8, EC-11, and EC-13.
613-91	[ATT 19:] [Chapter 3] - 33, 28 - "…..mechanical dryers utilizing electric, natural gas, or propane heat sources would be considered.'	Please refer to Chapter 22, Energy, which provides tables of estimated electrical power load assumptions for key project features. Assumptions for RTM storage and management incorporate energy used for mechanical heat drying of RTM. Refer also to response to comment 613-90 regarding

Letter-Comment Number	Comment	Response
	Here is another example of a component of the project that has not even been defined to a programmatic level of detail and the energy and air quality impacts of the options identified in the EIR have not been evaluated or mitigated.	air quality analysis and measures to reduce impacts. Use of the mechanical dryers in Alternatives 1 through 4 would result in different on-site equipment usage hours for RTM handling as compared to Alternative 5 equipment usage hours for natural RTM drying. The volume of RTM to be considered for mechanical or natural drying is described in Chapter 3, Description of the Proposed Project and Alternatives, and the Reusable Tunnel Material technical memoranda in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022h, 2022m). Also please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.
613-92	[ATT 19:] [Chapter 3] - 49, 40 - "…..but not be limited to….." This is a very succinct EIR statement that defines the document as programmatic. The list of facilities all have environmental impacts. The EIR is indicating this is not a complete list so that means that those other undefined project features with environmental consequences are not evaluated in this document or mitigated. Any additional project features not explicitly addressed in this EIR must be subject to a subsequent EIR prior to consideration for permitting or construction.	The assertion by the comment that the EIR is programmatic is not consistent with the analysis contained in the EIR. This comment appears to refer to the following sentence which appears in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Electrical Facilities: “Support facilities would include, but not be limited to, construction trailers, temporary lighting, and electric vehicle charging stations.” All construction impacts associated with facilities and other impacts associated with operating the project are addressed in the EIR. Electrical support facilities analyzed in the EIR include those listed in Chapter 3 section titled Electrical Facilities. If additional facilities are determined to be required in the future, the need for additional analysis will be determined at that time. Please refer to Chapter 22, Energy, regarding detailed analysis of power consumption at each facility. Please also refer to Chapter 23, Air Quality and Greenhouse Gases, for analysis of emissions during construction and during operations and maintenance. Also see Common Response 15, Air Quality and Greenhouse Gases, for additional discussion on the adequacy of information provided by DWR to support public review of the EIR air quality analysis. Also please see Common Response 1, CEQA Process, General Approach to

Letter-Comment Number	Comment	Response
		Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.
613-93	[ATT 19:] [Chapter 3] - BMP 1 This is another example of a programmatic EIR. There is a CEQA requirement to avoid and minimize significant impacts. BMP 1 is a mitigation plan as undefined in the future and to be implemented to some potential degree. The CEQA process requires that significant impacts are mitigated now in the EIR, not in the future. Whatever can be accomplished with the concepts in BMP 1 must be incorporated into the project plan to avoid and minimize impacts in this EIR.	The assertion by the comment that the EIR is programmatic is not consistent with the analysis contained in the EIR. Please refer to Appendix 3B, Environmental Commitments and Best Management Practices, for detailed descriptions of project measures designed to avoid or minimize project impacts. Environmental commitments and best management practices are incorporated into the project to reduce impacts, including Environmental Commitment EC-1 in Appendix 3B. Where resource analyses in EIR Chapters 7 through 32 find that environmental commitments and best management practices are not sufficient to reduce a significant impact to a less-than-significant level, mitigation measures are proposed. The Executive Summary table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures identifies the significance of impacts, mitigation measures that would reduce the impacts, and the impact significance after mitigation measures are applied for each resource topic addressed in Chapters 7 through 32. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.
613-94	[ATT 19:] [Chapter 3] - 3.4.14 This is another example of a programmatic level of project description. Even at this level of hypothetical set of actions, there is no analysis of the environmental impacts. The locations of potential land disturbance are known as are the activities planned at each (well probably not as they are not adequately described). A specific project level of detail reclamation plans be described, analyzed and mitigated.	The assertion by the comment that the EIR is programmatic is not consistent with the analysis contained in the EIR. Like other sections of Chapter 3, Description of the Proposed Project and Alternatives, the section titled Land Reclamation is an overview of one of the features and activities involved in implementing the Delta Conveyance Project in temporary construction areas that are not within postconstruction facility boundaries. The reclamation plan as described is sufficient for a project-level EIR because all the potential impacts related to disturbance in these temporary construction areas have been fully analyzed in the construction impact section of each resource impact analysis. Impact analyses of project actions are provided in EIR Chapters 7 through 32 and associated

Letter-Comment Number	Comment	Response
	Otherwise these actions must be covered under a subsequent environmental document (although that would be a CEQA violation against piecemealing a project's impacts).	appendices where necessary. The land reclamation areas overview figure shows the general locations of potential land reclamation activities that are described in the Land Reclamation section of Chapter 3. This section explains that final land reclamation sites will be identified based on postconstruction testing to determine reclamation suitability. Please refer to Common Response 3, Alternatives Development and Description, regarding the adequacy of the project description. Also please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.
613-95	[ATT 19:] [Chapter 3] - Facilities construction schedules None of the information provided on construction schedule is more detailed than a 6-month increment. In order to do air quality impact analysis, the type of equipment and weekly hours of usage are required. The programmatic level of detail of construction schedule does not allow for a project level air quality impact assessment.	The assertion by the comment that the air quality analysis does not consider equipment types and hours of usage is not consistent with the analysis contained in the EIR. Please refer to Chapter 23, Air Quality and Greenhouse Gases, regarding air quality impact analysis. Please refer to Appendix 23B, Air Quality and GHG Analysis Activity Data, for the assumptions used in the air quality analysis, including types of equipment and hours of use. Also see Common Response 15, Air Quality and Greenhouse Gases, regarding information provided by DWR to support public review of the EIR air quality analysis. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.
613-96	[ATT 19:] [Chapter 3] - 134, 7 "This information is expected to contribute to DWR's overall understanding of Delta geology, and this will inform the ongoing development of alternatives, environmental analysis, and conceptual design for the proposed Delta Conveyance Project to support preparation of the Delta Conveyance Project	The comment quotes an excerpt from Chapter 3, Description of the Proposed Project and Alternatives, in the introductory paragraph of the section titled Field Investigations. That excerpt refers to the existing Final Initial Study/Mitigated Negative Declaration (IS/MND) for the Soil Investigations for Data Collection in the Delta project that was prepared and approved in 2020 (California Department of Water Resources 2020b). The Field Investigations section identifies both past studies and future investigations that would be necessary to inform design, support permit applications, and comply with requirements during preconstruction and

Letter-Comment Number	Comment	Response
	Draft EIR." Since this is the DEIR, the EIR should be disclosing what this investigation has learned and how that information was used to formulate and optimize the proposed project and alternatives. The EIR makes unsupported claims regarding the relative quantity of expected contaminated RTM and of the suitability of RTM for construction of levees and other geotechnical project features. The EIR however does not disclose the findings of the geotechnical studies which the EIR claims must have relied upon. This is a material lack of disclosure in the EIR and must be redressed in a recirculated EIR.	construction phases if the project is approved. Please refer to response to comment 613-90 regarding quantity and suitability of RTM for construction. Information that was collected prior to the completion of the EIR was used to confirm assumptions from other published information or inform methods that could be implemented during construction of the Delta Conveyance Project, as described in the section titled, Process and Methods of Review of Geology and Seismicity. Use of the geotechnical information during development of the project alternatives is described in the DCA technical memoranda, as listed in the section referenced above, including increased potential use of vibratory installation of piles as compared to pile driving. The EIR did not report findings of these geotechnical studies as they have yet to be completed. As described in Chapter 3, additional geotechnical information will need to be collected and reviewed during the design phase to refine the final design criteria. Please also refer to Common Response 3, Alternatives Development and Description, regarding adequacy of the project description and the approach to describing the project.
613-97	[ATT 19:] [Chapter 3] - 135, 5 - "The information gained through soil borings and CPTs would be used to develop detailed design criteria for structure foundations, new and modified levee cross sections, ground improvement, dewatering methods and quantities, below-grade construction methods, need for impact pile driving, and methods to reduce ground settlement risk at all construction sites….." Here is another example of an explicit admission by the EIR	The assertion by the comment that the EIR is programmatic is not consistent with the analysis contained in the EIR. Please refer to Common Response 3, Alternatives Development and Description, regarding adequacy of the project description and the approach to describing the project. Also please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR. CEQA requires environmental review to be conducted as early as possible to inform project decision-making and allow for public disclosure. Detailed design criteria would not be developed until after the project decision-making process when the EIR is finalized and certified and an alternative is selected.

Letter-Comment Number	Comment	Response
	that the project is currently described at a programmatic level of detail and only after additional later date investigations are completed can the project level description be developed and evaluated for impacts. This comment also applies to the entirety of 3.15.2.1. through 3.15.2.8.	Please refer to response to comment 613-96 regarding the adequacy of the geotechnical information in the EIR to assess the potential impacts of the alternatives compared to Existing Conditions and the No Project Alternative.
613-98	[ATT 19:] [Chapter 3] - 3.17.2 - "The real-time operation and the proposed criteria would be refined if needed through the adaptive management plan process. The operational criteria elements that would be studied further based on real-time fish monitoring include hydrologic/behavioral cues upstream of and in the Delta for triggering, duration, and conclusion of pulse protection, Level 1, Level 2, and/or Level 3 bypass flow criteria and transitions, as well as diel (night/day) behavior in the intake reaches." There are decades of rotary screw trap data at Hood and now Clarksburg. What possible could a few additional years of monitoring accomplish to increase the understanding of fish behavior response to flow cues? The monitoring proposed in the DEIR is not described or disclosed so there is no way for the reader to evaluate the likelihood of the monitoring to produce useful information that could inform the process. This DEIR punt to the future with a promise of additional information so that the operating criteria can be developed later – with the impacts of those decisions unmitigated in this document – is a clear piecemealing of project impacts and is therefore a violation of CEQA. The DEIR must propose the operations it will use, based on existing available science and mitigate those impacts. If later studies inform a better set of operations then that is potentially positive, but it is not a blanket excuse for the	The commenter is incorrect that there are decades of rotary screw trap data at Hood and Clarksburg; the closest rotary screw trap monitoring location is Knights Landing. DWR proposed the operations and operational criteria used for the project in Chapter 3, Description of the Proposed Project and Alternatives, and evaluated those operations throughout the EIR. Where applicable and feasible, DWR proposed mitigation measures regarding operations to reduce, avoid, lessen, or minimize potentially significant environmental impacts. Real-time monitoring of abiotic and fish resources at the north Delta intakes would ensure proposed weekly, daily, and sub-daily operations are consistent with the permitted criteria and effects. Modeling used to approximate the effects of operating the north Delta intakes is an accurate representation of the changes that could occur for the purposes of comparing alternatives. Please refer to Common Response 3, Alternatives Development and Description, regarding the description of operations and operational criteria, and adequacy of the project description and the approach to describing the project. As described in Common Response 3, as well as Chapter 3, real-time monitoring describes how operations would be monitored and adjusted, if necessary, in the future to ensure fish protections are in compliance with regulatory criteria. Disclosure of this real-time monitoring process does not defer disclosure of operational impacts and does not represent project piecemealing as suggested in this comment. Please also see Common Response 3, Alternatives Development and Description, for a discussion of the Operations Adaptive Management and Monitoring Plan (OAMMP), which addresses uncertainty related to the north Delta intakes, and Common Response 11, Terrestrial Biological Resources and Compensatory Mitigation Plan, for a discussion of the

Letter-Comment Number	Comment	Response
	DEIR not to define critical operations and mitigate project impacts.	adaptive management included in the CMP, which addresses uncertainty related to habitat restoration. Additional years of data are important to inform the overall OAMPP process both before and during operations. Please refer to Chapter 12, Fish and Aquatic Resources, regarding analysis of impacts of north Delta intake operations under various modeled criteria on aquatic species of concern and proposed mitigation measures.
613-99	[ATT 19] [Chapter 3] - 158, 15 - "At each intake, real-time upstream flow, less the intake's real-time diversion flow, would provide a real-time flow downstream of each intake." No, that is incorrect and even nonsensical in its proposal. The DEIR is saying it has a near-field velocity in a water column upstream of the intake (with 3D bathymetry around the intake undefined) and somehow the flow subtracted by the intake results in some reliable math to predict what the resulting flow sweeping velocity across the screens will be? This could only be marginally an accurate proposal if the ADCP [Acoustic Dopler Current Profiler] monitored the whole of the cross section of the channel (it would have to be very confined like a lined ditch) and the geometry of the channel would have to be uniform. Neither of those conditions are true for the location of the NDDs [north Delta diversions]. Flow velocities are complex and dynamic in a non-uniform channel like the Sacramento River at the NDD locations and what the DEIR proposes will not result in any approximation even of reality to ensure that there is a minimum sweeping velocity across all areas and lengths of the screen under all ranges of hydrologic conditions. The DEIR must do a high resolution 3D bathymetry of the channel around the proposed NDD and model flow	Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of operations. As discussed in Chapter 12 (Impact AQUA-2), during design of the intakes, computational modeling would be undertaken, and field measurements/baffle adjustments would be done during commissioning/operations, both to demonstrate compliance with velocity criteria. As described later in the EIR section cited by the commenter, following planned full-facility velocity performance evaluations, the average downstream river velocity could be correlated to each intake facility's sweeping-velocity performance and adjusted as appropriate. The project description in Chapter 3, Description of the Proposed Project and Alternatives, section titled Approach and Sweeping Velocity Requirements, has been revised to clarify sweeping velocity compliance. The section titled Proposed Real-Time Actions, has also been updated to indicate the use of a flow gauge at the downstream end of each intake (rather than upstream, as previously indicated) to allow for a more direct assessment of sweeping velocity in real time, and to clarify other aspects of compliance monitoring. These revisions do not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Please also refer to response to comment 613-98 regarding the operational analysis.

Letter-Comment Number	Comment	Response
	velocities at the face of the screens at each flow condition to determine the sweeping velocities on all areas of the screen under each tributary flow condition, tide condition and diversion flow operation. By definition, an "average" of sweeping velocities being compliant as the DEIR proposes would result in some areas of the screen being above the minimum sweeping velocities and some areas being below the minimum sweeping velocities. Those areas below the minimum sweeping velocities would be in violation of fish screen criteria operations and would result in incidental take that is not covered in the impact analysis in this DEIR.	
613-100	[ATT 19:] [Chapter 3] - 158, 16 - "This flow, divided by the river's cross-sectional area just downstream of each intake facility, would result in an average river velocity downstream." No, that is incorrect. An ADCP [Acoustic Doppler Current Profiler]can profile the velocity of water under it. If a velocity profile of the entire cross section is desired, then the ADCP is conveyed in a transect across the channel. The description of the deployment of the ADCP in the DEIR is for determining near field velocity just upstream of the intake screen. The ADCP cannot monitor the entire river cross section (100-150' wide at the NDD [north Delta diversions] locations) velocity from this stationary location. The velocity of the water at the margin of the tributary where the intake is located would logically be much slower than the thalweg. It is not possible to calculate the "average river velocity" in the manner described in the DEIR. Since it is not possible for the average river velocity to be calculated in this way, ALL of the adaptive operations described in the DEIR and all of the operations adaptations that	Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of operations. Please also refer to response to comment 613-98 regarding the operational analysis and the response to comment 613-99 regarding modeling and velocity compliance. Chapter 3, Description of the Proposed Project and Alternatives, of the Final EIR has been revised to clarify how the project will monitor and comply with approach and sweeping velocity requirements. These revisions do not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit.

Letter-Comment Number	Comment	Response
	rely upon the correlation to average tributary velocity are not valid or defensible.	
613-101	[ATT 19:] [Chapter 3] - 158, 18 - "The average downstream river velocity can be used as a real-time surrogate to demonstrate sweeping-velocity criteria at each intake." No, as commented above, the calculation of the average velocity is incorrect and indefensible. Even if it were correct the average flow velocity in the tributary would be higher than the margin location where the screen is located. Also as commented previously, use of the average would result in some areas of the screen at higher velocity and some at lower. Those lower velocity areas would be in violation of the minimum sweeping velocities.	Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of operations. Please also refer to response to comment 613-98 regarding the operational analysis and the response to comment 613-99 regarding modeling and velocity compliance.
613-102	[ATT 19:] [Chapter 3] - 158, 19 - "Following planned full-facility velocity performance evaluations, the average downstream river velocity could be correlated to each intake facility's sweeping-velocity performance and adjusted as appropriate." So here, the DEIR admits that they have not done the requisite 3D flow/velocity analysis to understand how they would operate the facility to maintain fish screen criteria compliance. Instead of doing the 3D modeling they should as the best available science, the DEIR proposes to delay this analysis until post construction when additional impacts from the operations would be defined and would remain unmitigated in this EIR. The DEIR fails to define how operations would be "adjusted as appropriate""	The comment's assertion that flow/velocity analysis was not conducted and will be delayed until post construction is incorrect. Initial 2D river and intake modeling using modified bathymetry and various river and intake operations was done for the Engineering Project Report (Delta Conveyance Design and Construction Authority 2022i) and shows general compliance and impacts. Detailed hydraulic modeling will commence when facilities are in final design with final configurations. 3D hydraulic modeling, and potentially physical modeling of some features, using a final intake configuration is currently planned to demonstrate compliance. Performance monitoring will be conducted to demonstrate compliance or to make adjustments as necessary. Please refer to Common Response 3, Alternatives Development and Description, regarding the appropriateness of the description of operations and adequacy of the impact analysis for decision-making. Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of operations. Please also refer to response to comment 613-98 regarding the operational analysis and the response to

Letter-Comment Number	Comment	Response
		comment 613-99 regarding modeling and velocity compliance.
613-103	[ATT 19:] [Chapter 3] - 158, 23 - "Entrainment monitoring as necessary." The DEIR fails to describe where, when, and how entrainment monitoring would be done. Is this a 'fish salvage' action? Is there potential additional fish take from the monitoring? Are any of these impacts mitigated?	Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of operations, and a discussion regarding entrainment and impingement. As described in Chapter 12, the proposed screen/intake opening, and the low approach velocity criteria would be protective of fish about 1-inch and longer (e.g., all juvenile winter-run Chinook salmon) from entrainment and impingement losses consistent with fishery agency criteria. As such, the potential for impingement would be limited. However, entrainment monitoring, as necessary, would be undertaken consistent with any requirements established during project permitting and would not be a fish salvage action, nor would it result in take because it would occur behind the fish screens, where fish have already entered the intake facilities. Please also refer to response to comment 613-98 regarding the operational analysis and to 613-99; Chapter 3, section titled Proposed Real-Time Actions of the Final EIR has been revised regarding entrainment monitoring and velocity compliance.
613-104	[ATT 19:] [Chapter 3] - 158, 24 – "Approach/sweeping criteria relaxation would be considered when risk to covered species is low/absent (e.g., 0.3 feet per second approach velocity based on temperature/calendar off-ramps when smelt are unlikely to be in the intake reach)." The geographic range of the smelt is seasonally dynamic, and responds to changes in flows, turbidity, temperature, tidal cycles, food base and salinity. Due to the variables and vagaries of fish behavioral response to environmental conditions and in response to sea-level and climate change, the timing of current and future range of the smelt is uncertain at best. The Project can never be certain that there are no smelt in the NDD [north Delta diversion]area and because ESA requires protection of an	The comment mischaracterizes the Endangered Species Act given that incidental take is allowable and permitted with issuance of an incidental take statement which must not be exceeded. Exceeding take limits would trigger reconsultation. Relaxation of velocity criteria would only be done to the extent allowed by project Endangered Species Act permitting, and with regulatory agency approval; the Final EIR has been revised to reflect that. Please also refer to response to comment 613-98 regarding the operational analysis and to 613-99 regarding revisions to Chapter 3 of the Final EIR, section titled Proposed Real-Time Actions, concerning approach/sweeping velocity criteria, monitoring, and regulatory agency approval for criteria relaxation.

Letter-Comment Number	Comment	Response
	endangered species to the last member of the species, the screen minimum sweeping and approach velocities cannot be relaxed (or ignored) at any time of the year.	
613-105	[ATT 19:] [Chapter 3] - 158, 28 – "…..that may require a portion of the screen facility to be down. In no case would total designed diversion capacity be exceeded (e.g., 3,000 cfs as designed at intake facility).”." The amount of area of the fish screen is designed based on the fish screen criteria of maximum approach velocity times the area to meet a target maximum capacity, in this case, 3,000 cfs. Fish screen size is never designed to have excess capacity at the screen criteria compliant operation as that is excessively expensive. So we can assume from the DEIR that the proposed screen design is calculated for the screen area, operated at the maximum approach velocity will equal 3000 cfs. If that is true, then what the DEIR is saying here is that when the NDD [north Delta diversion] shut down some screens for maintenance, they will operate the screens at a higher than allowed approach velocity to maintain their 3000 cfs diversion. The revised DEIR must present an analysis of the screen maintenance operation proposed where remaining screens are demonstrated to continue to operate in compliance with the maximum screen approach velocity.	The comment’s assumption that diversions will occur when screens are undergoing maintenance is not supported by the EIR. Please refer to Chapter 12, Fish and Aquatic Resources, regarding evaluation of maintenance effects on aquatic species. As described in Chapter 12, solid panels would be installed behind the screens during maintenance to ensure water would not be diverted when the screens are raised. Although infrequent, changes to approach velocities at screens may occur during maintenance activities but would be coordinated with fish agencies and in consideration of fish presence and seasonal criteria. However, as stated above, intakes would not be diverting water while undergoing maintenance. No individual screen units would be operated to exceed the design approach velocity criteria or the temporarily allowed criteria, whichever is in effect. Please refer to the Intake Screen Sizing—North Delta Intakes technical memorandum (Delta Conveyance Design and Construction Authority 2022e). Please also refer to response to comment 613-98 regarding the operational analysis and 613-99 regarding approach and sweeping velocity requirements. Chapter 3 of the Final EIR, section titled Approach and Sweeping Velocity Requirements, has been revised to clarify how regulatory requirements will be met.
613-106	[ATT 19:] [Chapter 3] - 158, 31 - "Use of side-scan sonar technology (e.g., biosonic) to estimate presence and movement of large numbers of migrating juvenile chinook salmon-sized fish."	EIR Chapter 3, Description of the Proposed Project and Alternatives, section titled Real-Time Operational Decision-Making Process, describes the real-time monitoring of abiotic and fish data to ensure operations are consistent with permit criteria and within the effects analyzed in the permits. Chapter 3, section titled Adaptive Management and Monitoring Program, describes the plans for ongoing monitoring and reporting to

Letter-Comment Number	Comment	Response
	The DEIR has failed to define what frequency or density of fish population would trigger a change to the fish screen operation. Monitoring does not protect fish. What you do with monitoring data to modify operations may reduce, avoid or minimize fish take from screen operations. Because the DEIR has failed to define how and when operations would change to avoid fish concentrations, there is no avoidance or minimization achieved from the monitoring.	inform adaptive management and how monitoring would inform subsequent actions.
613-107	[ATT 19:] [Chapter 3] - 158, 33 – "Far Field: Bypass flow criteria and tidal restoration (i.e., sufficient acreage to minimize diversion-related increases in flow reversals at the Sacramento–Georgiana Slough junction) 11 proposed to minimize flow-survival effects of north Delta diversion operations are as follows. For the previous week: Provide daily and 3-day average Wilkins Slough, Freeport, and bypass flows including the daily north Delta diversion rates. Identify the north Delta diversion criteria in effect (pulse protection or level of the bypass flows). Provide cumulative count of days at the 1 current bypass flow level or pulse protection." Huh? This is so poorly written that we are left to guess what the DEIR proposes in order to comment. "sufficient acreage" - this section looks to be about flows so how is an area measurement relevant? "For the previous week" - compared to when? Does this mean that an additional amount of releases are made from the SWP facilities to make up for the water diverted at the NDDs as effectively carriage water so that flows below the NDD [north Delta diversions] are not diminished from what they would have been without the operations of the NDD? We should not have to be guessing here. By this being so	The text questioned in this comment is a subheading for the Real-Time Decision-Making Framework that describes the ongoing process to monitor fish data to inform operation of the north Delta intakes to protect sensitive fish species. The quoted text refers to tidal restoration acreages that are sufficient to minimize diversion-related flow reversals. The footnote associated with the quoted text indicates that it refers to acreage of tidal restoration that would be evaluated and considered throughout project development, adaptive management planning, and initial operations. For the Previous Week refers to data and monitoring that will be used to inform real-time operational changes. Overall, the section the comment refers to is a framework that describes the data, monitoring and decision process. Specific decisions that would result from this process are not yet known as they would be based on data and monitoring information collected during intake operation.

Letter-Comment Number	Comment	Response
	poorly written, the DEIR has effectively denied our opportunity to meaningfully respond to it. This and the many other poorly written sections that are unintelligible as to their intent must be rewritten and recirculated for the public to have their legal right to comment.	
613-108	[ATT 19:] [Chapter 3] - 158, note 11 - "Efficacy of tidal restoration to offset potential hydrodynamic changes due to operations of the north Delta intakes would be evaluated and considered during potential refinements to real-time operations and associated operational criteria, where applicable. Evaluation would occur and continue through project development and during the adaptive management plan, including during initial operations." So the DEIR is saying they intend to continue changing the planned operations of the facility after the EIR has been completed and that any and all impacts from these altered operations would be unmitigated by the project. The DIER fails to even describe the evaluation that would be conducted or their decision criteria and thresholds so this does not even rise to a programmatic level of detail. The Project must not be awarded operating-related permits until it has an actual project level operating set of rules and the impacts of those operations disclosed, evaluated, minimized and mitigated.	All operational criteria and impacts of intake operations are disclosed in the EIR chapters and where impacts could be significant, mitigation measures are proposed. Please refer to Chapter 5, Surface Water, which describes the surface water changes that would occur under modeled operations based on the operations criteria described in Chapter 3, Description of the Proposed Project and Alternatives. The quoted text refers to how far-field monitoring will occur and how tidal restoration is considered to ensure fish protections are achieved. The comment regarding awarding permits addresses the project decision process, not the contents of the EIR. Please also refer to Common Response 3, Alternatives Development and Description, regarding the intent and use of Operations Adaptive Management and Monitoring Plan (OAMMP), which would not cause new or additional impacts as the commenter suggests. If any operational changes are proposed in the future, DWR would conduct CEQA review to determine if they would have any significant adverse impacts, and if so, what alternatives or feasible mitigation may be available to reduce impacts. The scope, nature and timing of such changes are unknown at this time, so any analysis at this time would be speculative. Please see Common Response 3 regarding the adequacy of the project description and the level of analysis associated with the Delta Conveyance Project and the Compensatory Mitigation Plan. Also please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of analysis provided in the EIR.

Letter-Comment Number	Comment	Response
613-109	[ATT 19:] [Chapter 3.] - 169, 3 – "Modeled Through-Delta Survival values. Fish monitoring data" Again, the DEIR has failed to define how this information would be used, what thresholds would trigger action and how operations would be modified in response. Modeling and monitoring don't protect fish. What is done with that information might or might not be used to avoid or minimize impacts. Since the DEIR has failed to define any of these there is no avoidance or minimization achieved and the effectiveness of potentially altered operations (which were not disclosed) cannot be evaluated for their effectiveness or other potential resulting impacts. This comment applies to all of the bullets in this section to 3.18.	Please refer to the supporting text in the Chapter 3, Description of the Proposed Project and Alternatives, section titled Real-Time Operational Decision-Making Process, for introductory text describing this process, which provides context for comments on the specific real-time operations framework text. This section describes integrating the north Delta intake operations into an existing monitoring and decision-making process. Please refer to Common Response 3, Alternatives Development and Description, regarding the intent and use of operations adaptive management and monitoring program. Please also see Common Response 3 regarding the adequacy of the project description.
613-110	[ATT 19:] [Chapter 3] - 3.18 The DEIR makes the case that CEQA and the Delta Reform Act anticipate and allow for adaptive management in mitigation plans. That is correct. What the project is proposing to do with adaptive management plans extends well beyond mitigation planning, it has utilized this scapegoat and punt to the future adaptive management strategy for all of the aspects of the operations of the proposed facility. CEQA and the Delta Reform Act reference to adaptive management in mitigation plans do not give this project license to have an incomplete project description and undefined operations which have impacts that would not be disclosed or mitigated in this EIR because they would not be defined until some future date. That is a violation	The EIR provides a description of the project operations based on CEQA's rule of reason and the level of detail needed to disclose impacts and provide evidence supporting impact conclusions. This comment does not identify specific impact deficiencies related to the level of detail of operations detail in Chapter 3 of the EIR. Project operational effects on surface water were estimated with modeled results;, please also refer to Chapters 5, Surface Water, Chapter 6, Water Supply, and Appendix 5A, Modeling Technical Appendix, for the assumptions, approaches, details, and results of CalSim 3 and other models. Please also refer to response to comment 613-18 regarding adaptive management and response to comment 613-109 regarding real-time operations. Also please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate scope of analysis for the EIR.

Letter-Comment Number	Comment	Response
	of CEQA and the project must not be considered for award of operating related permits until the operations of the project have been defined, disclosed, evaluated and mitigated in an EIR. Since this EIR is entirely at a programmatic level, a subsequent project level EIR must be conducted by DWR prior to applying for or being considered for permits.	
613-111	[ATT 19:] [Appendix 3A] - 26, 15 – "."…with the knowledge that additional engineering refinements, preliminary findings about key environmental impacts, and input from the public and other interested parties may result in future changes." If the changes are material between the DEIR and FEIR the DEIR must be recirculated for public comment. If those changes are after the FEIR, then a new EIR must be conducted to cover those project aspects that were not disclosed, evaluated, and mitigated in this EIR.	The quoted text is one piece of a larger introductory discussion on alternatives screening criteria and how the alternatives considered in the screening analysis are alternatives to the proposed project that is presented in the NOP for the EIR. The intent of this text is to acknowledge that project changes may occur in the future based on engineering, environmental and public input during the environmental review process, as intended by CEQA. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding project approvals, permitting processes, and other required actions as well as recirculation requirements for an EIR. No changes to the project have been proposed that trigger the requirement to recirculate the EIR prior to certification.
613-112	[ATT 19:] [Appendix 3A] - 26, 17 - "The screening criteria were developed based specifically on the proposed project presented in the NOP and are consistent with the legal requirements of CEQA…" The proposed project fails to meet the legal requirements of CEQA as it defers development of fundamental operations (e.g. tidal operations of the NDD [north Delta diversion], NDD diversion volume carriage water volume), mitigations (i.e. a plan to develop a plan is not a mitigation) and engineering details (e.g. changes to the project footprint, equipment type and timing of usage, cement and tunnel muck volumes, disturbed land remediation, locations of disposal of	The quoted text from Appendix 3A, Identification of Water Conveyance Alternatives, explains that the screening criteria are consistent with the project objectives and should reduce significant environmental impacts as directed by CEQA. Operation and maintenance of the conveyance facilities is explained in Chapter 3, Description of the Proposed Project and Alternatives. All needed project information to facilitate impact analyses is provided in Chapter 3, including the operations and operational criteria, which are modeled using CalSim 3 (see section titled Intake Operations and Maintenance); construction and design of major facilities of each alternative (see section titled Common Features of the Alternatives); and construction and design associated with each of the alternatives. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope and approach of analysis based on the project details and Common Response 3,

Letter-Comment Number	Comment	Response
	contaminated tunnel muck materials; construction dewatering volumes, treatment and discharge locations, etc.) to a unspecified future time not disclosed in this EIR. Due to many of the important components of the proposed project being punted to some undefined future time for development, many of the impacts of the proposed project are not disclosed, evaluated or mitigated under this EIR. Deferring fundamental components of the proposed project to a future date and a subsequent environmental analysis is a violation of the CEQA requirement not to piecemeal project impacts. Because many of the critical components of the proposed project are not defined, it cannot be fairly evaluated in the alternatives screening process as there are likely fatal flaws in the project that would cause the proposed project to be screened out if it was developed to the CEQA compliant project level of detail.	Alternatives Development and Description, regarding the approach to describing the project and alternatives screening analysis. Common Response 1 describes that the project has been analyzed as a whole and includes all appropriate and applicable information to satisfy CEQA requirements. Also as described in Common Response 1, feasible mitigation measures are proposed and incorporated throughout the EIR to reduce, avoid, lessen, or minimize potentially significant environmental impacts on various resources. If these mitigation measures include a plan, the measure identifies performance standards or targets to achieve to demonstrate the feasibility and ability of the mitigation measure to reduce impacts.
613-113	[ATT 19: Appendix 3A.] - Table 3A-1 The EIR has defined several of the project objectives as "resiliency" of the objectives for climate change, operations and seismic). In the alternatives screening process, the EIR has misconstrued and misapplied the meaning of "resiliency" as the characteristic or potential of the project or alternatives to preemptively avoid or mitigate the impacts of something with regards to climate, operations and/or seismic conditions or events. This EIR alternatives screening application of their own defined project objective is incorrect as they have misapplied their criteria based on an incorrect definition. The definition of "resiliency" is the: "ability to recover quickly from illness, change, or misfortune" (https://www.wordnik.com/words/resilience) or "an ability to recover from or adjust easily to misfortune or change" (https://www.merriam-webster.com/dictionary/resilience). The correct interpretation of the Project Objectives therefore is for an alternative to have the characteristics to be able to	The assertions that the criteria used to screen alternatives were incorrectly applied, the objectives improperly defined, and the term resiliency is not defined properly are not supported by the EIR. See response to comment 613-66 regarding evaluation, screening, and selection of alternatives. “Resiliency” is just part of the short form title of three of the four screening criteria; the criteria are merely expressions of how to achieve the four project objectives. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, table titled Screening Filter Criteria and Project Objectives, for the application of screening criteria titles in relation to each project objective. These criteria are aimed at identifying alternatives that would secure SWP operations in the Delta into the future. Sections following the table provide examples of the factors that would disqualify a proposed alternative for consideration in the EIR. Note that the objectives do not use the term "resiliency." While the short-form names used for three of the criteria as part of the alternative filtering

Letter-Comment Number	Comment	Response
	recover quickly from changes in climate, operations or seismic. Several of the alternatives we submitted in alternatives scoping were specifically developed with the objective for the SWP to be able to recover more quickly from adverse events. As a consequence of the DEIR misinterpretation of the project objectives and misuse of them for alternatives screening (see more below), the alternatives submitted in the scoping process must be reevaluated and those that pass the corrected application of the criteria be given full consideration in the revised DEIR.	process use the term, the criteria were used to evaluate consistency with the project objectives as discussed further in Appendix 3A, section titled EIR Alternatives Screening Criteria. Common Response 3, Alternatives Development and Description, further elucidates the approach to alternatives screening.
613-114	[ATT 19: Appendix 3A.] - Table 3A-1 – climate resiliency The proposed project and alternatives selected in the alternatives screening process fail to meet this criteria as they do not do not change the ability of the SWP to recover quickly from climate change or extreme weather events. The design of the proposed project may have the intent to preemptively minimize the effect of these events, but that is not objective as it is defined in the NOP or EIR. The operable flow constriction facility we proposed at the Carquinez Straits (and others we proposed) do improve the SWP ability to recover quickly from extreme weather or tide events so this alternative was incorrectly screened out of the alternatives that should have received a full evaluation in the EIR.	See response to comment 613-66 and Common Response 3, Alternatives Development and Descriptions, regarding evaluation, screening, and selection of alternatives. The assertions made by the commenter that the through-Delta alternatives they recommended, including for an operable barrier at Carquinez Strait, were not considered, is not supported by the analysis in the EIR. Please refer to Common Response 3 for the reasons why various through-Delta alternatives, such as a barrier at Carquinez Strait, did not meet most of the basic project objectives including climate resiliency. Please also see response to comment 613-56 regarding western salinity barriers. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the project purpose and objectives statements for the purposes of CEQA.
613-115	[ATT 19: Appendix 3A.] - Table 3A-1 – seismic resiliency The proposed project and alternatives selected in the alternatives screening process fail to meet this criteria as they do not do not change the ability of the SWP to recover quickly from seismic events. The design of the proposed project may have the intent to preemptively minimize the effect of these	The assertion that the proposed project and alternatives do not meet the criterion of seismic resiliency is not consistent with the content of the EIR. See responses to comments 613-66 and 613-114, and Common Response 3, Alternatives Development and Descriptions, regarding evaluation, screening, and selection of alternatives.

Letter-Comment Number	Comment	Response
	events, but that is not objective as it is defined in the NOP or EIR. As an example, the rapid response levee failure resources we proposed in the alternatives scoping would reduce the impacts and time for the SWP to recover from a levee failure. This project alternative component was incorrectly screened out of the alternatives develop due to the EIR misapplication and misinterpretation of their own project objectives.	As discussed in Appendix 3A, Identification of Water Conveyance Alternatives, the western Delta could be subject to salinity intrusion due to levee failures, including failures due to seismic activities. Western Delta intakes or barriers would be more subject to salinity intrusion effects as compared to south Delta or north Delta intakes. Western Delta barriers could also be harmful to fish migration, water quality, recreation, and navigation. The western Delta intake concept was also eliminated from detailed analysis because operation of intakes in that location could be harmful to delta smelt. The proposed project is one part of a diverse portfolio of strategies needed to meet California's overall water management needs. It is not a substitute for other potential responses to seismic-induced levee failures. The proposed project in its upstream location improves the potential that critical water supply infrastructure would not be affected by seismically induced or other levee failures thereby minimizing the potential for public health and safety impacts resulting from a reduction in the quantity or quality of SWP water deliveries.
613-116	[ATT 19: Appendix 3A.] - Table 3A-1 – operational resiliency The NDD [North Delta Diversion] in the proposed project and alternatives considered in the EIR may provide some level of operational flexibility due to the additional point of diversion. In the alternatives scoping process we proposed that the south delta SWP intakes be augmented with dual operation of several smaller distributed intakes in various locations in the central and east delta as well as the reconnection of sloughs of the Sacramento River to restore the natural flows in those distributaries that historically freshened flows to the north, central and east delta. The wider geographic distribution of	Please refer to Common Response 3, Alternatives Development and Description, regarding proposals for alternative locations for diversion facilities or other through-Delta alternatives. Other locations were found not to be feasible because they did not meet two or more of the basic project objectives such as climate change and future sea level rise and the potential for catastrophic failure from a seismic event. Some alternate locations also were found to have greater environmental impacts. Refreshing flows is not an objective of the Delta Conveyance Project, and CEQA does not require projects to restore the environment.

Letter-Comment Number	Comment	Response
	intakes and operable gates from the Sacramento distributary sloughs to manage refreshing flows to the north, central and east delta in our proposed alternative would provide a much greater set of flow and diversion operation management tools to provide operational resiliency to the SWP than the proposed project's NDD.	
613-117	[ATT 19: Appendix 3A.] - Table 3A-1 – water supply reliability The term "restore" is never defined so it cannot be used as a component of the alternatives screening criteria. Restore as compared to what? Restore to D1641? That would be hugely growth inducing. Restore to unimpaired hydrology? "Restore" water supply cannot be used as a screening criteria. Additionally, the proposed project and alternatives considered in the EIR do not "protect" the ability of the SWP to deliver water. Basin plans change. Hydrology patterns change. New fish species become endangered. All of these and many more factors affect SWP water supplies. The proposed project and alternatives considered in the EIR do almost nothing to address and minimize the exposure to these operational factors that dictate water supply. If DWR wanted to "protect" the SWP water supply reliability, they should have done a Habitat Conservation Plan like proposed in the BDCP which would have protected the SWP operations from new listed species water supply operational constraints. The distributed intakes alternative previously submitted and discussed in the above comment would do much more to improve water supply reliability than the proposed project NDD [North Delta Diversion] as the additional intake locations would provide more opportunity to avoid current and potentially new listed species impacts to SWP operations and provide more adaptability to the SWP to continue to supply water under any	The assertion that the project and its alternatives do not meet the project objectives as described in Chapter 2, Purpose and Project Objectives, is not supported by the EIR. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, table titled Screening Filter Criteria and Project Objectives, for how the water supply reliability criterion to restore and protect the ability of SWP to deliver water relates to project objectives. Please also refer to the description of criterion 3 for water supply reliability for a description and context for this screening criteria and how it is applied. Please see response to comment 613-115 and Common Response 3, Alternatives Development and Descriptions, regarding the water supply reliability objective and the evaluation, screening, and selection of alternatives. Appendix 3A provides descriptions of the screening criteria and how they were used for alternatives screening and selection. Please refer to response to comment 613-116 regarding the distributed intakes alternative. Common Response 3 also addresses why intake locations farther downstream in the western and southern Delta were not selected.

Letter-Comment Number	Comment	Response
	set of levee failure scenarios.	
613-118	[ATT 19: Appendix 3A.] - 20, 9 – ".....Division 7 of Water Resources, analyzed the feasibility and comparative costs and benefits of constructing a salinity barrier in the Carquinez Strait in Bulletin 25 (California Department of Public Works, Division of Water Resources 1930:117–123). That report concluded that it would be considerably more cost effective to control salinity in the Delta for water supply through upstream reservoir releases." In 1929, the date of this report and conclusion, water supply was not a limited resource and it was cheap. In current times, we have an oversubscribed water supply and a scarce resource that is expensive. The rationale used in this now very old report does not apply to current conditions and must not be relied upon as an excuse not to fully and fairly consider this alternative component. In a more recent study on the Carquinez Straight flow control structure, it concluded that the only "movement" that might be impeded was crabs so the DWR reference to it affecting commercial fisheries is an inaccurate representation of the report findings.	The Department of Water Resources followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, Alternatives Development and Description, CEQA requires lead agencies to develop project objectives to inform the identification of the project and a reasonable range of potentially feasible alternatives. CEQA does not require consideration of every variation of every alternative; CEQA requires an EIR to include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the project. Common Response 3 provides an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed project. Appendix 3A, Identification of Water Conveyance Alternatives, describes that operable salinity barriers would not meet the water supply reliability, climate resiliency, seismic resiliency, or operational flexibility project objectives within the Delta upstream of the barrier. Citation of specific early studies in Appendix 3A did not mean to imply that earlier studies were the most recent or only studies considered. The historical documents provided valuable background to inform and compare with similar current studies and proposals. The more recent (2016) evaluation of the BDCP/WaterFix, explaining how DWR considered and screened out several alternatives, was also consulted, along with other recent studies listed in the References section of Appendix 3A. Please also refer to Common Response 3 for a brief overview of the studies relevant to western salinity control barriers. The comment does not provide an attachment or citation to the “more recent study on the Carquinez Strait flow control structure” and therefore

Letter-Comment Number	Comment	Response
		no changes were made. Please see response to comment 613-56 regarding western salinity barriers.
613-119	[ATT 19: Appendix 3A.] - 22, 5 – "An alternative suggested during the scoping process included construction of an operable flow constrictor at the Carquinez Straight that would allow ships and fish to pass without impediment, but peak tide or storm surge events are moderated in their ability to push salt water and water volume into the Delta. Early in the CEQA analysis of the BDCP, DWR considered, but screened out, an alternative to the conveyance component called Initial Screening Conveyance Alternative C3, Through Delta Conveyance with West Delta Salinity Barrier. At that time, DWR concluded (California Department of Water Resources 2016a:3A-50–3A-51) that this alternative would not meet the BDCP objectives of a brackish water system in the Delta that would support the estuarine habitat required by the BDCP covered species and would reduce the ability of fish passage for anadromous fish. This alternative would not support project objectives and aspects of the project purpose and need that focus on creating ecological improvements in the Delta ecosystem and contributing to recovery of declining listed species. Nor would the alternative meet the coequal goal under the 2009 Delta Reform Act of "protecting, restoring, and enhancing the Delta ecosystem." Here the DEIR is describing the alternative proposed in our scoping comments. Then the DEIR goes on to detail why the BDCP project dismissed this alternative. The reasons the BDCP dismissed this alternative (conflicted with their other ecosystem restoration actions or recovery of declining listed fish species) do not apply to the Delta Conveyance project as	The assertion that the EIR must analyze the Through Delta Conveyance with West Delta Salinity Barrier alternative is not supported by the EIR. The Department of Water Resources followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, Alternatives Development and Description, CEQA lead agencies develop project objectives to inform the identification of the project and a reasonable range of feasible alternatives; an EIR should include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the proposed project. Common Response 3 provides an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed project. The project's purpose and objectives are presented in Chapter 2, Purpose and Project Objectives, of the EIR. The Draft EIR explains in Appendix 3A, Identification of Water Conveyance Alternatives, that a number of salinity control barrier concepts have been studied in the past. As explained in Appendix 3A, Delta barrier alternatives were screened from further consideration because they did not meet two or more of the stated project objectives. For example, Appendix 3A explains that the operable barrier alternatives would not meet the water supply reliability objective because water supply resiliency would only occur at the south Delta diversions. Similarly, Delta barriers do not fully meet seismic resiliency objectives because the existing Delta levees upstream of the barriers could be subject to seismic events that could affect Delta water quality in the areas where existing SWP and CVP pumping plants operate. Considerable uncertainty also exists related to the extent barriers could improve water supply diversion operational flexibility (refer to the table titled Alternatives Eliminated at First-Level Screening).

Letter-Comment Number	Comment	Response
	this project does not include those objectives. This alternative is not in conflict with the Delta Conveyance project objectives therefore it must not be eliminated from full consideration in the DEIR as a project alternative component in combination with other components such as distributed east and central intakes and restored distributary slough flows.	Appendix 3A also notes that consideration of barrier options to the proposed new diversion facilities was rejected from further consideration because of potential effects barriers could have on the Delta's brackish water ecosystem and the potential to impede anadromous fish passage. Furthermore, western delta barriers were also eliminated due to impacts on fish migration, water quality, recreation, and navigation. Therefore, it was determined that the barrier projects considered in Appendix 3A would not meet most of the basic project objectives and were not considered further in the screening process. The proposed Delta Conveyance Project is one part of a diverse portfolio of strategies that would assist in meeting California's water management needs and would not preclude other measures that may be taken by DWR or other entities. The project would be operated consistent with the Delta Reform Act and other applicable legislation and agreements.
613-120	[ATT 19: Appendix 3A.] - 27, 9 – "Could the potential alternative address SWP water reliability challenges anticipated from rising sea levels and other reasonably foreseeable consequences of climate change and extreme weather events?" Again, the way the EIR has interpreted their project objectives is for the alternative considered to pre-empt the effect of (in this case) climate change and extreme weather events. This is incorrect for the objective of "resiliency" which is not to pre-empt, but to facilitate recovery from an event that has occurred. The proposed project does not make the SWP recover more quickly from extreme weather events as compared to the previously proposed alternative of a Carquinez Straights flow control structure or the central and east delta distributed intake locations in combination with the restored and controlled flows from the Sacramento River	The description of the project purpose and need and project objectives as stated in the comment is not consistent with the EIR. Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose and objectives of the Delta Conveyance Project. The Department of Water Resources followed CEQA requirements when identifying alternatives to be considered for evaluation in the EIR. As described in Common Response 3, Alternatives Development and Description, CEQA requires lead agencies to develop project objectives to inform the identification of the project and a reasonable range of feasible alternatives. CEQA does not require consideration of every variation of every alternative; CEQA requires an EIR to include a reasonable range of alternatives that meet most of the basic project objectives, are potentially feasible, and would avoid or substantially lessen one or more of the significant effects of the proposed project. Common Response 3 provides an explanation of the alternatives screening process and how project objectives are used to identify potential alternatives to the proposed

Letter-Comment Number	Comment	Response
	distributary sloughs to freshen and more rapidly turn over water in the north, east and central delta.	project. The section of Common Response 3 discussing alternatives suggested in comments explains how the screened-out alternatives do not meet project objectives or are not feasible alternatives to the proposed project. Please refer to response to comment 613-119 and Common Response 3 regarding why a western Delta flow control structure similar to the Carquinez Straight proposal and other proposals involving the western Delta, as well as alternative intake locations, would not meet most of the basic project objectives.
613-121	[ATT 19: Appendix 3A.] - 27, 12 – "Climate change is expected to cause rising sea levels and altered patterns of precipitation." The south of delta water storage facility we proposed in the alternatives scoping would do more to improve SWP water supplies under altered patterns of precipitation than the proposed project and alternatives considered in the EIR. With additional south of delta storage, more water could be diverted when winter flows are greater and there are less diversion operating constraints. The greater SWP winter diversions stored south of delta means more water supply and greater reliability than the proposed project. The south of delta water storage alternative was incorrectly eliminated from consideration in the EIR due to DWR's misinterpretation of the project objectives in the alternatives screening process.	The assertion that the south of Delta water storage alternative was incorrectly eliminated from analysis in the EIR is not supported by the EIR. Water storage is not an objective of the Delta Conveyance Project. Please refer to response to comment 613-20 and Common Response 3, Alternatives Development and Description, regarding how the screened-out alternatives do not meet two or more project objectives or are not feasible alternatives to the proposed project. The proposed Delta Conveyance Project is one part of a diverse portfolio of strategies that would assist in meeting California's water management needs and would not preclude other measures that may be taken by DWR or other entities.
613-122	[ATT 19: Appendix 3A.] - 27, 12 – "Either of these effects, or both combined, would affect salinity in the Delta and potentially affect the distribution, behavior, and lifecycles of aquatic species, which in turn would affect water supply reliability for the SWP. The EIR is conflating 2 different objectives here. This criteria is climate resiliency, not water supply reliability. Second, the species response to changing climate conditions likely moves much more of the population distribution into the area of the proposed NDD operations as	The comment's assertion that the EIR is conflating two different objectives is incorrect. The quoted sentence from Appendix 3A, Identification of Water Conveyance Alternatives, demonstrates that climate change directly and indirectly affects water supply reliability. The project's proposal for an alternate point of diversion is intended to maintain water supply reliability by allowing water deliveries to continue when climate change causes changes in species distribution, behavior, or lifecycle that constrain operations in the south Delta and excess water is available for export. The EIR Chapter 3, Description of the Proposed Project and Alternatives,

Letter-Comment Number	Comment	Response
	the saline interface moves upstream from sea level rise. There is no evidence provided in the EIR that the proposed NDD location is not vulnerable to future operating constraints from the redistribution of the listed species population from climate change. Any alternatives identified in the scoping process with different intake locations that were dismissed for being judged as more vulnerable to delta smelt or other endangered species population redistribution from climate change are unsupported by evidence, analysis or even professional opinion in the EIR. Any alternatives eliminated from consideration for this criteria are incorrect and must be fully analyzed in a revised DEIR.	section titled Intake Operations and Maintenance, describes how the north Delta diversions would be subject to the same regulations and operating constraints as the existing infrastructure. Please refer to Common Response 3, Alternatives Development and Description, regarding integration of the Delta Conveyance Project with the SWP, operations, and operational criteria. Please refer to response to comment 613-66 regarding evaluation, screening, and selection of alternatives.
613-123	[ATT 19: Appendix 3A.] - 28, 5 – "The rating, however, was tied to the location of the new diversion; for example, a new diversion facility in the west Delta area would not be able to satisfy this objective because, farther downstream and more influenced by the ocean, it would have limited ability to adjust to changes in sea level and resulting increases in salinity." West delta diversion alternatives in isolation of consideration of other project components would be vulnerable to future sea level rise and resulting SWP water quality degradation. This is why the alternative components we submitted in the alternatives scoping included east and central delta diversion locations, Carquinez Straight flow controls, and managed flow reconnection of Sacramento River distributary sloughs to control and refresh flows in the north, central and east delta. The DEIR example quoted here does not apply to excluding the above described set of alternative components from full consideration as an alternative in the EIR.	Please refer to responses to comments 613-119 and 613-120 and Common Response 3, Alternatives Development and Description, regarding how the screened-out alternatives do not meet two or more project objectives or are not feasible alternatives to the proposed project. CEQA does not require consideration of every variation of potential alternatives. The eastern and western delta diversions were primarily eliminated due to potential impacts on delta smelt and other delta fisheries, as well as other factors described in previous responses to these comments.

Letter-Comment Number	Comment	Response
613-124	[ATT 19: Appendix 3A.] - 28, 16 – "Could the potential alternative minimize the potential for public health and safety impacts from reduced quantity and quality of SWP water deliveries south of the Delta resulting from a major earthquake that causes breaching of Delta levees and the inundation of brackish water into the areas in which the SWP pumping plant operates in the south Delta?" Table 3A-1 defines Seismic resiliency as "Minimizes health/safety risk to public from earthquake-caused reductions in water delivery quality and quantity from the SWP." In this project objective, the EIR correctly does not arbitrarily or capriciously limit the geographic scope of alternatives with the objective to increase SWP seismic resiliency. In 3A.4.1.2 the EIR describes the screening criteria used. The alternatives screening criteria applied to evaluate the potential alternatives identifies one of many SWP seismic vulnerabilities as a criteria. The screening criteria also falsely inserts a geographic constraint on the potential location of where the improvement in SWP seismic resiliency could be accomplished. Any potential alternative or alternative component dismissed from further consideration in the EIR due to the location outside of the delta or to address the DEIR inserted focus on only delta levee seismic vulnerability in the SWP system is based on a false criteria that is not consistent with the NOP or project objectives. This DEIR misapplication of screening criteria resulted in alternatives being screened out of the EIR process that actually did met the project objectives (often, better than the proposed project). Any alternatives dismissed for being outside of the delta must be reconsidered in the revised DEIR without this DEIR invented false, geographically constrained criteria. In the alternatives scoping, we proposed several	The assertion that the seismic resiliency screening criterion is false is not consistent with the content of the EIR. Please refer to response to comment 613-20 and Common Response 3, Alternatives Development and Descriptions, regarding how the screened-out alternatives do not meet two or more project objectives or are not feasible alternatives to the proposed project. Chapter 10, Geology and Seismicity, provides a detailed analysis of the geologic setting and earthquake risk in the sections titled Regional and Local Seismicity and Geologic and Seismic Hazards, respectively, including hazards outside the Delta Conveyance Project direct footprint. It is outside the scope of the EIR to analyze the seismic vulnerability of the entire State Water Project system and a comparison of relative seismic vulnerability of SWP facilities is not relevant to impact analyses for the proposed project and alternatives. While the alternatives identified by the commenter could provide earthquake risk benefits to the overall SWP, they do not address the risk of levee breach in the south Delta and do not meet the other three project objectives. Thus, while these types of activities warrant consideration to further protect SWP supplies from earthquake risks, they were screened from further consideration in the EIR because they do not meet the majority of the basic project objectives of the Delta Conveyance Project. Seismicity concerns relating to the other major SWP facilities are distinct from the seismicity concern the proposed project seeks to address, which is impacts of levee failure and inundation of brackish water into areas where existing south Delta pumping plants are located. The Delta Conveyance Project does not propose to address vulnerabilities of other SWP facilities. Ongoing efforts to maintain and improve the seismic vulnerability of other SWP facilities will continue to be pursued whether or not the proposed project is approved.

Letter-Comment Number	Comment	Response
	alternatives to improve the SWP seismic resiliency which included attention to other SWP project conveyance water supply seismic vulnerabilities that are consistent with the project objective in the NOP and the DEIR table 3A-1 project objectives. These were: address the slip fault geologic risk in Oroville Reservoir which could cause the loss of the entire facility from a seismic event, address the "green spot" leak in the face or Oroville Dam which is indicative of a structural problem which could cause a failure in this facility from a seismic event, address subsidence and seismic engineering deficiencies in the California Aqueduct (many faults have been discovered and seismic engineering standards have improved considerably since the original construction of the SWP), create additional downstream of delta SWP storage (so that in the event of an upstream SWP system or conveyance seismic failure there is more water supply stored closer to the end users in the event of a seismic failure that occurs upstream of the delta, in the delta or downstream of the delta), and the project alternative components we proposed for rapid response to delta levee failures to minimize the impacts from potential levee breaches. All of these proposed alternatives and alternatives components would increase SWP water supply resiliency in a seismic caused SWP failure event. The EIR alternatives screening must be redone so it is consistent with the NOP and the objectives in Table 3A-1. The revised set of alternatives from the corrected alternatives screening must be rereleased in a revised DEIR.	The proposed Delta Conveyance Project is one part of a diverse portfolio of strategies that would assist in meeting California's water management needs and would not preclude other measures that may be taken by DWR or other entities.
613-125	[ATT 19: Appendix 3A.] - 28, 20 – "The current water system utilizes natural channels within the Delta to convey water in an area that is extremely vulnerable to large seismic events." The DEIR description and assertion of the delta as "extremely	The assertion that the EIR does not adequately address and support findings regarding local and regional seismic vulnerability in the Delta and that the screening criteria used to identify potentially feasible alternatives analyzed in the EIR are inadequate is not supported by the EIR. Please refer to response to comment 613-124 regarding seismic risk.

Letter-Comment Number	Comment	Response
	vulnerable to seismic events" is unsupported in the EIR analysis as it does not compare the seismic vulnerability of other SWP storage and conveyance components to those of the delta. This assertion, if supported by facts disclosed in the EIR (which it is not), belongs in the environmental settings section of the document, not in the screening criteria for the alternatives. The NDD [North Delta Diversion] also has delta levees so by this DEIR logic the proposed project must be screened out. Again, the geographic focus of the DEIR screening criteria was not supported by the project objectives in Table 3A-1 as the seismic resiliency of the SWP in the project objectives is not limited to the delta. The next sentence in the EIR (line 21) which is quoted from a geologic hazard report, defines the seismic risk in the delta as "moderate" – see next comment. The much greater risk than the delta to the seismic resiliency in the SWP system is the California Aqueduct which is much closer to the major magnitude earth quake faults. The SWP aqueduct is located on hard rock geology as cuts and fills across the hills south of Tracy all the way down to and over the Tehachapi's. The solid rock is vulnerable to P wave earthquake energy which is faster moving and more destructive to infrastructure like the aqueduct. The delta levees are located on deep non-bedrock soils. The delta consolidated plastic material means that the S wave earthquake energy that would reach there is attenuated to rolling waves which are generally much less destructive to engineered levees or facilities. The location of the California Aqueduct on bedrock and fill in much closer proximity to the major potential faults are subject to the much greater risk of engineering structural failure. Increasing the aqueduct risk is that those facilities are generally oriented in parallel with the high risk earthquake fault lines which is an orientation which makes the earthquake energy more	Please refer to the Environmental Setting section of Chapter 10, Geology and Seismicity. The subsection titled Regional and Local Seismicity provides information supporting the statement that the Delta is "extremely vulnerable to seismic events" and describes the seismic hazards in detail in the vicinity of the project from a local and regional perspective. Appropriately, the geology and seismicity study area refers to all areas that could involve excavation, filling, stockpiling, constructing, or otherwise disturbing the ground to design and construct the conveyance facilities and appurtenant features for all alternatives combined. The geology and seismicity study area also includes a 0.5-mile buffer beyond the footprints of these areas, with the exception of power transmission lines, metering areas, and park and ride sites, which have a 0.125-mile buffer. Additionally, the analysis also considers seismic sources located outside the study area that could cause seismic shaking within the study area. It is outside the scope of the EIR to analyze the seismic vulnerability of the entire State Water Project system and a comparison of relative seismic vulnerability of SWP facilities is not relevant to impact analyses for the proposed project and alternatives. Seismicity concerns relating to the California Aqueduct are distinguishable from the seismicity concern that the proposed project seeks to address, which is impacts of levee failure and inundation of brackish water into areas where existing south Delta pumping plants are located. The Delta Conveyance Project does not propose to alter operation and maintenance of the California Aqueduct. As a result, ongoing efforts to maintain and improve the California Aqueduct to address, for example, seismic vulnerability will continue to be pursued whether the proposed project is approved or not. Please also refer to response to comment 613-120 regarding the adequacy of alternatives screening and selection.

Letter-Comment Number	Comment	Response
	destructive to structures. The alternatives screening must be redone to be consistent with the project objectives to consider all SWP system seismic vulnerabilities, not just those in the delta. The alternatives we proposed address the SWP system seismic vulnerabilities in the Oroville Reservoir and California Aqueduct which are a much greater threat to water supply reliability than the potential for delta levee failure. These alternatives must not be screened out for the DEIR falsely applied criteria that are not consistent with the project objectives. These alternatives must be considered in a revised DEIR.	
613-126	[ATT 19: Appendix 3A.] - 28, 21 – "The Delta is a region of moderate seismic hazard, with hazard generally increasing from east to west (e.g., Deverel et al. 2016:13). Contributions to Delta seismic hazard come from faults near or within the Delta (e.g., Midland, Pittsburg Kirby Hills) capable of producing moderate-magnitude earthquakes and, from more distant faults (e.g., San Andreas, Hayward), capable of producing large earthquakes." So the delta is a moderate seismic hazard, not "extreme" as characterized in an unsupported claim in the EIR. The seismic risk increases from east to west. The farther west you go, the closer you are to the faults that can produce large earthquakes. The California Aqueduct is farther west and closer to the large faults than any of the delta levees which participate in the current SWP through delta conveyance. The distributed intakes we proposed in the east and central delta are located in a lower seismic risk area than the proposed project tunnels and the much higher risk located California Aqueduct. The reconnection of the Sacramento Distributaries we proposed to provide flows through the north, east and central delta also	The comment takes the quoted material that appears in Appendix 3A, Identification of Water Conveyance Alternatives, out of context. The Delta's status as "a region of moderate seismic hazard" is why the Delta is described as "extremely vulnerable to large seismic events," in Appendix 3A, section titled Criterion 2 – Seismic Resiliency. Seismic hazard status and vulnerability to seismic events are two different characteristics. Appendix 3A goes on to recognize that "seismic activity is one of the most significant hazards that could cause a levee breach" and the impacts of such a breach on water supply and water quality. Please also refer to response to comment 613-120 and 613-125 regarding the adequacy of alternatives screening and selection, the California Aqueduct as distinct from the Delta Conveyance Project, and why the suggested alternative did not pass the screening criteria. The comment over-simplifies relative geographic seismic and levee failure risk in the Delta. Relative levee vulnerability was evaluated in the Levee Vulnerability Assessment technical memorandum (Delta Conveyance Design and Construction Authority 2022g). This memo notes that site-specific conditions other than seismic events that contribute to a levee's vulnerability for failure when subjected to seismic loading, including poor/weak embankment or foundation soils, insufficient levee geometry

Letter-Comment Number	Comment	Response
	reduce seismic risk by putting more of the through delta SWP conveyance farther east in lower seismic risk areas. For these reasons, these alternative components must not be screened out and must be considered in a revised DEIR.	(height, width, and slope inclination), and various types of damaging animal activity or vegetation growth. The Flood Risk Management technical memorandum (Delta Conveyance Design and Construction Authority 2022d) points out that sunny-day levee failures (i.e., not caused by earthquake) can occur for similar reasons. Site-specific geotechnical investigations will be conducted prior to construction to evaluate soil and levee characteristics related to vulnerability to seismic events, as described in EIR Chapter 3, Description of the Proposed Project and Alternatives, section titled Investigations Prior to Construction. While the alternate intake locations suggested by the comment may be at lower risk of seismic effects, the suggested alternative would not meet the other basic project objectives of operational flexibility, resilience to climate change and sea level rise, and protecting the ability of the SWP to deliver water when hydrologic conditions result in the availability of sufficient amounts of water consistent with state and federal regulations and water delivery contracts and agreements. The proposed north Delta intakes were judged to meet all project objectives and would provide for operational flexibility farther upstream from existing SWP facilities that would improve system redundancy and operational flexibility for diversion and conveyance of SWP water supply.
613-127	[ATT 19: Appendix 3A.] - 28, 25 – "Delta levees on Bacon Island, Webb Tract, Venice Island, and King Island have been damaged by moderate-magnitude earthquakes close to the Delta (e.g., M5.9 1980 Livermore earthquake; Finch 1985:40–41)." I have worked on many projects in the delta and reviewed many other projects including the Delta Risk Management Strategy study. I have never heard of a report of an earthquake caused levee damage in the delta and was not able to find the reference used in the DEIR. DWR needs to make this report available to DEIR commenter's and needs to support the conclusion from this report with actual text conclusions from this report. As it stands we dispute this to be an accurate claim	The comment's assertion that reports of earthquake damage to levees in the Delta are not available is not consistent with the EIR. The Notice of Availability for the Delta Conveyance Project Draft EIR states that the Draft EIR as well as documents incorporated by reference in the Draft EIR were made available for public review at DWR's office at 3500 Industrial Boulevard, Room 117, West Sacramento, CA 95691. Therefore, members of the public had the opportunity to request to review the full text of Finch 1985, cited in Appendix 3A, Identification of Water Conveyance Alternatives, as well as all other materials referenced in the EIR during the public comment period. Furthermore, the report that the commenter cites seems to support Finch in that it concludes estimated ground motions are large enough to induce failure, but local applicability is uncertain and, even

Letter-Comment Number	Comment	Response
	or interpretation of the cited report. In another report (https://escholarship.org/content/qt36t9s0mp/qt36t9s0mp.pdf?t=q5asq) much more recently conducted, characterized Finch's 1985 report in the following; "Finch (1985) and Youd and Hoose (1978) reported that the 1906 earthquake caused the foundation of a railroad bridge on the Middle River to drop about a meter and become misaligned, and the pier supporting the bridge over the main San Joaquin River sank "several inches." The embankments associated with those structures were similar in composition to the present Delta levees (Finch 1985). Hopf (2011) investigated evidence that might link the earthquake (which occurred in April 1906) to subsequent levee failures. He discovered that six islands flooded in June and July of 1906 (Hopf 2011). Although these floods could be earthquake-related, high-water events that spring and summer were also documented." So contrary to the DEIR's representation, Finch 1985 (and Hopf 2011) did not document any earthquake damage to the delta levees. They conjectured that the infrastructure damage they found reported of a railroad trestle and pier piling might also have happened to the levees. Further, some later levee failures might have been correlated to earthquake damage, but also (and more likely) could have been from high flow events that occurred at the time of the failures. In summary then, the DEIR has misrepresented the cited study and conclusions. This material misrepresentation of delta levee earthquake damage risk is material in the evaluation of the SWP conveyance vulnerability to a seismic event and therefore must be corrected in a revised DEIR where seismic risks are accurately portrayed and appropriately treated in the alternatives screening process.	if levees remain standing following an earthquake, secondary failure mechanisms can threaten the long-term stability of levees. This supports the EIR's conclusion of seismic risk to Delta levees. The report also says about the Finch report: "The record also contains evidence of damage to levees in their essentially contemporary state. Finch (1985) reported 15 instances of observed Delta levee damage from relatively modest earthquakes from 1979 to 1984 with epicenters in Livermore, Coalinga, Pittsburg, and Morgan Hill." Following the excerpt provided in the comment, Finch goes on to document reports of witnessed levee damage on Webb Tract after May 2, 1983, Coalinga earthquake, reported by workers on the levee at the time, and 14 other reports of potentially earthquake related damage to Delta levees (Finch 1985:40-42). This information has been added to Appendix 3A. These clarifications do not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Chapter 10, Geology and Seismicity, provides a detailed analysis of the geologic setting and earthquake risk in the sections titled Regional and Local Seismicity and Geologic and Seismic Hazards, respectively.

Letter-Comment Number	Comment	Response
613-128	[ATT 19: Appendix 3A.] - 28, 43 – "This screening criterion requires that an alternative be able to protect the continued operation of the SWP against a large seismic event, similar to the proposed project." This is another example of the DEIR misapplying the project objectives in the screening criteria. The seismic "resiliency" requires that a project alternative be able to recover more quickly from a seismic event, not an alternative protecting the SWP from a seismic event. The west and central delta intakes we proposed as alternatives in combination with the reconnection of the Sacramento River distributary sloughs for refreshing flows to push salts out of the east and central delta and/or in combination with the proposed Carquinez Straights flow control facility, would provide a much greater set of tools for the SWP to recover from a seismic event that caused delta levee failures than the proposed project.	Please see responses to comments 613-120 and 613-126 regarding alternative screening, selection, and seismic risks. Please see response to comment 613-56 regarding western salinity barriers.
613-129	[ATT 19: Appendix 3A.] - 29, 4 – "Alternatives that involved locating facilities in the west Delta were generally rejected because the west Delta is closer to the Bay Area faults, and other faults underlie the area, placing it at higher risk of damage from seismic shaking" The elimination of these alternatives for the DEIR stated reason is incorrect. The screening criteria used falsely added the specification of "delta" in the screening criteria when that is not in the requirement defined by the project objectives. When the whole of the SWP conveyance is considered for seismic risk as is defined in the project objective, the California Aqueduct and the Oroville Facilities are at a much greater risk of seismic failure than even a west delta conveyance alternative – see related comments. All of the alternatives the DEIR dismissed based on these corrupted screening criteria must be	The assertion that screening criteria specifying “the Delta” is unfounded. The fundamental project purpose is to restore and protect the reliability of SWP water deliveries by developing new diversion and conveyance facilities in the Delta—not to improve the entire SWP system with this project. Please refer to response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Applying project objectives for the purpose of screening alternatives to be considered further in the EIR are intended to focus project alternatives on stated objectives of the project. Please refer to Common Response 3, Alternatives Development and Description, for further discussion regarding screening alternatives in the context of project purpose and objectives.

Letter-Comment Number	Comment	Response
	reevaluated in a revised DEIR.	
613-130	[ATT 19: Appendix 3A.] - 29, 12 – "Alternatives did not meet this criterion if they increased risk of levee failure through use of additional leveed waterways (e.g., the Deep Water Ship Channel)." The DEIR fails to provide the rationale of this dismissal of the Deep Water Ship Channel as an alternative conveyance. Are they claiming its use as a conveyance is a hazard to other levees? Are they claiming that the DWSC Super levees that are 50 yards across could fail under a seismic event? If the DEIR proposes that these levees could fail under a seismic event, some specific analysis of seismic vulnerability of these levees must be disclosed in a revised DEIR. This alternative dismissal is incorrect and unsupported by the DEIR. Further, this DEIR statement implies that other alternatives may have been dismissed for this misapplied criteria. If an alternative is to be screened out, it must be explicitly disclosed in the revised DEIR.	The assertion that the Draft EIR fails to disclose why the Deep Water Ship Channel was not considered as a project alternative is not supported by the content of the EIR. Please see response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Please also refer to the full explanation in Appendix 3A, Identification of Water Conveyance Alternatives, about why the Water Plan for All of California (utilizing the Deep Water Ship Channel) was eliminated from further consideration in the EIR. While the Water Plan for All of California passed Filter 1 screening of Delta Conveyance Project alternatives (meets at least two project objectives), it did not pass Filter 2 (avoids or substantially lessens environmental impacts). The Appendix 3A table titled Results of Second-Level Screening (i.e., Filter 2) lists how the environmental impacts of the Water Plan for All of California would increase or not reduce impacts compared to the project.
613-131	[ATT 19: Appendix 3A.] - 29, 15 – "Could the potential alternative protect the ability of the SWP to reliably deliver water, when hydrologic conditions result in the availability of sufficient amounts, consistent with the requirements of state and federal law, including the CESA, ESA, and Delta Reform Act, as well as the terms and conditions of water delivery contracts and other existing applicable agreements?" This is very poorly written and is completely unfunctional as an alternatives screening criteria. Under CEQA, all projects and alternatives must comply with the law, so by default all projects and alternatives are formulated to comply with CESA, ESA, the SWP Biological Opinions, the Cooperative Operating Agreement, the Central Valley Basin Plan, settlement agreements, existing contracts, etc. So that part of the above criteria can be thrown out in the alternatives screening process. The term "protect" is	Please see response to comment 613-66 regarding evaluation, screening, and selection of alternatives. Please refer to Chapter 2, Project Purpose and Objectives, for a full explanation of project objectives. Please also refer to Appendix 3A, Identification of Water Conveyance Alternatives, for an explanation of the requirements and intent of the alternatives screening process. Please refer to Common Response 3, Alternatives Development and Description, for further explanation of the reliability objective and how objectives were applied to screening alternatives.

Letter-Comment Number	Comment	Response
	undefined in the DEIR so that is not a component of the criteria that can be used for alternatives screening. The rest of the Criterion 3 are not a complete sentence or thought. Here is criterion 3 with the superfluous compliance with existing laws and obligations removed. "Could the potential alternative protect the ability of the SWP to reliably deliver water, when hydrologic conditions result in the availability of sufficient amounts, as well as the terms and conditions of water delivery contracts and other existing applicable agreements?" Huh? No alternatives should be screened out of consideration based on this nonsense criteria.	
613-132	[ATT 19: Appendix 3A.] - 29, 22 – "These pumping restrictions could prevent the SWP from reliably capturing water when it is available, especially from storm events." The eastern and central intakes we proposed in our alternatives and proposed upstream and downstream of delta water storage all would increase the amount of water the SWP could capture in high flow events. The eastern and central dual conveyance intakes would serve at least as well as the proposed NDD [North Delta Diversion] for peak flow capture and the additional upstream and/or downstream storage would significantly surpass the proposed project operational flexibility to capture these peak storm water supply opportunities.	Please refer to response to comment 613-119 regarding screening and selecting alternatives for further analysis in the EIR. Alternative intake locations were evaluated and found not to meet siting criteria; refer to the Intake Site Identification and Evaluation technical memorandum (Delta Conveyance Design and Construction Authority 2022f) for the evaluation criteria.
613-133	[ATT 19: Appendix 3A.] - 29, 37 – "The SWP must operate in compliance with regulatory constraints that protect aquatic species and water quality under dynamic conditions." Our proposed eastern and central delta intakes allow for SWP intake operations to adapt to, avoid and protect aquatic species as well or better than the proposed project.	Please see responses to comments 613-119 and 613-132 and Common Response 3, Alternatives Development and Description, regarding diversion intake location analysis and selection. The Delta Conveyance Project provides for operational flexibility by prioritizing use of the existing SWP south Delta facilities. The proposed north Delta intakes would be used during excess flow conditions or when water quality conditions in the southern Delta during the summer or fall limit use of south Delta facilities.

Letter-Comment Number	Comment	Response
	Reconnecting the Sacramento River distributary sloughs with flow control structures allows control of flows and water quality in the central, eastern and southern delta. The proposed project provides no operational capability to improve aquatic conditions and water quality in these areas. The proposed Carquinez Straights flow control structure also provides an operational tool to dynamically manage west and south delta water quality by reducing the magnitude of peak tide and storm tide salinity intrusion into the delta. In combination, these proposed project alternatives provide a much greater range of real time SWP operational flexibility and resiliency to improve aquatic conditions and adapt to potential future regulatory constraints than the proposed project.	The proposed conveyance facilities would improve SWP operational flexibility by providing an upstream alternate diversion location to manage water supply and flow conditions in the Delta. Please see Common Response 3, Alternatives Development and Description, regarding shifting and improving aquatic conditions. Analyses in Chapter 9, Water Quality, Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, indicate that operating the proposed project or alternatives would result in less-than-significant impacts or less-than-significant impacts with mitigation measures applied for Delta aquatic resources and water quality.
613-134	[ATT 19: Appendix 3A.] - Table 3A-4 This table copies the scoping alternatives scoring matrix we submitted in our comments. The introduction to the table in our scoping comments was referred to in Appendix 1A, but the table was not included – see related comment on Appendix 1A. Use of the table is a good idea as it allows the reader to see the alternatives and conclusions regarding their attributes to satisfy the project objectives side by side. What the DEIR omitted was the discussion and rationale that justify and support those conclusions. Further, the DEIR must address all of the instances in which their conclusions were different than those we submitted in our scoping comments.	Please see Appendix 3A, Identification of Water Conveyance Alternatives, text and table titled Screening Filter Criteria and Project Objectives and table titled Results of Second-Level Screening, which provides the rationale for the screening decisions. All scoping comments, including the subject alternatives matrix were considered during the alternatives screening process.
613-135	[ATT 19: Appendix 3C.] - What is the assumed operational lifespan of the proposed project? This was not disclosed in any location we found. The project lifespan has impact implications for ongoing and incremental environmental impacts that occur over time with the operations of the project. These ongoing incremental environmental impacts are not addressed in the DEIR.	Please see response to comment 613-85 regarding the project lifespan; as identified in that response, the EIR and Engineering Project Reports do not specifically identify a project lifespan for the purposes of CEQA analyses in the EIR. The project impacts are discussed in terms of long-term and short-term impacts. Short-term impacts generally refer to the construction timeline and long-term impacts generally refer to the period over which the project would be operational. It is anticipated that the project would

Letter-Comment Number	Comment	Response
		be operational for as long as is feasible and practical. Long-term changes and impacts are accounted for in a variety of ways in the EIR. First, the operation of the project is evaluated using reasonable assumptions in multiple ways in the document, including in resource chapters but also in appendices that include climate change scenarios. Second, Chapter 30, Climate Change, and the associated appendix (Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections) describe the types of changes that could occur and the performance of the project under climate change scenarios. Third, as described in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, the cumulative impact analyses contained in Chapters 7 through 32 consider reasonably foreseeable future projects that, when combined with the operation of the Delta Conveyance Project, could result in cumulatively considerable impacts. Fourth, the project includes an adaptive management and monitoring program that would be in place for the life of the project and enable adjustment to operations based on changes in scientific understanding and changes in the environment (see Chapter 3, Description of the Proposed Project and Alternatives, section titled Adaptive Management and Monitoring Program, which includes the Operations Adaptive Management and Monitoring Plan). Fifth, the Compensatory Management Plan (CMP) also enables adjustment to changing environmental conditions and regulatory requirements. All these elements are built into the project as well as conformance with future environmental regulations that will help address the potential for longer-term changes and impacts and are properly accounted for and disclosed in the EIR
613-136	[ATT 19: Appendix 3C.] - 8, 38 Sea level rise is assumed, but not described or quantified. These assumptions must be clearly stated, defined and disclosed for public review and comment.	The assertion that the Draft EIR fails to describe or quantify sea level rise is not consistent with the content of the EIR. Sea level rise is described in Chapter 30, Climate Change, in the section titled Recent Trends in Climate and the section titled Application of California Climate Projections to Alternatives Analysis. It is also described in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations

Letter-Comment Number	Comment	Response
		Modeling, Attachment 4, Climate Change Development for Delta Conveyance Project.
613-137	[ATT 19: Appendix 3C.] - 9, 19 - "...planned EcoRestore projects still in development are also included." If these projects are not sufficiently developed in scope or description and if these projects are not yet funded, then they do not meet the CEQA test of "reasonably foreseeable" and therefore may not be included in the no project assumption. Any projects that do not meet the CEQA criteria for reasonably foreseeable must be removed from the DEIR and the impact analyses redone in a recirculated DEIR.	EcoRestore was included in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions, because it is a broad multi-agency initiative covering the Central Valley that began in 2015 and is ongoing. This program meets the criteria for considering cumulative projects that are "related past, present, and reasonably foreseeable probable future projects and programs to be considered in the cumulative impacts analysis generally (though not always) are not components of, or outgrowths from, the individual identified projects or programs" (Appendix 3C, the section titled Cumulative Impact Analysis). Please refer to the table in Appendix 3C titled Descriptions of Programs, Projects, and Policies Considered for Existing Conditions, No Project Alternative, and Cumulative Impact Analysis, which generally describes projects under EcoRestore that have been funded, constructed, or are in the planning stages (e.g., Lower Yolo Ranch Restoration Project).
613-138	[ATT 19:] Chapter 9 - WATER QUALITY[.] - 9.3.2 Thresholds of significance These significance thresholds do not conform to DWR standards of previous EIR documents and are incorrect regarding requirements of satisfying regulatory agency criteria (e.g. SWRCB beneficial uses), #3 – "long-term degradation" is incorrect as even short term degradations (e.g. DO crash, temperature spike, etc.) can cause unsuitable designated critical fish habitat to cause large scale ESA and CESA fish mortalities. #6 – they say "substantially alter" when Basin Plan designated	DWR appropriately identified and used thresholds for the purposes of evaluating potentially significant environmental impacts throughout the EIR. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding CEQA requirements and thresholds and the appropriate and adequate use of thresholds throughout the document. Please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding the appropriateness of the thresholds of significance defined in Chapter 9, Water Quality.

Letter-Comment Number	Comment	Response
	beneficial uses require significance criteria as "adversely affect" which are completely different thresholds. "Significantly affect" is a subjective call whereas "adversely affect" is a binary, yes or no if there was any degradation to any degree. #7 – violate discharge WQ – if you don't say where, when, how much and what quality – you can't assess it. Incorrect significance thresholds result in incorrect impact calls so all of the impact assessment that were made using these incorrect definitions and thresholds are incorrect and must be reanalyzed in a revised DEIR.	
613-139	[ATT 19:] [Chapter 9.] - Table 9-6 Selenium was not analyzed which the changes in flows that result from the proposed project can affect. Selenium bioaccumulates so one of their significance criteria can't be evaluated.	Selenium is one of the constituents analyzed in detail in Chapter 9, Water Quality, in Impact WQ-10. The analysis included modeling of changes in water column concentrations of selenium and selenium bioaccumulation in whole body fish, bird eggs (invertebrate diet and fish diet), fish fillet, and whole sturgeon tissue. All Delta assessment location concentrations of selenium are well below applicable aquatic life criteria as described in Impact WQ-10 (selenium) and project operations would not make selenium concentrations be above criteria. The project alternatives would have little to no effect on selenium concentrations in the fish and bird eggs. When evaluated relative to the water quality thresholds of significance, the project alternatives would have a less than significant impact on selenium.
613-140	[ATT 19:] [Chapter 9.] - Dewatering locations, volumes, timing treatment and discharge impacts 9-44, 9 – dewatering identified, but not described or quantified. 9-44-18 – the DEIR omitted tiger salamanders, Giant Garter	Chapter 9, Water Quality, focuses on surface water quality impacts. Dewatering would occur at the construction sites for the intakes, tunnel shafts, Southern Complex forebay spillway and pumping plant, and Bethany Complex pumping plant. The tunnel shafts would be constructed under wet conditions in the groundwater and an impermeable bottom would be installed at the bottom of the shaft to make the shaft watertight; and only the water within the sealed shaft would be dewatered so that there would be no changes to adjacent groundwater. At the intake, Southern Complex, and Bethany Complex sites, slurry walls or similar

Letter-Comment Number	Comment	Response
	Snake, Riparian Brush rabbit, etc. 9-44, 20 all dewatering would be treated on site, stored and reused on site. – Any quantification of that or equipment identified, power use? Etc. – NO, this impact is written off in 9-46, 8 with just a promise of a future development and not even a programmatic level description.	underground walls would be constructed to depths below the existing ground surface to isolate the construction from the adjacent groundwater. Shallow and deep groundwater monitors would be installed adjacent to the construction sites, and if groundwater elevations decline, the dewatering flows would be treated and re-injected into the groundwater (Mitigation Measure GW-1). As described in Chapter 9, Water Quality, Impact WQ-1 (construction impacts), dewatering water and stormwater runoff would be treated prior to reuse or discharge. Furthermore, discharges would be in compliance with applicable laws and permits, including those issued by the Central Valley Regional Water Quality Control Board. For these and other reasons provided in Impact WQ-1, including implementation of environmental commitments, construction activities would not substantially degrade water quality or adversely affect beneficial uses. Construction-related impacts on other resource topics are discussed in their respective chapters and not in Chapter 9. For example, Chapter 7, Flood Protection, Impact FP-2 describes how project elements during construction would ensure that peak flow rates would not be increased such that there would be an increased risk of flooding. Construction effects on the species listed in the comment are addressed in Chapter 13, Terrestrial Biological Resources, Impacts BIO-22 (California tiger salamander), BIO-30 (giant garter snake), and BIO-50 (riparian brush rabbit). Chapter 22, Energy, and Chapter 23, Air Quality and Greenhouse Gases, evaluate air quality emissions and energy use resulting from construction activities.
613-141	[ATT 19:] Chapter 12 - Fisheries and Aquatic Resources[.] - 40, 23 "Indirect impacts are discussed in Chapter 31, Growth Inducement." Indirect impacts are still part of impacts and must be included in the impact assessments. The EIR separation of the indirect impacts from the direct impacts in the impact assessment means that all impact assessments are incomplete and incorrect. The EIR must be revised to include	The incorrect reference to Chapter 31, Growth Inducement, indirect impact discussion has been deleted in Chapter 12, Fish and Aquatic Resources. This deletion does not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Direct and indirect impacts on fish are appropriately identified and evaluated in Chapter 12. For example, effects on Delta flows and resulting

Letter-Comment Number	Comment	Response
	the indirect impacts in the significance assessments and the impact mitigations. This omission is a material defect of the EIR and it must be corrected and recirculated for public comment.	flow-survival effects were assessed for species such as winter-run Chinook salmon in Impact AQUA-2, and on delta smelt and longfin smelt prey resources in Impacts AQUA-6 and AQUA-7. Furthermore, Chapter 12 includes a cumulative analysis, which looks at project-related impacts combined with other reasonably foreseeable projects. Please see response to comment 613-135 regarding the analysis of direct and indirect impacts throughout the EIR. Please also see response to comment 613-210 regarding the evaluation of growth inducement.
613-142	[ATT 19: Chapter 12.] - 40, 33 "The potential for impacts on fish and aquatic resources was assessed for construction activities and for operations and maintenance activities." No project level description (hourly, daily, or even weekly) were disclosed anywhere in the EIR we could find. Without hourly operations described, disclosed and modeled; most fishery impacts assessments, e.g. intake fish screen operations entrainment and impingement, cannot be conducted. The location, frequency and magnitude of maintenance operations was also not described or disclosed at a project level anywhere in the EIR. As an example, the location, frequency and magnitude of dredging operations to clear accumulated sediment at the fish intake screen locations was not described or disclosed in the EIR. The location, timing, frequency and magnitude of dredging operations is a significant contributor to fisheries impacts including direct mortality of listed fish species. This is another type of project impact that was not analyzed or disclosed in the EIR. For these and many other reasons, the EIR is materially deficient and must be revised to disclose and analyze the construction, operations and maintenance impacts of the proposed project.	Operations criteria are described in Chapter 3, Description of the Proposed Project and Alternatives, of the EIR, including timeframes on which the criteria would be met (e.g., 3-day average for bypass flows, transition times between bypass levels, diel operations, and instantaneous compliance for sweeping and approach velocity requirements). The comment suggests that without hourly operations being described, fish impact assessments such as fish screen entrainment and impingement cannot be conducted. This is not correct; for example, for entrainment, a key variable is size of screen opening relative to fish size, so that in the case of winter-run Chinook salmon, it is possible to conclude that there would not be a risk of entrainment because fish would be too big to be entrained (see Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources). In cases where fish may be of sufficient size to be entrained (e.g., larval delta smelt, egg/larval striped bass, or larval American shad discussed in Impact AQUA-6), a relative indicator of entrainment risk applied in the effects analysis is the proportion of river water diverted by the intakes. Maintenance of fish agency criteria for fish screens at all times (i.e., 0.2 feet per second approach velocity and at least 0.4 feet per second approach velocity) would minimize potential for negative species effects from screen contact and impingement. Modeling data to inform potential impacts on fish reflected various time scales, depending on the analysis being conducted. For example, analysis of potential effects to longfin smelt based on outflow-abundance index relationships required model input data to be at the multiple-month scale (i.e., total Delta outflow volume from December–May

Letter-Comment Number	Comment	Response
		and March–May). In contrast, through-Delta survival of juvenile winter-run Chinook salmon as assessed with the Sacramento River Winter-Run Chinook Salmon Life Cycle Model required 15-minute modeling outputs from DSM2-HYDRO, which capture finer scale migration patterns and the potential sub-daily impacts of daytime vs. nighttime north Delta intake diversions (see also description of modeling assumptions in Appendix 5A, Modeling Technical Appendix, Section C, One Dimensional Delta Hydrodynamics and Water Quality Modeling Results). With respect to the comment's suggestion that maintenance operations were not described, please see, for example, the assessment of Maintenance Effects in Impact AQUA-2 in Chapter 12 for winter-run Chinook salmon. Therein it is noted that there would be very limited effects, and the frequency of the types of relevant activities are described. Maintenance activities are also described in Chapter 3. Dredging to clear accumulated sediment at the fish intake screen locations, as mentioned in the comment, is not proposed under the project alternatives; sediment jetting would occur, as described in Chapter 3, with minimal potential to affect fish, as described in Chapter 12.
613-143	[ATT 19: Chapter 12.] - Table 12-3 The scope of the impact analysis is incomplete and omits a number of important sources of impacts. These omissions and material deficiencies in the impact analysis include: - Delta hydrodynamic impacts on Delta Smelt and Longfin Smelt. The reversal of flows both from the operations of the north delta intakes at or near slack tide reduced or reversed tributary flows and reversed flows from south delta intake operations, both significantly affect smelt entrainment and impingement at the intakes. The hydrodynamic impacts of project operations on smelt is the most significant source of impact on smelt. The omission of this analysis is material and makes the EIR incomplete in its impact analysis and impact conclusions.	The comment suggests that the EIR does not include assessment of hydrodynamic impacts on delta smelt and longfin smelt. However, the EIR does include such analyses, based on particle tracking modeling and hydrodynamic indicators such as Old and Middle River flows in Impacts AQUA-6 and AQUA-7 in Chapter 12, Fish and Aquatic Resources.

Letter-Comment Number	Comment	Response
613-144	[ATT 19: Chapter 12.] - Table 12-3 The delta passage model should have included impact assessment for the steelhead and sturgeon.	As described in Chapter 12, Fish and Aquatic Resources, Impact AQUA-5 for steelhead, through-Delta flow-survival relationships for steelhead have not been established, which is the result of few data being available for the species. The analysis for steelhead considers the general patterns from through-Delta survival modeling for Chinook salmon as well as trends in Delta hydrodynamics from DSM2-HYDRO modeling. As with steelhead, there are few data available with which to inform through-Delta survival relationships for green sturgeon, and such relationships may not be as relevant given that the species resides in the Delta for long periods (see Appendix 12A, Environmental Setting Background Information). The analysis for green sturgeon in Impact AQUA-8 addresses potential flow effects given that flow-abundance relationships exist for white sturgeon.
613-145	[ATT 19: Chapter 12.] - Table 12-3 - DSM 2 Qual - should have included the use of the Dissolved Oxygen (DO). Adequate DO is a significant criteria for fish habitat suitability. DO analysis for project impacts of fish habitat suitability should have been done for all listed and species of special concern as well as for economically and recreationally important species. The "fingerprint" analysis listed in the table for the delta smelt shows changes in residence time of water in the delta due to proposed project operations as compared to the no project. Increases in residence time from proposed project operations indicate the magnitude, frequency and geographic extent of DO impacts from the operations. All of these important impact assessments were omitted from the EIR, which makes this draft materially deficient.	Impact WQ-9 in Chapter 9, Water Quality, concluded there would be a less than significant impact on dissolved oxygen, reflecting that the project alternatives would not have significant impacts on fish and aquatic resources with respect to dissolved oxygen. Please see response to comment 613-57 regarding the evaluation of dissolved oxygen in Chapter 9. It is unclear how the commenter infers that there would be increases in residence time based on DSM2-Fingerprinting mentioned for delta smelt; the DSM2-Fingerprinting analysis informs the analysis of selenium for delta smelt, as described in Chapter 12, Fish and Aquatic Resources, and Appendix 12B, Bay-Delta Methods and Results.
613-146	[ATT 19: Chapter 12.] - Table 12-3 - Fish impingement - This impact also would occur at the North Delta intakes for steelhead and sturgeon, but this impact analysis was omitted from the EIR. There were no descriptions of daily and hourly North Delta intake operations in the EIR. Hourly intake operations against slack and reverse tributary tidal flows at the	The table referenced in the comment summarizes various quantitative methods as addressed in the EIR, including the screen passage analysis for juvenile Chinook salmon, which informs the potential for near-field effects such as impingement. Although quantitative analysis was not undertaken for steelhead and sturgeon, fish impingement impacts were addressed for each of the species, either by cross-referencing salmon analyses in the case

Letter-Comment Number	Comment	Response
	intakes are required in order to calculate the duration of fish exposure to the screen. With reverse flows, fish may be exposed to the intake screens multiple times (as many as 3 times per intake location). None of these assessments were included in the impact analysis so the EIR is materially deficient.	of steelhead in Impact AQUA-5, or in consideration of flow-tolerance limitations in the case of sturgeon in Impacts AQUA-8 and AQUA-9 in Chapter 12, Fish and Aquatic Resources. The north Delta intakes would not divert water during slack or reversing flows because of the 0.4 feet per second sweeping velocity criterion described in Chapter 3; see also responses to other comments on this topic such as 613-142 and 613-153.
613-147	[ATT 19: Chapter 12.] - Table 12-3 - NDD food web material entrainment - Food base for emigrating juvenile salmonids and sturgeon is an important source of project impact that the EIR failed to include in its assessment and impacts.	The EIR did consider entrainment of food web materials for juvenile salmonids (see Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources), cross-referencing the quantitative analysis for delta smelt presented in Impact AQUA-6 that is noted in the table cited in the comment. As described in Appendix 12A, Environmental Setting Background Information, feeding for sturgeon in the Bay-Delta consists of benthic organisms, which would not be subject to entrainment in the same manner as planktonic organisms noted for smelt and salmon; note also that the impacts for smelt and salmon would be limited given the in-situ production within the Delta compared to inputs from freshwater flow.
613-148	[ATT 19: Chapter 12.] - Table 12-3 - 2D modeling - 3D modeling of water velocities near the NDD is required in order to determine the amount of juvenile impingement that would occur with the operation of the intake screens. 2D modeling is not adequate for this assessment and does not utilize the best available science.	3D modeling is not required for the analysis of impingement because the key variables to be considered are approach velocity and sweeping velocity, for which the criteria are known (as described in Chapter 3, Description of the Proposed Project and Alternatives), allowing assessments to assess likely conditions. Note that in the case of juvenile Chinook salmon, as discussed in Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources, laboratory studies did not find impingement to be related to any variables examined (including approach and sweeping velocity).
613-149	[ATT 19: Chapter 12.] - Table 12-3 - Riparian bench inundation - There are no daily operations disclosed or model results, so the frequency and duration of inundated shallow water habitat cannot be analyzed. Oscillations in daily or weekly flow stage elevation from project operations can cause fish stranding events on these riparian benches and is an important source of fish mortality from project operations that was not assessed in	With respect to operational criteria, please see response to comment 613-142. With respect to stranding, please see response to comment 613-203. With respect to spawning effects on species such as Sacramento splittail, this was qualitatively addressed in Impact AQUA-11 in Chapter 12, Fish and Aquatic Resources, and was noted to have a potential negative effect that would be limited relative to floodplain habitat availability that drives population dynamics, with mitigation provided for juvenile Chinook salmon

Letter-Comment Number	Comment	Response
	the EIR. Sacramento splittail utilize shallow inundated grassy riparian benches for spawning. Project impacts to the availability of suitable spawning habitat of this species of concern were not assessed in the EIR or at least were not assessed using the riparian bench inundation identified here in table 12-3.	limiting the negative effects.
613-150	[ATT 19: Chapter 12.] - Table 12-3 - Selenium impacts - Selenium impacts on delta smelt were apparently considered, but not for other species that would be affected by bioaccumulation of selenium such as the sturgeon, catfish and bass. These species can have long residence time in the delta and due to their bottom feeding diets, are particularly susceptible to bioaccumulation impacts from project operations. It should also be noted that the Water Quality section failed to do a quantitative impact analysis on Selenium.	Contrary to the commenter's suggestion, quantitative analysis of selenium was included for other fish species in Impact WQ-10 in Chapter 9, Water Quality, including assessment of whole-body fish (representative of predatory species such as bass) as well as sturgeon. The impact analysis showed this to be a less than significant impact.
613-151	[ATT 19: Chapter 12.] - Table 12-3 - Straying rates - Project operations would alter the timing and magnitude of upstream facility water releases, therefore creating both flow and water temperature sources of impacts of fish straying for all the salmonids and sturgeon species. The EIR failed to analyze, disclose or mitigate these impacts. Further, tributary flows and reverse flow timing, frequency and magnitude in the delta from proposed project operations also is a source of straying impacts for the salmonids and sturgeon species. The EIR failed to analyze, disclose of mitigate for these straying impacts.	Straying was considered in the EIR; see the Adult Straying section for winter-run Chinook salmon in Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources, for example, which qualitatively discusses that there would likely be no difference in potential straying for fish returning to the Sacramento River basin. Quantitative analysis is undertaken for fall-run Chinook salmon from the San Joaquin River basin in Impact AQUA-4 using a method noted in the table cited by the commenter. With respect to sturgeon, no information is available to quantitatively inform straying risk, and it is not a stressor noted to be of concern for the species either in existing conceptual models (Heublein et al. 2017) or in the green sturgeon recovery plan (National Marine Fisheries Service 2018), both cited in Appendix 12A, Environmental Setting Background Information.
613-152	[ATT 19: Chapter 12.] - 43, 14 - "The assessment of impacts from maintenance activities was based largely on a qualitative evaluation for the various facilities included under the alternatives." The qualitative impact analysis was conducted in the EIR because the project failed to define, describe or	With respect to the comment's suggestion that there was insufficient description and assessment of maintenance effects, please see response to comment 613-142. With respect to the adequate level of project level detail, the appropriate scope and approach to the CEQA analysis, and sufficient detail in the project description to conduct impact analyses,

Letter-Comment Number	Comment	Response
	disclose relevant project characteristics in terms of the location, magnitude, and frequency of maintenance operations. An example of a maintenance impact the EIR failed to define, disclose, analyze or mitigate is dredging operations impacts on fish species. The lack of the project description and analysis is symptomatic of this deficient EIR. The EIR fails to provide a project level description or impact analysis and must not be given consideration for construction or operating-related permits at least until these and all other of the project-level impact analyses are completed, disclosed, and mitigated.	including the role of permits for the project, please see responses to comments 613-7 and 613-83 through 613-97.
613-153	[ATT 19: Chapter 12.] - 43, 19 - "…entrainment effects were assessed at the proposed north Delta intakes and also at the existing south Delta export facilities because of changes in operations in the north Delta resulting in changes in operations at the south Delta facilities. Entrainment effects were not properly analyzed for fish criteria compliant screens. Fish criteria screens and their operations must not exceed approach velocities that exceed the maximum swimming velocity of the fish species evaluated. Further, the duration of exposure of fish must not exceed the maximum duration of a fish species swimming ability. Since the EIR failed to define and disclose hourly intake operations in relation to the variation in tributary velocity from tidal influence, a fish criteria screen compliance analysis cannot have been completed. Further, no 3D modeling of local velocities in the area of influence of the intake were not conducted. Both the intake hourly operations and 3D modeling would be required to complete an actual fish criteria screen compliance impact analysis, yet neither were provided in the EIR. Therefore entrainment effects were not sufficiently analyzed to determine impact or compliance with fish screen criteria and the EIR is incomplete and deficient. The EIR analysis does not even cover programmatic level impact	With respect to the commenter's suggestion that entrainment effects were not properly analyzed, please see response to comment 613-142. As described in Chapter 3, Description of the Proposed Project and Alternatives, velocity compliance would be informed by real-time hydrological data measured at the intake locations. Contrary to the criteria that the commenter suggests indicate fish screen compliance, the proposed north Delta intakes would be compliant with fish agency standards for factors such as approach velocity, sweeping velocity, and intake opening size. As described in Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources, during design of the intakes, computational modeling would be undertaken, and field measurements/baffle adjustments would be done during commissioning/operations, both to demonstrate compliance with velocity criteria. The analysis included in the EIR uses the best available information. Uncertainty in potential near-field effects of the north Delta intakes will be addressed as part of the Operations Adaptive Management and Monitoring Plan (see Chapter 3). The comment suggests DWR can refer to other projects and that none of those projects were completed without the use of hourly operations and 3D velocity impact analysis for intake screen compliance. However, examination of other fish screen projects does not suggest such information was used. For example, the California Department of Water

Letter-Comment Number	Comment	Response
	analysis, let alone a project level one which is required for construction and operation of a fish screen facility. DWR can look at other intake fish screen project EIR documents in which it has been a responsible agency and see that none of those projects were completed without the hourly operations and 3D velocity impact analysis for intake screen compliance was completed.	Resources Sherman and Twitchell Islands Fish Screen Project Initial Study/Mitigated Negative Declaration (California Department of Water Resources 2016) does not include such information and, consistent with the Delta Conveyance Project EIR, references agency criteria for selection of cylindrical fish screens (California Department of Water Resources 2016:2-3). Similarly, the Contra Costa Water District Alternative Intake Project EIR/EIS (Bureau of Reclamation 2008) did not include an hourly operations and 3D velocity impact analysis.
613-154	[ATT 19: Chapter 12.] - 43, 24 - "The results of this screening-level summary indicated that detailed analysis of upstream areas was not necessary because of the limited magnitude of difference between scenarios; note that while biological effects from the project alternatives are not expected to differ from existing conditions in the Sacramento River upstream of the Delta, this area was assessed as part of winter-run Chinook salmon life cycle modeling (IOS, OBAN, and Winter-Run Chinook Salmon Life Cycle Model)." The use of this Winter-run Chinook to dismiss analysis of all impact areas above the delta is fundamentally flawed. The Feather River tributary downstream of Oroville Dam, which is an SWP facility directly affected by the proposed project operations, does not have a Winter-run Chinook population. The Feather River salmon runs are Spring- and (predominantly) fall-run Chinook salmon. The winter-run and fall-run Chinook have different life stage timing for immigration, adult holding prior to spawning and different spawning timing. As such, the analysis of water temperature impacts to winter-run are not representative or applicable to predicting (or dismissing) potential impacts to fall- or spring-run Chinook in the Feather River. Since the logic used in the EIR for dismissing these critical listed species impact analyses was fundamentally flawed and indefensible, the EIR must be revised and re-issued to address these material deficiencies.	The comment misunderstands the purpose of the EIR's mention of the winter-run Chinook salmon life cycle models, which is not to dismiss analysis of impacts upstream of the Delta, but to note that these areas are part of the overall life cycle model framework. The screening analysis noted in the comment addressed potential impacts upstream, including on the Feather River; please also see the discussion of upstream areas in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues.

Letter-Comment Number	Comment	Response
613-155	[ATT 19: Chapter 12.] - 43, 29 - "Export service areas were not included in the analysis because reservoirs in the export service areas receiving water as a result of operation of the project alternatives would fluctuate within typical levels that any fish assemblages present experience under existing conditions." The EIR fails to provide or disclose any evidence or analysis that supports this claim and their wholesale dismissal of consideration for these impacts.	Evidence for this general statement can be found in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 3, CalSim 3 Model Results for Existing Condition and Alternatives at 2020, which shows the project alternatives have monthly San Luis Reservoir end-of-month storage that is within the range of storage under existing conditions, an indicator of water supply to export service areas.
613-156	[ATT 19: Chapter 12.] - 43, 34 - "Thresholds of Significance. The proposed project would be considered to have a significant effect if it would result in any of the conditions listed below." The thresholds of significance DWR used in this EIR are inconsistent with previous EIRs in which DWR has been the Lead Agency, e.g. BDCP, Water Fix, etc. DWR must explain why it has departed from their standard practices and standards for this document and must produce an impact assessment and impact evaluation criteria that are consistent with the well established agency precedent they have set in these closely related EIRs.	The thresholds of significance applied in the EIR are based primarily on the questions included in CEQA Guidelines Appendix G and on the mandatory findings of significance listed in CEQA Guidelines Section 15065. Additionally, the thresholds are consistent with previous DWR projects. Examples include the Bay Delta Conservation Plan/California WaterFix Final EIR/EIS (California Department of Water Resources and U.S. Bureau of Reclamation 2016:11-258) and the Long-Term Operation of the California State Water Project Final EIR (California Department of Water Resources 2020a:4-113).
613-157	[ATT 19: Chapter 12.] - 43, 36 - "Substantially reduce the habitat of a fish or aquatic species." This criteria is insufficient to meet the requirements of the basin plan designated beneficial uses for fisheries in which the CVWRCB requires that significant impact is from "any adverse modification" of fish habitat suitability. The EIR criteria used is incorrect to conform with regulatory standards and must therefore be reanalyzed, the impact calls reassessed and mitigations be revised. An important implication of the EIR applied incorrect criteria is that fish habitat suitability for Dissolved Oxygen in designated critical habitat for listed fish species is that the degradation of habitat suitability from project operations have not been evaluated against the correct criteria and therefore significant	The comment purports to quote a phrase from the Central Valley Regional Water Quality Control Board's water quality control plan (basin plan). However, the phrase "any adverse modification" does not appear in that plan, with the only mention of "adverse modification" being specific to the granting of a variance for point source dischargers (Central Valley Regional Water Quality Control Plan 2019:4-34). With respect to dissolved oxygen, the analysis addresses the entire Delta, including waterways in the Delta identified on the state's Clean Water Act Section 303(d) list. Project operations would not affect these factors sufficiently to cause substantial changes in dissolved oxygen concentrations and the impact would be less than significant. As described in Impact WQ-17, Chapter 9, Water Quality, construction, operation, and maintenance of the project alternatives would be subject to meeting water quality objectives in the Central Valley

Letter-Comment Number	Comment	Response
	impacts from the project have been omitted from the EIR disclosure and mitigations required. There are many other examples of degradation to fish habitat suitability, but the entire chapter must be redone with the correct criteria.	Regional Water Quality Control Board's basin plan, as implemented through water rights decisions for operation and permits for construction and maintenance. The EIR assessed potential impacts on fish habitat suitability appropriately, as described in Chapter 12, Fish and Aquatic Resources.
613-158	[ATT 19: Chapter 12.] - 44, 1 - "Have a significant impact, either directly or through habitat modifications, on any fish or aquatic species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service or by the National Marine Fisheries Service." CEQA requires inclusion of direct AND INDIRECT impacts from a project. The EIR's failure to include the indirect impacts in its impact assessments means that all of the impacts in this chapter (as well as all other impact assessments in the EIR that made this same significant error) are incorrect and must be redone in a revised and recirculated EIR.	Indirect effects were evaluated in the EIR, as described in responses to comments 613-141 and 613-210.
613-159	[ATT 19: Chapter 12.] - 46, 4 - "Desalination projects would most likely be pursued in the northern and southern coastal regions. The southern coastal regions would likely require larger and more desalination projects than the 5 northern coastal region..." The EIR author is identifying entirely speculative hypothetical projects. This statement demonstrates a clear lack of understanding of the CEQA criteria for a reasonably foreseeable project. By CEQA requirements, a reasonably foreseeable project is one that has a completed and approved EIR AND project funding. This criteria is so that a future, reasonably foreseeable, project can be evaluated for its contribution to the future no project condition. Without this	Please see Common Response 4, No Project Alternative Description and Analysis, regarding the CEQA requirements for describing and evaluating a No Project Alternative in an EIR and the types of projects that are included in the No Project Alternative, including those projects mentioned by the comment (desalination). Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions, provides descriptions and evidence of the existing and proposed desalination projects in the northern and southern coastal regions; As explained in that appendix, projects currently in development or in exploratory phases are outlined in the most current Urban or Agricultural Water Management Plan for each of the water agencies in the various regions. These plans formed the basis for the assumptions regarding projects most likely to be pursued. A project can be reasonably foreseeable even absent a certified EIR and project funding.

Letter-Comment Number	Comment	Response
	wise CEQA criteria for reasonably foreseeable, an author could just make up hypothetical projects that create impacts that the proposed project could magically avoid and therefore be credited with avoiding impacts the project would otherwise have to mitigate without the corrupted baseline for comparison. Unfortunately, that appears to be exactly what the EIR is doing here. The EIR must be revised to correct this speculative inclusion of projects in the future condition assumption and description. The impact analyses and conclusions must also be revised with the revised baseline for comparison.	
613-160	[ATT 19: Chapter 12.] - 62, 5 - "To address these impacts, the project will include Mitigation Measures AQUA-1a: Develop and Implement an Underwater Sound Control and Abatement Plan, AQUA-1b: Develop and Implement a Barge Operations Plan, AQUA-1c: Develop and Implement a Fish Rescue and Salvage Plan" A plan to develop a plan is not a mitigation. Mitigations have their own impacts which must be analyzed and mitigated in this EIR. The current EIR plan to develop a plan leaves the impacts that would result from these future and undisclosed plan, unmitigated. The EIR must be revised to include the proposed mitigation plans now so the impacts of them are analyzed, disclosed and mitigated in this EIR analysis. This comment is global for the entire EIR document for all chapters which refer to "develop a plan." as any part of their proposed EIR impact mitigations. The current plan to develop mitigation plans later results in a piece-mealing of impacts of the project to some future assessment, which is a violation of CEQA which requires that all of the impacts of a project are considered in the EIR which seeks to have the project approved.	Although not all details of the mitigation measures cited in the comment have been finalized, the description of the elements in each measure provides an appropriate and sufficient summary of the key elements to be considered based on what is currently known, and each such measure has clear performance measures. Mitigation measures with the potential to cause environmental impacts are summarized in Chapter 4, Framework for the Environmental Analysis, and analysis of potential mitigation impacts is provided for each numbered impact related to fish and aquatic resources in Chapter 12 in sections titled Mitigation Impacts. As described in Chapter 4, some measures in the Compensatory Mitigation Plan may be refined or modified in the future, and at that time DWR would evaluate the necessity to do supplemental environmental documentation for those refinements. The Mitigation Monitoring and Reporting Program (MMRP) being prepared by DWR pursuant to CEQA for the Delta Conveyance Project, will include all mitigation measures adopted by DWR, including the environmental commitments and best management practices included in Appendix 3B, Environmental Commitments and Best Management Practices, of the EIR. The MMRP will include specific details regarding the responsible parties, timing, location, monitoring and reporting requirements. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding use and incorporation of

Letter-Comment Number	Comment	Response
		mitigation measures.
613-161	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). There are many errors and flaws in the analysis of fish exposure to the intake screen operations. The analysis must be redone taking into account all of the following points. Once a revised analysis has been done and impacts reassessed, the corrected EIR must be recirculated for public comment. - The analysis fails to take into account that the intake locations are in interdal zones. The CALSIM flows used in their analysis are average flows over a period of time (not clearly disclosed in the EIR, so we don't know if this is a daily, weekly or monthly average) that integrates the tidal flow and resulting channel velocities.	Please see response to comment 613-142 regarding the adequacy of analyses related to fish screen near-field effects. The analysis performed is consistent with the project description, which states that diversions that would occur would meet fish agency standards of 0.2 feet per second approach velocity and 0.4 feet per second sweeping velocity.
613-162	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). The 0.4'/sec sweeping velocity used is the average velocity of the channel, not the velocity at screen. 3D modeling, not 2D, would be required in order to characterize velocity at the screen.	Quantitative fish screen analyses were based on 0.4 feet per second sweeping velocity at the fish screens, not the average velocity of the channel as suggested by the commenter. The analyses using 0.4 feet per second sweeping velocity did not rely on any modeling inputs, but instead the project description provided in Chapter 3, Description of the Proposed Project and Alternatives.
613-163	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). Since the flow velocities at the screen will only actually be 0.4'/second under some flow and tidal conditions, by the assumptions used in this analysis, is the project committing that the intake screens will only be operated during times of	As stated in Chapter 3, Description of the Proposed Project and Alternatives, the instantaneous diversions would be subject to fishery agency velocity criteria (i.e., maximum approach velocity of 0.2 feet per second and a minimum sweeping velocity of 0.4 feet per second).

Letter-Comment Number	Comment	Response
	the day in which positive flow velocity meets or exceeds 0.4'/second? Since the EIR makes this assumption in their impact analysis, the fisheries agencies issuing take permits based on this impact analysis must make a positive flow velocity of 0.4'/second a condition of the operating permit that they may issue based on this EIR;.	
613-164	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). The EIR fails to address the tidal impact on slack and reverse flows that occur at the intake locations. Unless intake operations are ceased at these times, then a 4+ hours of fish screen exposure will occur as there will be ZERO sweeping velocity in a slack flow. The actual exposure could be 7 times as long as the hypothetical example offered in the EIR on page 78, line 16. With reverse flows, the fish could be exposed to the screens multiple times. The EIR fails to address these basic impact factors in their impact assessment of fish screen operations on listed fish species.	The intakes would not be operated at slack and reversing flows because a minimum sweeping velocity of 0.4 feet per second would not occur at these times. Therefore, the impacts suggested in the comment are not relevant for consideration.
613-165	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). The fish screen impact assessment also failed to take into account floating aquatic vegetation which will foul intake screens. Even if floating vegetation barriers are used (not described in the project description), there will be some vegetation that will make it through to foul the screens. Floating vegetation barriers also have predation-related fish take which was also not identified, analyzed, disclosed or mitigated in the EIR. Fouling of portions of the area of the fish	The comment suggests that floating vegetation effects on the intake screens were not considered. This is incorrect. A log boom is shown in the diagram of the cylindrical tee screen facility in Chapter 3, Description of the Proposed Project and Alternatives, and maintenance of the log boom is described in that chapter. An analysis of construction effects for log boom pile installation is included in Chapter 12, Fish and Aquatic Resources (see Impact AQUA-1). The analysis of predation-related effects accounted for the log boom and its support pilings, including accumulated debris; see, for example, the analysis of Predation in Impact AQUA-2; as part of the overall near-field predation effects analysis, potential effects were concluded to be limited, albeit with some uncertainty to be addressed with fisheries studies and adaptive management, as described in Impact AQUA-2. With

Letter-Comment Number	Comment	Response
	screens will result in increased approach velocities in the areas of the screen that are not clogged by the vegetation. The clogged and not clogged portions of the screen will have complex flow velocities. Fish may take refuge in the impinged aquatic vegetation. When the aquatic vegetation is removed from the screen, the fish taking refuge in the vegetation may be removed with it, resulting in a direct fish take. Aquatic vegetation removal from the fish screens was not included in the impact assessment and is therefore incomplete and deficient. The EIR does not quantify or disclose the vegetation removal operation, related fish take, or the disposal of the vegetation (which will have CO2 emission air quality impacts which were also not addressed in the EIR). The EIR fails to take aquatic vegetation into account in their analysis so it is incomplete and deficient.	respect to fouling, this was analyzed as part of the maintenance effects; for example, in Impact AQUA-2, it was described that hand and power tools would be used to periodically remove debris from the log booms (e.g., accumulations after storms), addressing the concern expressed by the commenter. This would limit the potential for clogging of screens in the manner suggested by the comment. As further noted in the analysis of maintenance effects in Impact AQUA-2, debris removal would not be likely to negatively affect fish, which if in the vicinity would be startled and swim away. With respect to disposal of vegetation concerns expressed by the commenter, removal of debris (including vegetation) means freeing of the debris for it to continue moving downstream, as opposed to removal from the waterbody as implied by the comment. Therefore, there are no undisclosed disposal impacts because vegetation would remain in the waterbody as it would absent the project.
613-166	[ATT 19: Chapter 12.] - Fish screen analysis (applies to all Chapter 12 sections and species for discussion, analysis and impact conclusions of NDD fish screens). Large rafts of floating vegetation were observed at the proposed site of intake screen #3 just upstream of Randall Island. At the time of observation, 1:00pm on 11/21/22, the rafts of aquatic vegetation were moving upstream toward Sacramento due to the cycle of the tide and the reverse flows that happen at this proposed intake location. These rafts will colonize upstream of the intakes and create a persistent flow of aquatic vegetation debris both with normal downstream flows, but also in the observed reverse tidal flow conditions. This observation documents 2 problems the EIR failed to address, reverse and slack flow velocity at the proposed intake screen locations and the affects on fish screen and intake operation by floating aquatic vegetation.	It is unclear what the comment means by suggesting that rafts of vegetation will colonize upstream of the intakes and create a persistent flow of aquatic vegetation debris. To the extent that such debris occurs at the proposed north Delta intakes, it will be removed as described in the EIR; please see response to comment 613-165 for further relevant details.

Letter-Comment Number	Comment	Response
613-167	[ATT 19: Chapter 12.] - 89, 30 - "North Delta intake operations would meet fishery agency standards for approach velocity (0.2 foot 30 per second per USFWS criteria for delta smelt) and a minimum sweeping velocity of 0.4 feet per 31 second..." The analysis did not prove this conclusion at all. The analysis just assumed that the sweeping velocity across the screens would be 0.4'/second and did not disclose any intake screen operating rules in which slack or reverse flows occur at the intake screen intertidal locations. Without acknowledging that 0 velocity and negative velocity flow conditions occur at the intake locations and presenting operating rules in which intake operations would avoid these conditions, the EIR is fundamentally flawed, incorrect, incomplete and the EIR asserted conclusion of compliance is FALSE.	Please see responses to comments 613-142, 613-161, 613-162, 613-163, and 613-164, regarding sweeping velocity. These responses give details regarding the adequacy of analyses related to fish screen effects.
613-168	[ATT 19: Chapter 12.] - 90, 19 - "During design of the intakes, computational modeling would be undertaken, and field measurements/baffle adjustments would be done during commissioning/operations, both to demonstrate compliance with velocity criteria." By the EIR's own words here, the level of project description is conceptual and programmatic at best. Project level design is clearly proposed here to be completed at a later date and the impacts of the design to be assessed at a later date, presumably in a subsequent environmental document as the impacts of those designs are not analyzed, disclosed or mitigated in this EIR. Since this EIR analysis is incomplete and not at a project-level of analysis, NO construction or operating related permits should be issued based on this EIR.	The EIR includes sufficient detail for impact analysis because it describes the criteria which would be operated to; the description cited by the commenter illustrates that there would be additional work done to demonstrate compliance, which can only be done during later design stages and ultimately commissioning/operations. With respect to construction or operating-related permits, please see the discussion of project approvals, permitting processes, and other required actions in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues.

Letter-Comment Number	Comment	Response
613-169	[ATT 19: Chapter 12.] - 90, 23 - "The potential for juvenile salmonids to contact and be impinged on the screens of the North Delta intakes would be very limited. Experimental studies at the UC Davis Fish Treadmill facility found that Chinook salmon experienced frequent contact with the simulated fish screen but were rarely impinged (defined as prolonged screen contacts >2.5 minutes)…" The EIR uses a reference that bases fish injury from screen exposure as any contact of 2.5 minutes. The duration of exposure in the EIR, flawed as it is, ranges from 14.2 to 93.8 minutes (Table 12-23). Clearly the EIR conclusions from a paper that uses 2.5 minute duration as a basis for long term exposure and injury level is NOT applicable to the range of duration of exposure that even the flawed EIR analysis indicates are 5.7 to over 37.5 times longer. In our comments above, we identify that under slack and reverse tidal flow conditions that occur at the intake location, that fish screen duration of exposure could easily be 4 hours or greater which is much higher than the hypothetical calculations the EIR presented in Table 12-23 and the other related tables. For the EIR to use this UC Davis paper as a justification for finding no impact from durations of fish screen exposure which are many magnitudes greater than the reference is disingenuous and scientifically indefensible. The EIR must reference peer reviewed scientific papers that have a comparable order of magnitude duration of exposure in order to make any credible conclusion that no take is occurring from these extremely long durations of exposure.	The comment misunderstands that impingement as defined in the UC Davis studies was 2.5 minutes of prolonged screen contact. This is not the same measure as the EIR's analysis of screen passage time, which are the durations cited in the comment and are estimates of the time fish would pass the intake screens, which depends on the number of screens passed and the prevailing approach and sweeping velocity. As discussed in Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources, the UC Davis laboratory studies did not find impingement to be related to any variables examined (including approach and sweeping velocity) and impingement occurred rarely, with none of the few mortalities occurring during the studies having been related to impingement. Please see response to comment 613-146 regarding the north Delta intakes not diverting during slack or reversing flows.
613-170	[ATT 19: Chapter 12.] - 93, 2 The EIR analysis of juvenile entrainment at the south delta pumps only analyzes fish take that occurs from operations at the intake screens (louvers). There is fish salvage data from the intakes which can be modeled from determining potential changes in entrainment	The analysis of juvenile winter-run Chinook salmon cited in the comment includes predation-related effects in Clifton Court Forebay because the estimates are expressed as loss (i.e., salvage including multipliers for the estimates of fish lost as a result of predation, louver efficiency, and other factors). Salvage or loss are reasonable indicators of relative project effects

Letter-Comment Number	Comment	Response
	from proposed changes in operations. What the EIR failed to analyze is the much larger direct impact from south delta intake operations, those that occur from fish predation in Clifton Court Forebay. Of the fish that are drawn into Clifton Court Forebay by the south delta intake operations, only a small percent of the fish survive predation to become entrained in the intake. The EIR must include this predation-related portion of fish take associated with south delta intake operations. The EIR will remain incomplete in its analysis and mitigations until this other direct source of take is included.	because the analyses are always based on comparison of project alternatives to a baseline condition, i.e., existing conditions in this case. In addition, as described for winter-run Chinook salmon in the section cited by the commenter, the risk of winter-run Chinook salmon entrainment under existing conditions and all alternatives would be minimized by the inclusion of the various regulatory requirements from the existing regulatory requirements (e.g., take limits for number of winter-run Chinook salmon lost to entrainment at the south Delta export facilities from the National Marine Fisheries Service biological opinion).
613-171	[ATT 19: Chapter 12.] - 105, 31 "Several aspects of habitat suitability for winter-run Chinook salmon and the potential far-field effects of the project alternatives were examined: riparian and wetland bench inundation (juvenile rearing habitat); water temperature; Microcystis harmful algae blooms; and metals (selenium and mercury)." This EIR analysis is very incomplete. First, this list is missing adult immigration and juvenile emigration straying from altered tributary flows and proportional flows at tributary confluences, water temperature affects on straying and habitat suitability, and most importantly, dissolved oxygen concentration habitat suitability from increased frequency, duration and geographic extent of algal blooms resulting from project operations caused reduced frequency of freshening water flows.	It is unclear what the comment is referring to with respect to adult immigration and juvenile emigration straying from altered tributary flow. If the comment is referring to upstream tributaries, please see the discussion of upstream areas in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please see response to comment 613-151 regarding straying risk. As noted in that response, the Adult Straying section for winter-run Chinook salmon in Impact AQUA-2 identifies there would likely be no difference in potential straying for fish returning to the Sacramento River basin. Regarding water temperature and harmful algal blooms, please see response to comment 613-206. With respect to dissolved oxygen, please see response to comment 613-145.
613-172	[ATT 19: Chapter 12.] - Riparian Bench Inundation (all species) The EIR analysis of riparian bench inundation is missing a significant project impact. When riparian benches are dewatered due to project operations, the operations create a potential fish stranding event in which rearing juvenile salmonids mortality can be a significant. The EIR will remain	Please see response to comment 613-203 regarding additional information on analysis of bench inundation.

Letter-Comment Number	Comment	Response
	incomplete and deficient until this and the other missing impact analyses and mitigations are completed in a revised draft EIR.	
613-173	[ATT 19: Chapter 12.] - All comments above that may be specific to winter-run Chinook are also applicable to the sections of the EIR that address the other fish species analyzed.	Multiple fish species are analyzed in Chapter 12, Fish and Aquatic Resources. Different methods and impact mechanisms are used in Chapter 12 depending on the life stage, presence of species, and data available. Please see responses to comments throughout this letter on the specific comments related to specific species identified such as winter-run Chinook salmon (e.g., 613-141 through 613-171).
613-174	[ATT 19: Chapter 12.] - 134, 20: The impact analysis failed to include impacts to holding and spawning salmonids in the Feather River due to altered Oroville Operations. The EIR failed to present any credible disclosure or evidence that water operations and therefore flows and water temperature-related impacts to habitat quantity and suitability from the proposed project do not impact listed fish species in the Feather River downstream of Oroville Dam and Thermolito Afterbay. This comment applies to all listed and species of concern that occur in the Feather River. After this omission in the EIR is corrected, a revised draft EIR must be circulated.	The assertion that the Draft EIR fails to disclose why the project would have no impacts on listed fish species in the Feather River downstream of Oroville Dam and Thermalito Afterbay is not consistent with the content of the EIR. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for information about the analysis of upstream aquatic species, including aquatic species in the Feather River and other upstream waterways.
613-175	[ATT 19: Chapter 12.] - 134, 33: "it is concluded that the operations and maintenance impact of the project alternatives would be significant for spring-run Chinook salmon. Compensatory mitigation to be implemented for the winter-run Chinook salmon significant impact discussed above in Impact AQUA-2 (i.e., Mitigation Measure CMP: Compensatory Mitigation Plan, specifically CMP-25: Tidal Habitat Restoration to Mitigate North Delta Hydrodynamic Effects on Chinook Salmon Juveniles and CMP-26: Channel Margin Habitat Restoration for Operations Impacts on Chinook Salmon Juveniles [Attachment 3F.1, Table 3F.1-3]) would also be applied to spring-run Chinook salmon to mitigate	As noted in the comment and in the EIR, the channel margin mitigation is intended to mitigate flow-related effects to riparian and wetland bench habitat. This mitigation is not focused on mitigating near-field intake effects on migrating salmon, as the comment seems to suggest; rather, it is focused on potentially negative effects on the extent of bench rearing habitat. To the extent that migrating juvenile salmon use bench habitat during migration, the channel margin habitat restoration mitigation would also mitigate negative effects from reduced extent of bench rearing habitat to these migrating fish by providing the equivalent amount of restored channel margin habitat. With respect to near-field effects alluded to by the commenter, the EIR did not conclude these to be significant, but acknowledged uncertainty and includes associated fisheries studies and

Letter-Comment Number	Comment	Response
	hydrodynamic effects such as flow reversals in the Sacramento River at Georgiana Slough (CMP-25) and effects from reduced inundation of riparian/wetland benches as a result of NDD operations (CMP-26). The impact would be less than significant with mitigation." The EIR fails to provide ANY supporting rationale that these mitigations would result in a reduction of take from the intake screen operations that results in something less than significant. The proposed mitigations do not result in any kind of equivalency to the level of take. The screen operations result in direct mortality. The mitigations provide some small "gardening" projects that minimally increase habitat value for emigrating juvenile salmonids that a few of them may use in their emigration for only a few minutes of shelter (which has its own increase in juvenile fish predation). If the juvenile salmonids are actively emigrating in the thalweg, they will not use these inundated bench habitat enhancements at all. The sum total of proposed compensatory habitat enhancement is likely less than 10,000th of the total length of juvenile emigration path (considering both sides of the channel) so there is no measurable or even theoretical increase in juvenile emigration survival as a result from the proposed mitigation. So if there is mortality at the screens, but no concomitant increase in juvenile emigration survival from the mitigations, the proposed mitigation is not a mitigation at all with regards to a significant impact on the species. Mitigations MUST have some rationale provided in the equivalency of the quantity and type of impact vs the verifiable and justifiable beneficial offsetting affects of the proposed mitigation. This comment applies to all impact significance calls with mitigation in which the impact is based on direct or indirect mortality of the	adaptive management outlined in Chapter 3, Description of the Proposed Project and Alternatives, to address the uncertainty. The rationale for mitigation measures is generally provided in the CEQA conclusions for each numbered impact, such as in the example given in the comment for CMP-25 and CMP-26. Thus, for example, with respect to demonstration of mitigation effects, the EIR in the section of Chapter 12, Fish and Aquatic Resources, cited by the commenter cites evidence from studies conducted by Resource Management Associates (2020) for how changes in Delta geometry (including opening of leveed islands, analogous to the proposed tidal habitat mitigation restoration) affect hydrodynamics, which is the basis for the proposed mitigation. The extent of tidal habitat proposed for Mitigation Measure CMP, specifically CMP-25, has been added to the Final EIR Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources, based on hydrodynamic analysis conducted by California Department of Water Resources (2023). This clarification does not result in a new significant environmental impact or substantial increase in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit.

Letter-Comment Number	Comment	Response
	species and the mitigation does not have a corresponding magnitude impact and certainty on increased species survival.	
613-176	[ATT 19: Chapter 12.] - 140, 1: "The results of this analysis indicated that south Delta operations under the project alternatives generally would give similar through-Delta survival as existing conditions..." CEQA impact calls are based on comparisons of the project alternatives to the No Project Alternative. The comparison provided to the Existing Condition does not mean anything and is confusing to the reader. The analysis creates a false sense to the reader of no or deminimus impacts and is therefore misleading.	The comment suggests that CEQA impact calls should be based on comparison to the No Project Alternative as opposed to existing conditions. Please see the discussion of the CEQA environmental baseline in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Note that Appendix 12C, Fish and Aquatic Resources 2040 Analysis, compares the No Project Alternative under a 2040 scenario to the project alternatives under the 2040 scenario using modeling tools and methods appropriate for the evaluation of impacts on fish and aquatic resources; in Appendix 12C, modeling for the No Project Alternative under the 2040 scenario and project alternatives under the 2040 scenario incorporates assumptions regarding changes to hydrology and sea level rise as a result of climate change; this appendix shows that the relative difference between the project alternatives and No Project Alternative in the 2040 scenario is generally similar to difference between the project alternatives and existing conditions at 2020.
613-177	[ATT 19: Chapter 12.] - 143, 13 - "Maintenance of the North Delta intake facilities for each alternative would have very limited effects on the adjacent aquatic environment and hence very little potential for effects on fall-run/late fall-run Chinook salmon." This conclusion comes after analysis of DCC operations. The conclusion is unsupported by any description of the location, magnitude of area (acres per screen?), seasonal timing (sensitive life stage avoidance?), frequency of occurrence (annually?), type of operation (dredging, vegetation removal screens?), plan for salvage of fish caught in dredging or vegetation removal, disposal of dredged and salvaged materials., etc. The EIR conclusion of no impact with no supporting operations description or supporting rationale for the impact call are materially deficient and must be addressed in a revised DEIR.	The assertion that the Draft EIR lacks evidence to support its effects analysis for fall-run/late fall–run Chinook salmon is not consistent with the content of the EIR. The analysis for fall-run/late fall–run Chinook salmon operations and maintenance impacts in Impact AQUA-4 as cited by the commenter cross-references the impact analysis for winter-run Chinook salmon (Impact AQUA-2), wherein more detail is described for maintenance effects. Please see response to comment 613-142 regarding similar comments related to maintenance for winter-run Chinook salmon.

Letter-Comment Number	Comment	Response
613-178	[ATT 19: Chapter 12.] - 143, 26 - "Effects on San Joaquin and Mokelumne fall-run would not be negative relative to existing conditions." See comment 140-1. Comparisons of proposed project alternatives to Existing Conditions are not relevant for CEQA impact calls. All use and reliance upon impacts that did or did not occur in this false comparison cannot be used in the synthesis of impacts to make a CEQA impact call. This section and all other sections which made comparisons to the Existing Conditions and/or relied upon those comparisons for impact calls must be redone in a revised public draft EIR.	Please see response to comment 613-176 regarding information on CEQA impact determinations. Please see the discussion of the CEQA environmental baseline in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues.
613-179	[ATT 19: Chapter 12.] - 155, 2 - "The low population abundance of delta smelt (Appendix 12A) in recent years suggests that few delta smelt would be exposed to potential near-field effects of the north Delta diversion intakes, including entrainment, impingement, predation, and upstream passage restriction." The EIR fails to take into account changes in the population geographic distribution in response to altered flow regime from the proposed project and from climate change in the No Project. It is very likely that delta (and long fin) smelt geographic distribution will shift upstream in response to reduced Sacramento River flows from north delta intake project operations. Further, changes in water temperature, salinity gradient locations and turbidity from climate change will also predictably shift the delta and long-fin smelt population distribution upstream to occur much more frequently and in much greater numbers in the locations of the proposed project north delta intakes. The EIR claim of lack of population observation in the last few years at the intake locations under those selected few hydrologic conditions provides no compelling evidence of absence in the future no project condition. The geographic range of the delta smelt has	The comment suggests that the EIR fails to take into account changes in population geographic distribution because of reduced Sacramento River flows. As described in the analysis of upstream migration effects in Impact AQUA-6, previous analyses demonstrated that tidal surfing behavior typically employed by adult delta smelt would not allow upstream passage in the north Delta intakes region. River flow as a potential influence on delta smelt upstream migration was considered in the analysis of delta smelt occurrence upstream of Freeport Regional Water Authority Intake in Appendix 12B, Bay-Delta Methods and Results, which did not find river flow to be a statistically significant predictor of delta smelt occurrence; therefore, there is no evidence to support the comment's suggestion. As described in Chapter 3, Description of the Proposed Project and Alternatives, monitoring of abundance and distribution of listed species in the intake reach would be undertaken as part of the Operations Adaptive Management and Monitoring Plan. With respect to changes in smelt distribution related to climate change, such considerations are beyond the scope of the comparison to existing conditions. Regardless, although salinity may increase long-term, the project alternatives would be operated to maintain salinity objectives, therefore limiting the extent of potential changes. For example, the percentage of years with X2 less than 85 km at 2020 climate as discussed in Chapter 12, Fish and Aquatic Resources, is not greatly different from 2040 climate, as shown in Appendix 12C, Fish and

Letter-Comment Number	Comment	Response
	been defined as ranging up to the confluence of the Sacramento and Feather Rivers (DWR Oroville Facilities Relicensing EIR/S). The reasoning of the EIR for no or low take from intake screen operation due to the absence of delta and long fin smelt is flawed and indefensible, especially given the recent DWR Oroville EIR/S document which acknowledges delta smelt distribution far farther upstream than the location of the proposed north delta intakes. DWR must explain this huge change in conclusions of the geographic range of this fish species. This EIR's unsupported conclusion of low or no impact due to species absence must be withdrawn and the impact call and required mitigations revised in new public draft EIR.	Aquatic Resources 2040 Analysis. Changing tidal influence from sea level rise would not be expected to greatly change the need for delta smelt to undergo active swimming to migrate upstream in the north Delta intake vicinity, as presumably occurs under existing conditions. With respect to the comment's suggestion that there is a change in the EIR's characterization of delta smelt upstream distribution, the EIR is in fact consistent with previous documents: as noted in Appendix 12A, Environmental Setting Background Information, delta smelt have been found as far upstream as Knights Landing on the Sacramento River (upstream of the location mentioned in the comment). The key point made in the EIR's delta smelt impact analysis is that there would be low numbers because of the current population status and a low proportion of the population in any case.
613-180	[ATT 19: Chapter 12.] - 155, 15 - "The north Delta intakes could reduce the potential for migrating adult delta smelt to migrate upstream to spawning areas in the northern Delta based on replacement of low velocity nearshore habitat at the north Delta intake locations with fish screens and associated structures." Delta smelt utilize deep water habitat for migration and spawning. This EIR claim of nearshore habitat is flawed and not relevant to the impact discussion. Any reliance upon the relationship of delta smelt migratory movement and nearshore habitat is flawed and must be removed from the impact call synthesis.	The comment suggests that delta smelt utilize deep water habitat for migration and therefore would not occur in nearshore habitat. If true, this would lessen the potential for the negative effects noted in the EIR. However, as described in the EIR in the section cited in the comment, there may be the potential for effects because tidal surfing behavior observed elsewhere in the Delta would not allow upstream migration in the reach with the north Delta intakes, so active swimming is necessary and given downstream velocity would be most likely to occur near shore or near the river bottom. Although not relevant to this issue, the comment's suggestion that delta smelt spawn in deep water is not consistent with the conceptual model of the delta smelt life cycle ("sandy substrates in shallow areas") (Interagency Ecological Program Management, Analysis, and Synthesis Team 2015:100).
613-181	[ATT 19: Chapter 12.] - 155, 17 - "Previous analyses demonstrated that the tidal surfing behavior typically employed by adult delta smelt elsewhere in the Delta (Bennett and Burau 2015) would not allow passage upstream of the north Delta intakes because of the primarily downstream flow in the intake reach (ICF International 20 2016a:6-75)..." The	The comment misinterprets the EIR's discussion related to delta smelt upstream migration. The discussion in the section cited by the commenter notes that to migrate upstream, delta smelt would have to actively swim rather than tidally surf; the EIR does not suggest that delta smelt would not occur upstream of the north Delta intakes. Please also see responses to comments 613-179 and 613-180 regarding additional information on delta

Letter-Comment Number	Comment	Response
	documented geographic distribution of delta smelt generally accepted by all fisheries and water agencies as to occur above the I Street Bridge and in some recent DWR documents (Oroville EIR/S - see above) to the confluence of the Feather and Sacramento Rivers, belies the conclusions in the EIR cited papers. Although these 2 papers appear to support the position of the EIR, they are in conflict with all previous EIR an EIS document analysis of the accepted geographic range of this fish species.	smelt behavior, distribution, and habitat utilization.
613-182	[ATT 19: Chapter 12.] - 155, 25 - "Assuming that river velocity at Freeport is representative of river velocity near the north Delta intakes..." This is a flawed assumption. The magnitude of the intertidal influence on slack and reverse flows is substantially diminished at Freeport as compared to the 3 proposed north delta intake locations. This whole EIR is flawed due to the consistent omission and lack of acknowledgement of slack and reverse tidal flows at the intake locations. The EIR continues to "assume" as they have here, that the intakes will operate under an assumed sweeping velocity at the screens that will not happen for a number of hours each day under most flow conditions. This EIR assumption is provably false and its inclusion in the basis for the EIR analyses fundamentally corrupts all of the EIR analyses that incorporate this assumption. The EIR must do the project-level 3D flow velocity analysis at the locations of the screen, with the appropriate level of design detail of the screens and supporting structures, to PROVE that the minimum sweeping velocities are being achieved at the screens under all flow ranges and hourly intertidal operations of the north delta intakes.	In the particular case referenced by the commenter, the assumption that river velocity at Freeport is representative of river velocity near the north Delta intakes is conservative given that this pertains to delta smelt upstream swimming probability past the north Delta intakes. With respect to the portion of the comments related to assumptions regarding sweeping velocity, please see responses to comments 613-142, 613-161, 613-162, 613-163, and 613-164.

Letter-Comment Number	Comment	Response
613-183	[ATT 19: Chapter 12.] - 156, 8 A 7-8% take of a listed species is a significant impact which must be fully mitigated.	The comment is referring to potential effects on delta smelt survival from the north Delta intakes assessed in Impact AQUA-6. Note that this potential effect would only be applicable to the small subset of the delta smelt population moving upstream as far as the north Delta intakes and of those, only those individuals passing immediately adjacent to the fish screens (i.e., this would not be 7%–8% take of the whole species as implied by the commenter). As noted later in the analysis cited by the commenter, there is uncertainty in the potential for effect because of factors such as fish using suitably low velocity during limited time periods, fish using the opposite riverbank or on the riverbed, or velocity refuge within the screen structure. As further described in Impact AQUA-6 analysis, uncertainty in the potential effects on upstream passage of adult delta smelt would be addressed by field studies involving methods such as beach seining or environmental DNA. The analysis concluded that the impact was less than significant and therefore did not require mitigation. (The comment's suggestion that the impact must be fully mitigated appears to be based on CESA requirements for full mitigation, whereas the analysis is part of an EIR under CEQA, and appropriately identified as less-than-significant impact.)
613-184	[ATT 19: Chapter 12.] - 156, 25 --"...2D hydraulic modeling conducted to illustrate potential north Delta intake effects..." 2D modeling is not sufficient for a project-level impact analysis for the construction and operation of a fish screen intake. A project level analysis must be site specific, based on actual site bathymetry and conducted using 3D modeling of flow velocities. The project must not be considered for award of construction-related permits until the appropriate project-level analysis and mitigations are completed.	The 2D modeling referenced in the comment provides substantial evidence of the occurrence of low velocity habitat potentially available for delta smelt upstream migration. Please see response to comment 613-153 regarding additional modeling to be done during project development.
613-185	[ATT 19: Chapter 12.] - 157, 38 - "...the cylindrical tee fish screens and their associated manifolds, as well as the support piles for the log boom structure may provide velocity refuge for upstream migrating adult delta smelt occurring near the	The comment suggests that there may be predatory fish habitat created by the fish screen structures that could affect delta smelt. This potential impact is analyzed in Impact AQUA-6, with relevant literature suggesting limited potential for negative effects. As described at the end of the

Letter-Comment Number	Comment	Response
	intakes, thereby reducing the extent of the potential negative effect." It is FAR more likely that these project operations created velocity refuges will be utilized by predator fish, so any reduction in fish entrainment from the velocity refuge would be greatly exceeded by the increase in loss to fish predation. The DEIR impact synthesis and conclusion must be revised to integrate this perfectly predictable increase in loss of listed fish species due to the proposed project and appropriate mitigations be defined and disclosed in a revised DEIR. DWR must justify its departure from the Fish Intake Screen Steering Committee recommendations from the BDCP and WaterFix that utilized flat screens. The recommendation for flat screens was based on a panel of leading experts on fish screens. What now has transpired that makes the selection of cylindrical screens superior when under previous projects these were considered to be inferior to the flat screen design? DWR must disclose the rational for this change from what was recommended by their own panel of convened experts.	section, field studies would be undertaken to corroborate the literature-supported conclusions reached in the EIR concerning predator association with the north Delta intakes and to inform the need for adaptive management (described further in Chapter 3, Description of the Proposed Project and Alternatives). With respect to differences in fish screen design between Delta Conveyance Project and previous efforts, reconsideration of various factors (including more recently available literature) indicated that compared to flat plate fish screens the cylindrical screens offered benefits such as reduced in-water footprint and better operations and maintenance performance; the available literature cited in the EIR did not suggest greater predation risk with cylindrical screens, but as noted above there would be field studies undertaken to inform the need for adaptive management.
613-186	[ATT 19: Chapter 12.] - 157, 8 - "Statistical analysis of the Freeport Regional Water Authority intake in the north Delta did not find evidence that the intake reduced upstream occurrence of delta smelt during and following construction, in comparison to the pre-construction period." So the EIR does admit that delta smelt do have geographic distribution upstream of the NDD. This is in direct conflict with the previous EIR claim in Appendix 12B, page 144, line 2 in which the EIR claimed evidence that delta smelt did not range up to the NDD and therefore impact analysis of the smelt from the NDD did not need to be considered.	The statement cited in the comment is not in direct conflict as suggested by the commenter; the EIR does not suggest that delta smelt do not range up to the north Delta intakes. Please see responses to comments 613-179, 613-180, and 613-181 for further discussion of this issue.

Letter-Comment Number	Comment	Response
613-187	[ATT 19: Chapter 12.] - 159, 3 - "...the increase in in-water structure would be small and a relatively minor increase to the limited extent of in-water structures within the Delta..." This is a disingenuous comparison. This is a new impact that occurs only because of the proposed project. Any increase in predation from the project is a significant impact. This predation loss is particularly bad as the fish are even more vulnerable due to the intake flows slowing their swimming relative to the current so they have an increased duration of exposure to this increased predation risk - both project caused.	The analysis cited in the comment is consistent with the CEQA significance criteria in terms of assessing factors such as whether there is a substantial reduction in habitat, for which the limited extent of project-related habitat change relative to the species' overall distribution is accurate. This is consistent with the peer-reviewed reference cited in this context and reflects that any change in low-predation-risk habitat within the Delta as a result of the north Delta intakes would be small given the overall extent of habitat in the Delta. Please also see response to comment 613-185 describing other information considered in this analysis.
613-188	[ATT 19: Chapter 12.] - 159, 12 - "The north Delta intakes would be screened to fishery agency standards, including 0.2-ft/s approach velocity for delta smelt…" The statement here is wrong. The screens are not to a standard for approach velocity, it is that the screen area AND operations of that screen must result in an approach velocity that is compliant with the fish screen criteria. The DEIR never discloses or justifies the operations of the NDD and how those, with the complexities of flows in their intertidal location, will result in compliance. The EIR just again and again assumes that however the intakes are operated, they will comply. This is not adequate and must not be rewarded with consideration of construction or operating-related permits.	The assertion that the EIR does not disclose or describe operations of the north Delta intakes or the potentially significant environmental impacts associated with operations is not supported by the content of the EIR. Specifically, Chapter 3, Description of the Proposed Project and Alternatives, describes operations; Chapter 4, Framework for the Environmental Analysis, describes the framework for the environmental analysis; and Chapters 5 through 32 evaluate changes associated with operating the north Delta intakes on different resources, with Chapters 7 through 32 providing impact determinations related to CEQA. Please refer to responses to comments 613-7, 613-83, 613-97, and 613-112 regarding the appropriate approach and scope of analysis contained in the EIR based on the project description and the disclosure of impacts throughout the EIR. The statement quoted by the commenter is correct and consistent with the description of operational criteria for the proposed north Delta intakes described in Chapter 3, Description of the Proposed Project and Alternatives. As the commenter notes, approach velocity is a function of screen area and operations, with the design of the fish screens taking into account the area of screen needed given the required maximum opening size (1.75 millimeters) and maximum diversion rate for each screen unit (100 cubic feet per second). As described in Chapter 3, velocity compliance would be informed by real-time hydrological data measured at the intake

Letter-Comment Number	Comment	Response
		locations. With respect to construction or operating-related permits, those are separate processes from CEQA compliance (please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues).
613-189	[ATT 19: Chapter 12.] - 159, 31 This discussion (it is not an analysis) fails to take into account that by 2040, with climate change that the distribution of the delta smelt may likely shift farther upstream in response to those changed conditions and therefore a much larger proportion of the population be exposed to this entrainment take. Further, the discussion fails to integrate that the portion of the species that exhibits the life history behavior for utilizing this farther upstream habitat may very well be an essential segment of the population that more successfully adapts to future climate change and therefore is a more important part of the population for the future species survival.	Please see response to comment 613-179, which addresses the same issue raised by the commenter.
613-190	[ATT 19: Chapter 12.] - 162, 1 - "...there would be similar levels of delta smelt entrainment risk under the project alternatives and existing conditions." The comparison to existing conditions is not a CEQA relevant comparison. These EIR comparisons of the proposed project to the existing conditions must be removed as they are confusing and obscure the CEQA required comparisons to the No Project. The "Existing Conditions" will no longer even exist at the time when the project would initiate operations. The change or lack of change of impact in comparison to the existing condition must not be included in the impact synthesis to determine significance of impact or the need for mitigation.	Please see response to comment 613-176 regarding discussions on CEQA required comparisons. Please see the discussion of the CEQA environmental baseline in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues.
613-191	[ATT 19: Chapter 12.] - 165, 10 - "The north Delta intakes would entrain sediment..." The EIR analysis of the frequency of inundation of sediment	As described in Impact AQUA-6, the overall estimates of sediment entrainment by the north Delta intakes are 4%-5% depending on alternative. The relatively small percentage of sediment entrained by the north Delta intakes indicates that the project alternatives would likely have

Letter-Comment Number	Comment	Response
	benches downstream of the intakes (12B.6) failed to take into account the reduced sediment load from the NDD operations. The reduction in sediment load from project operations results in a change in the equilibrium of sediment deposition and erosion that maintain the current sediment bench habitat. With the reduced sediment from the proposed project, there is reduced deposition on the benches and therefore there will be a reduction in the quantity and quality of this high value habitat that the EIR failed to disclose, discuss, analyze or mitigate.	limited impacts on suspended sediment and turbidity for delta smelt. Furthermore, should the effects of the type suggested in the comment occur, Impact AQUA-6 concludes that they would not be significant and would be further addressed through an adaptive management program.
613-192	[ATT 19: Chapter 12.] - 165, 13 The EIR fails to identify how much sediment is collected at the intake, how it is collected and how and where it is disposed of. It does not address if there are contaminants that are hazards in the EIR.	Details of sediment collection methods, quantities, and method of disposal are provided in Chapter 3, Description of the Proposed Project and Alternatives (see the discussion of sedimentation basins and drying lagoons). Analysis of hazards related to contaminants in the sediment is presented in Impact HAZ-2 of Chapter 25, Hazards, Hazardous Materials, and Wildfire, of the EIR and impacts would be less than significant.
613-193	[ATT 19: Chapter 12.] - 165, 30 A plan to develop a plan is not a compensatory mitigation that can be relied upon. The disclosure of this information is material.	The line referenced in the comment does not pertain to development of a plan related to compensatory mitigation; the line references adaptive management. As cross-referenced by the EIR in the section cited by the commenter, further information is provided in the CEQA conclusion for Impact AQUA-6, which describes the impact as less than significant and notes that Environmental Commitment EC-15 would include study and adaptive management related to entrainment of sediment by the north Delta intakes; the details of this are disclosed in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions.
613-194	[ATT 19: Chapter 12.] - Fish screen maintenance operations for Zebra Mussel. The screen cleaning operation described in the DEIR would not successfully remove zebra mussels. Since this invasive species is likely in the delta already and certainly will be by 2040, the DEIR must describe how the screens would be cleaned to remove the zebra mussels. The operation will	Based on available information, zebra mussels are not in the Delta already, having only been verified in two locations within California (in the Pajaro River drainage) (U.S. Geological Survey 2023). The first detection was in 2008 and there have been no reports of the species outside of the Pajaro River drainage; therefore, it is not certain that the species will spread to the Delta by 2040 as suggested by the commenter. Note that the state of

Letter-Comment Number	Comment	Response
	certainly require removal of the screens (they cannot be removed with any level of pressure washing) which is an operation which could result in take of listed species that is not covered or mitigated in the DEIR. The DEIR must further describe how the cleaned mussels would be disposed of such that the infestation is not spread to other water bodies. Equipment sanitation and wash water disposal must also be addressed. These are material omissions of operating description and resource impacts which must be addressed in a recirculated DEIR.	California implements several infestation prevention efforts (Division of Boating and Waterways 2023). In the event of invasion of zebra mussels within the Delta, it is unclear why the commenter suggests that removal of fish screens could result in take of listed species. If the implication is that the screens would be severely fouled and cause increased approach velocity, actual experience in mussel infested waters does not support this conclusion. The proposed screen brushing system has proven highly effective in controlling mussel fouling and the project includes provisions to allow all screens to be pressure washed at least every three months. Three months is a suitable period to be able to remove settled veligers before they advance to a more problematic stage in their growth. If the implication is that portions of the intakes would be unscreened during cleaning or repair and continue to divert water and therefore could entrain fish, this is incorrect; as described in Impact AQUA-2 in Chapter 12, Fish and Aquatic Resources, when the screen units are lifted up to the deck for cleaning, solid panels would be installed behind the screen to seal off the unit's intake area from diversions so that there would be no potential for entrainment. Further, several spare screens are provided for each intake to help avoid the need to seal off portions of the intake during cleaning or repairs. While unanticipated, should there be a need to address future infestations of mussels in a manner other than that described for screen maintenances in the EIR or project permits, this would be addressed with necessary environmental compliance and permitting at that time.
613-195	[[ATT 19: Chapter 12.] - 178, 4. The reliance upon the Water Quality assessment of a less than significant impact is not a valid basis to support the same conclusion with respect to fisheries resources. A change in a condition for one resource, water quality in this case, may be less than significant, but at the same time, significant for another resource, i.e. fisheries, because the resource has different resource sensitivities. In this case water quality impact might not be significant for that resource, but the alteration of the suitability of a designated	The cross-reference in Chapter 12, Fish and Aquatic Resources, to Chapter 9, Water Quality, Impact WQ-14 for the assessment of cyanobacteria harmful algal blooms and potential impacts on fish is appropriate because the analysis for water quality in Chapter 9 deals with the potential impact on these blooms and is not focused solely on effects to human beings, for example. The environmental setting in Chapter 9, Water Quality, describes that the toxins related to these blooms can affect fish and aquatic resources, illustrating the broader context and implications for fish. The factors analyzed in Impact WQ-14 are those affecting harmful algal blooms

Letter-Comment Number	Comment	Response
	critical habitat for a listed fish species is VERY significant. Therefore, the rational provided in the EIR for no significant impact is incomplete, inaccurate and unsupported. The analysis must be redone relying upon the sensitivities of the fisheries resources, not those of the water quality impacts.	and therefore are appropriate for consideration in Chapter 12, Fish and Aquatic Resources, with the impact found to be less than significant.
613-196	[ATT 19: Chapter 12.] - 178, 8. "The increase in the proportion of San Joaquin River water entering the Delta because of less south Delta exports under the project alternatives relative to existing conditions would be expected to increase the selenium concentration in Delta water because the San Joaquin River is relatively high in selenium." This is correct. It is also in direct conflict with the conclusion that the project would not result in any significant increase in algal blooms. The San Joaquin River carries a significant nutrient load. As a result, there is a chronic and well documented algal bloom and Dissolved Oxygen (DO) sag where the San Joaquin flow hits the Stockton Deep Water Ship Channel. As the proportion of flow of the San Joaquin River is effectively increased by the reduced south delta intake operation, the frequency, severity and geographic extent of the algal bloom and DO sag can logically be anticipated to be greater under the proposed project condition as compared to the No Project. The DEIR must complete a thorough analysis of the impacts of the proposed project and operations on dissolved oxygen habitat suitability for fisheries resources.	With respect to dissolved oxygen, please see response to comment 613-145. Specific to the Stockton Deep Water Ship Channel, this was analyzed in Chapter 9, Water Quality, Impact WQ-9, wherein it was noted that an approved TMDL to control oxygen-demanding substances has been approved and aerators provided by the Port of Stockton have improved dissolved oxygen conditions; in addition, the project alternatives would not result in changes in San Joaquin River inflows relative to existing conditions that would make these impairments discernibly worse. With respect to harmful algal blooms, please see responses to comments 613-195 and 613-206.
613-197	[ATT 19: Chapter 12.] - 179, 13. The impact synthesis is incorrect as the underlying analyses were flawed - see related previous comments. Due to the flawed, incorrect and incomplete impact analysis, the impact call is incorrect.	Please see responses to the previous comments related to delta smelt, including 613-104, 613-141, 613-142, 613-143, 613-147, 613-150, 613-179 through 613-191. These provide rationale as to why the impact was concluded to be less than significant with mitigation.

Letter-Comment Number	Comment	Response
613-198	[ATT 19: Chapter 12.] - Proposed Project operations changes upstream flows: The proposed project would alter the release timing and magnitude from the Oroville facilities. Those altered releases as well as the operation of the NDD [north Delta diversions] and the alteration of the south delta diversions all alter the proportion of tributary flows at each confluence from Oroville through the delta and to the bay. Altered flow proportions alter the rates of fish straying on juvenile emigration as well as adult immigration of all migratory fish species. The EIR failed to analyze this impact as well as the resulting fish mortality and genetic introgression.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for information about the analysis of upstream aquatic species, including aquatic species in the Feather River and other upstream waterways. As described in this Common Response, changes in flows upstream of the north Delta intakes would either not occur or are relatively limited. With respect to the Feather River, the project alternatives would not substantially affect any species in the Feather River relative to existing conditions or the No Project Alternative. Finally, as described in Common Response 1, as well as Common Response 3, Alternatives Development and Description, analysis of potential effects of flows on aquatic species in the Delta are reported in Chapter 12, Fish and Aquatic Resources, under impact headings for each species inhabiting the Delta. Given the above, the EIR fully evaluates the appropriate impact mechanisms on fish and any potential changes in habitat within the appropriate study area for fish and aquatic resources.
613-199	[ATT 19:] Appendix 12B - 1, 20. "…preliminary calculations for this effects analysis suggested that these equations did not perform well for the lengths of screen contemplated for the north Delta diversions (NDD)." Yes, the length of the treadmill used to develop the calculation is not at all representative of the magnitude of the length of the proposed NDD screens. Therefore this entire analysis is fundamentally flawed and must be reassessed with a methodology that is at least rationally comparable to the proposed project.	The method used here represents the best available science for fish screen interactions. The portion of the analysis cited in the comment did not perform well and so was not used, as noted; there is no alternative method available. The analysis is reasonable because as described in Chapter 12, Fish and Aquatic Resources, the available studies suggested minimal risk from near-field effects, but fisheries studies and, if needed, adaptive management are proposed to address uncertainties.
613-200	[ATT 19:] Appendix 12B - 1, 27. Assumptions used in the DEIR for sweeping velocity were never explained or justified. This is a material omission in disclosure of methods so the EIR must be revised and recirculated.	Sweeping velocity calculations are provided for a range of sweeping velocity values, ranging from 0.4 feet per second (the minimum at which diversions could occur, per the description of operations criteria provided in Chapter 3, Description of the Proposed Project and Alternatives) up to higher values that are generally representative of velocity that could occur based on DSM2-HYDRO modeling. In addition, the project sweeping and

Letter-Comment Number	Comment	Response
		approach velocity requirements are consistent with fish and wildlife agencies guidelines to minimize effects to sensitive species.
613-201	[ATT 19:] Appendix 12B - 1, 27. The intakes are in intertidal zones, so sweeping velocity assumption used in the calculation fails to take into account the 0 and negative flow velocities that would fundamentally alter the screen exposure duration.	Please see response to comment 613-161 regarding flow velocities and analyses related to fish screen near-field effect.
613-202	[ATT 19:] Appendix 12B - 1, 29 - "SEE = 6.56" The term "SEE" is never defined, so the whole equation is meaningless as a disclosure.	Definition of the term has been added to the Final EIR; note that this was defined in the source paper referenced and does not affect the calculations presented in the EIR.
613-203	[ATT 19:] Appendix 12B - 12.B.6 Bench Inundation. The methodology calculates shallow water riparian habitat based on stage elevation changes below the NDD. What the EIR analysis fails to address is inundation events which cause fish stranding. The EIR analysis was done using 15 minute data from DSM2. The EIR method used accumulated a "habitat value" based on the combination of inundation duration and depth suitability. This is only part of the impact. Most of these inundated benches are near or at 0 slope which means that with every flow fluctuation inundation and dewatering of these benches, there is take from juvenile fish stranding. The EIR had the data to analyze the fish stranding by looking at the number of dewatering events on the bench habitat areas. Fish stranding which results in direct fish mortality and take is far more important an impact to analyze than the creation of some riparian habitat. The EIR must utilize this information which is already available, to analyze fish stranding on riparian benches from the proposed project.	The comment suggests that inundated bench slopes are near or at zero slope; in fact, the available slope data for the benches analyzed in the EIR indicate slopes are mostly 10:1, with a range from 6:1 to 50:1. This compares with around 1,000:1 to 10,000:1 slope in the Yolo Bypass (Sommer et al. 2005:1495), which may be more the type of slope that the commenter envisages. Restored habitats are designed and built such that grading is appropriate to prevent stranding in areas with tidal or seasonal water elevation changes (National Marine Fisheries Service 2021:30), indicating that the risk of stranding as a result of operations suggested by the commenter would be minimal, at most.
613-204	[ATT 19:] Appendix 12B - 142, 2 - "…both flood and ebb tide flows are usually moving downstream in the Sacramento River where the proposed NDDs would be built." This gross	With respect to the commenter's suggestion that flood and ebb tide flows are usually downstream and that this is unsupported by information presented in the EIR; in fact, later in the section cited in the comment,

Letter-Comment Number	Comment	Response
	description of tidal flow characteristics at the NDD is inaccurate, misleading and unsupported by any calculation presented. The commonly accepted geographic distribution of the delta smelt to the I street bridge in Sacramento based on survey catch data belies the claim made by the EIR that the smelt do not make it as far upstream as the NDD. Further, with altered flow conditions in the future, the adaptation of the geographic range of the smelt cannot be discounted that it will not range farther upstream in the future in greater numbers that it currently does. Just because the flow is in the downstream direction the majority of the time under a range of flow conditions does not mean you can ignore the impacts caused by the reverse flows that routinely do occur at the NDD locations. This entire EIR suffers from the gross and inaccurate characterization of reverse flows at the NDD. The EIR must be revised to disclose the magnitude, duration and frequency of slack and reverse flow conditions at the NDD and a full analysis of the implications of those flow conditions on fish passage, fish take and other impacts.	there is a figure describing the cumulative frequency distributions of estimated swimming velocity of adult delta smelt in the Sacramento River by hour: this figure is based on maximum sustainable swimming speed (0.91 feet per second) minus downstream river velocity and shows that around 90% or more of the time the net delta smelt swimming velocity is downstream, i.e., river velocity is mostly at least 0.91 feet per second downstream during adult delta smelt migration months, supporting the general statement that flood and ebb tide flows are usually moving downstream. With respect to the comment's specific issues regarding delta smelt distribution, please see responses to comments 613-179, 613-180, and 613-181, which explain that the EIR does not claim that smelt do not occur as far upstream as the north Delta intakes. Analysis of effects of the north Delta intakes related to fish passage and potential for entrainment or impingement in the EIR appropriately accounts for sweeping velocity, which must be at least 0.4 feet per second downstream before diversions occur (see Chapter 3, Description of the Proposed Project and Alternatives).
613-205	[ATT 19:] Appendix 12B - 143, 45 - "...because at the minimum channel velocity at which diversions were assumed to be allowable in the operations..." This is not a valid assumption unless there are NDD diversion operating rules as part of the proposed project. Without those being part of the project description, this is an indefensible and meaningless assumption which invalidates all of the analysis which rely upon this assumption.	This comment is referencing the 0.4 feet per second sweeping velocity, which is an operating criterion of the north Delta intakes, as described in Chapter 3, Description of the Proposed Project and Alternatives. Consequently, this and other analyses based on this assumption are appropriate.
613-206	[ATT 19:] Appendix 12B - 12B.12 The DSM2 particle tracking model was used for delta smelt larval entrainment. This same model data set can be used to analyze the impacts of the proposed project on the reduction in the frequency, magnitude	The comment focuses on factors related to dissolved oxygen. Please see response to comment 613-145 related to dissolved oxygen. With respect to nutrient loads and algal blooms, these were analyzed in Impacts WQ-7 and WQ-14 in Chapter 9, Water Quality, and the project alternatives would

Letter-Comment Number	Comment	Response
	and geographic extent of refreshing flows in the central, eastern and south delta from the operation of the NDDs. This analysis of residence time of water in the delta from project operations is critical to evaluating accumulation of nutrient loads, increase in water temperature, algal blooms and dissolved oxygen crashes. Dissolved oxygen suitability of designated critical fish habitat could easily have been included in the EIR, but the EIR instead confined their discussion of DO suitability and proposed project impacts to a subjective hand waving exercise that fails to meet the CEQA requirement to use best available science. The EIR must be revised and recirculated to address this critical DO analysis omission.	have less-than-significant impacts, with analyses including the use of DSM2 for residence time, consistent with the fundamental suggestion in the comment (although note that DSM2-QUAL as opposed to DSM2-PTM was used, as the former is the more appropriate for this type of analysis). With respect to water temperature, the analyses conducted in Chapter 12, Fish and Aquatic Resources, of the EIR showed limited potential for negative effects from the project alternatives because there was no difference in modeled water temperature compared to existing conditions (see discussion in the subsection titled Water Temperature in Impact AQUA-2).
613-207	[ATT 19:] Appendix 12B - Figure 12B-9.7 Note that no sampling occurred in the Sacramento River occurred above the confluence of Cache Slough. The lack of delta smelt distribution in the region near the NDDs is not supported by this data because no sampling occurred near those locations.	The comment is presumably referring to the figure in Chapter 12, Fish and Aquatic Resources, titled Mean Annual Percentage of Suspended Sediment in the Sacramento River at Freeport Entrained by the North Delta Diversions by Water Year Type and Total Percentage Entrained Over Full CalSim Modeling Period (Water Years 1922–2015). This figure is not used to make inferences regarding the distribution of delta smelt near the north Delta intakes. Such inferences are made based on other data described in the North Delta Exports section of Impact AQUA-6.
613-208	[ATT 19:] Appendix 12C - 1, 16 - "Analysis of the No Project Alternative at 2040 conditions relative to existing conditions is provided in Chapter 12, Fish and Aquatic Resources." No, the analysis presented in chapter 12 was mostly based on comparisons of the project and alternatives to the Existing Conditions, which as commented previously, is not relevant to CEQA requirements. If the 2040 No Project comparisons are all supposed to be in Chapter 12 for each impact topic, then they are missing from the EIR.	Comparison of the No Project Alternative to existing conditions is provided in Chapter 12, Fish and Aquatic Resources; this is the final section under each of the Impacts AQUA-2 through AQUA-19. Please see response to comment 613-176 regarding comparison of the project alternatives to existing conditions and the No Project Alternative.

Letter-Comment Number	Comment	Response
613-209	[ATT 19:] Appendix 12C - 29, 9. The comparison is between [year] 2020 existing conditions to the [year] 2040 No project. This is somewhat informative to help describe the nature of the differences between the 2 baselines. However, the CEQA required comparison is the Proposed Project and Alternatives to the No Project. It appears, very confusingly, that the EIR has incorrectly compared the Proposed Project and Alternatives to the 2020 Existing Condition for its impact calls in Chapter 12 and then relies upon description of the difference between the Existing Condition to the No Project. Further, the impact analysis in Appendix 12C of the Proposed Project and Alternatives to the 2040 No Project do not appear in the Chapter 12 synthesis and discussion of the impact calls. The 2-step comparison the EIR has used in some cases is incorrect to satisfy CEQA's requirements. The project and alternative comparisons must be done directly to the No Project, not to the existing condition which is then compared to the No Project as this EIR has done. The impact synthesis and impact calls must be based on the No Project comparisons, not the Existing Condition as has been done in chapter 12. This is a global comment and criticism of the EIR that applies to the entire document where impact comparisons were not made directly against the No Project condition, not just this one impact discussion.	Please see response to comment 613-176 regarding comparison of the project alternatives to existing conditions and the No Project Alternative.
613-210	[ATT 19:] Chapter 31 Growth Inducement - 1, 20 "...most growth-inducing effects are characterized as indirect." That is correct, but fisheries chapter 12 indicated that all of their indirect project impacts would be covered under chapter 31 Growth Inducement, see related comment under Fisheries Chapter 12. This is obviously incorrect as fisheries related impacts indirect or not are not related to growth inducement.	Indirect impacts on fish were evaluated in Chapter 12, Fish and Aquatic Resources. For example, effects on Delta flows and resulting flow-survival effects were assessed for species such as winter-run Chinook salmon in Impact AQUA-2, and on delta smelt and longfin smelt prey resources in Impacts AQUA-6 and AQUA-7. The incorrect reference to Chapter 31, Growth Inducement, indirect impact discussion has been deleted in Chapter 12. It is unclear what the comment is alluding to with respect to

Letter-Comment Number	Comment	Response
	Since the Growth Inducement chapter correctly does not address fisheries indirect impacts such as genetic introgression of fish runs from project induced changes in relative tributary flow relationships, then the fisheries chapter has completely failed to address the CEQA required aspects of indirect impacts to fisheries resources in their impact significance calls.	genetic introgression of fish runs from project-induced changes in relative tributary flow; if this is meaning the potential for salmonid straying as a result of differences in Sacramento River versus San Joaquin River flow, this is analyzed in Chapter 12, e.g., for Sacramento River basin-origin fish in Impact AQUA-2 (see Adult Straying section), for San Joaquin River basin-origin fish based on a quantitative analysis using relationships from Marston et al. (2012), and for Mokelumne River-origin fish in Impact AQUA-4 based primarily on Delta Cross Channel gate operations. None of these analyses suggested the potential for greater straying under the project alternatives compared to existing conditions.
613-211	[ATT 19:] Historical SWP deliveries: The chapter's discussion of historical deliveries to SWP service areas provides some context, but the CEQA impact analysis requires the assessment to be based on a comparison of the Proposed Project and Alternatives to the No Project. The No Project with climate change should show a reduction in water deliveries compared to the existing condition, therefore the Proposed Project and Alternatives must have even a greater increase in deliveries than the 12- 15% presented in the table 31-2 comparison to existing conditions. The DEIR growth inducement impact analysis must be redone to the CEQA required comparison to the No Project.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA environmental baseline. The CEQA environmental baseline does not need to be the No Project Alternative and can be different from the No Project Alternative. Chapter 31, Growth Inducement, performs the correct comparison between the CEQA environmental baseline and the project alternatives.
613-212	[ATT 19:] - Table 31-2 The comparison of the proposed project to Existing Conditions is not CEQA relevant except for context. The 12%-15% increase in SOD [south of Delta] SWP deliveries is obviously very significantly growth inducing. The impacts of this growth inducement must be mitigated in this EIR.	Please see response to comment 613-211 regarding the required comparison between the CEQA environmental baseline and the project alternatives. Chapter 31, Growth Inducement, evaluates inducing substantial unplanned population growth in an area, either directly or indirectly, such that additional facilities would need to be established to support such growth. This evaluation is focused on Delta Conveyance Project as a project itself, per CEQA requirements to "discuss the ways in which the proposed project could foster economic or population growth, or the construction of

Letter-Comment Number	Comment	Response
		additional housing, either directly or indirectly, in the surrounding environment." (CEQA Guidelines, § 15126.2(e).) It appropriately identifies direct and indirect growth that could occur as a result of construction or operation of each alternative. As described in Chapter 31, the increase in potential SWP annual average water supply would act as a water stabilization source as it would restore previously contracted amounts. The project would restore amounts of water that agencies have previously received that have been reduced due to regulatory requirements or operational agreements. The analysis represents the baseline accurately and quantifies the amount of water that would be restored under operation of the alternatives. It is part of the volume of water that falls under existing water-service contracts but has not been reliably delivered or received because of the aforementioned regulatory and operational agreements. Finally, the change in SWP water deliveries attributable to the Delta Conveyance Project should also be placed in context of being divided among the Delta Conveyance Project participating water agencies, further muting potential growth related effects.
613-213	[ATT 19:] - Proposed Project Created Excess Capacity that Facilitates New Water Transfers The NOP project description claimed the project would create the capacity for water transfers above the current SWP system capacity for water deliveries and that the impacts of those additional water deliveries would be addressed in this DEIR. Analysis of this DEIR did not discover the location of any analysis of water transfer capacity or impacts. Logically those water transfers from additional capacity created by the project would be growth inducing and would be addressed in this chapter if indeed additional water transfers or water deliveries were created by this project. Seeing as no additional water transfers or deliveries were discussed as Growth Inducing in this DEIR, we can only conclude that NO additional water transfers or deliveries above the current no project SWP are covered under	Please see response to comment 613-212 regarding the results of the growth inducing assessment conducted in Chapter 31, Growth Inducement, and how the change in delivers were treated in the analysis. Water transfers are performed between willing buyers and sellers and DWR's role would be limited to conveying the water through facilities depending on the transfer. As described in Appendix 3H, Non-Project Water Transfer Analysis for Delta Conveyance, water transfers can occur within a year and between years and have done so between 1995 and 2020. DWR incorporated information from various documents regarding water transfers, including documents that evaluated groundwater substitution, crop idling, and reservoir releases, which are typical examples of activities that occur during water transfers. Potential changes to the system during a water transfer are described in Appendix 3H. As disclosed in the appendix, even though Delta Conveyance Project may add additional

Letter-Comment Number	Comment	Response
	this EIR or would allow permits for future additional water transfers or delivers based on this DEIR. If the analysis of increased capacity for water transfers is included in the FEIR, this would be a material change and require recirculation of the EIR for public comment.	export capacity, it is unlikely to increase the amount of water transfers, since the current capacity is not fully utilized. Finally, while the proposed project is not anticipated to increase the amount of potential future water transfers, DWR notes that transfers that utilize SWP facilities require CEQA compliance by public agencies involved in the transfer.
613-214	[ATT 19:] - 9, 2 - "...there does not appear to be a correlation between water delivery amount and the population growth rate within the growth study area. Furthermore, the increase in potential SWP annual average water supply would act as a water stabilization source rather than a water surplus that could induce growth, as it would restore previously contracted amounts." The DEIR failed to disclose the analysis that supported their conclusion that there is not a correlation between water supply and population growth. In fact, California has a requirement that new developments have a secured 20-year water supply prior to development approval. New development is currently limited by lack of available water supply so it is inescapable that a project that delivers new additional water will absolutely result in induced growth. The increased water supply for SOD by 12-15% from the Proposed Project will definitely result in the development of new growth.	Chapter 31, Growth Inducement, provides substantial evidence in different formats that there is not a discernable link between the amount of water exported to the study area by the SWP (or CVP) and population growth. For example, the chapter presents data that population growth steadily increased in all water contractor service areas from 1978 through 2020, with Southern California having by far the largest population with the most historic growth. Furthermore, Figure titled: Population Growth across SWP South-of-Delta Contractor Areas and Figure titled: Population Growth vs. Total Demand for Water in the Metropolitan Water District of Southern California, demonstrate that although water deliveries or exports to the south of the Delta have varied over time, population growth has steadily increased since 1978 in all water service areas. California does require new development to demonstrate a reliable water supply as noted by the comment, but that requirement is unrelated to the evidence presented in Chapter 31 regarding the steady increase in population growth in the study area and fluctuations (including decreases) in exports of water.
613-215	[ATT 19:] - 9, 6 - "When taken in consideration of the reliability of all water sources available to the participating agencies, the amount of water that may be delivered under each of the alternatives is more likely to result in an increase in the reliability of the total existing water portfolio for each participant than an absolute increase in water supply over the life of the project." The DEIR postulation that the additional water supply created would only be used to stabilize existing demand falls flat in the	Please see response to comment 613-214 regarding the relationship between water exported and population growth in the study area described in Chapter 31, Growth Inducement. Chapter 31 presents evidence using the existing water supply portfolios of project proponents, reductions in water supply portfolios, population growth trends, a description of other factors affecting growth within the study area, and the modest change in water supply under the project alternatives to conclude the project alternatives would not be a substantial factor in fostering growth within the study area. Public water suppliers cannot sell water for more than the cost to provide it, and do not sell more water to the people

Letter-Comment Number	Comment	Response
	face of logic. The new water supply created by the project will sell to the people who can pay the most money for it. The highest value to new water is new housing. In the case of existing developments, the developer has made their money and left so they will not compete for the new water. The new construction developers can value the new water created by the project at a greater value and profit to them than the existing water demand so the result will be new developments and induced growth by the project. The DEIR provides no evidence or even a defensible rationale for their claim that the additional water would only be utilized to service existing demand.	willing to pay the most money for it.
646-1	I support the acceptance of the Delta Conveyance Project draft EIR. I found the report to be adequate in scope and analysis, and the proposed selection of Bethany Reservoir Alternative to be well justified.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support for the project.
646-2	Thank you for delivering such a thoroughly researched, clearly articulated analysis, and complete proposal and EIR.	Please see response to comment 646-1 regarding Common Response 1 and support for the project.
717-1	Please see the attached RD 2037 Comments on the Delta Conveyance Project Draft EIR. Please acknowledge receipt of those comments.	This information describes the structure or organization of the comment letter, the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
717-2	Re: Delta Conveyance Project Draft Environmental Impact Report Dear Delta Conveyance Office: Reclamation District No. 2037 (RD 2037) is a public agency within the Sacramento-San Joaquin Delta, adjacent to and within the proposed Delta Conveyance Project (Delta Tunnel), area of influence. RD 2037 appreciates the opportunity to submit comments on the draft	This information describes the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	Environmental Impact Report (DEIR) for the proposed Delta Tunnel.	
717-3	These comments are focused on the likely impacts and concerns related to flood control, drainage and the potential impacts related to access, resource scarcity, buried and exposed resources, levee stability and other items tied to operations, maintenance, repairs, rehabilitation and replacement (OMRR&R) over the life of the construction of this project which could impact RD [Reclamation District] 2037.	This is an introductory statement for subsequent comments in the same letter. The comment in itself does not raise a specific significant environmental issue relating to the project or address the adequacy, accuracy, or completeness of the Draft EIR. Please refer to responses to following comments in the letter, including 717-5, 717-8, and 717-12.
717-4	The Department of Water Resources (DWR) has been actively pursuing potential isolated water conveyance infrastructure that would impact elements of flood control and drainage for reclamation districts in the Delta, depending on the location and proximity of intakes, and intermediate shafts, including potential impacts associated with settlement along the tunneling alignments in the proposed alternatives and preferred alternative, Alternative 5.	The comment assertions regarding the significance of impacts on flood control, drainage, and settlement are not supported by the analyses contained in Chapter 7, Flood Protection, and Chapter 10, Geology and Seismicity. Please refer to Impact FP-2 in Chapter 7 for an analysis of flood control and drainage impacts resulting from the project construction and postconstruction phases. Please refer to Impact GEO-4 in Chapter 10 for an analysis of settlement along the tunneling alignments. As shown in these impact evaluations, all impacts associated with flood control, drainage, and settlement would be less than significant for all project alternatives.
717-5	Dual Conveyance (Levee Rehabilitation and Improvement) A critical element for the implementation of dual conveyance is a detailed description of the necessary rehabilitation and improvement of the existing system of levees throughout the Delta. This should include an evaluation of Project and Non-Project levee features to ensure reliability of the through-Delta conveyance system. This should include not only levees and channels downstream of the Delta Cross Channel and the Old/Middle River corridor, but all levee systems to ensure protection of freshwater through the Delta, as well as ensuring protection and access to intake and shaft components of the proposed Delta Tunnel. The rehabilitation and improvement of the existing system of levees throughout the Delta should be	Please refer to Chapter 2, Purpose and Project Objectives, for a description of the Delta Conveyance Project objectives, and to Common Response 3, Alternatives Development and Description, which discusses the scope and screening process of alternatives, as well as other alternatives or components (such as Delta levees rehabilitation) proposed by commenters but not retained as part of the Delta Conveyance Project. CEQA requires an EIR to include a reasonable range of alternatives that can meet most basic project objectives, are feasible and would avoid or lessen potentially significant impacts. Please also refer to Chapter 7, Flood Protection, for more information on the impact analysis focusing on specific areas (including project levee features) that may be affected by the project. Please also note that although rehabilitation of the non-project, existing Delta levee system is

Letter-Comment Number	Comment	Response
	included as a significant and essential component of dual conveyance. Rehabilitation and improvement of the existing Delta levee system provides assurances for water supply reliability, water quality and support of the Co-Equal goals.	not part of the considered alternatives, the proposed Delta Conveyance Project is just one part of a diverse portfolio of strategies that would assist in meeting California's water management needs and would not preclude other measures that may be taken by DWR or other entities consistent with the Delta Reform Act.
717-6	RD [Reclamation District] 2037 does not meet Bulletin 192-82, and barely meets the short-term hazard mitigation plan (HMP) 1-foot freeboard requirement. Any impact due to settlement of the levees, or impact to stability of those levees, would be a critical impact to RD 2037.	As a standard of practice, a review of existing levees within the impact area (i.e., Special Flood Hazard Area) for freeboard, settlement, seepage, and stability will be performed based on additional subsurface information obtained. DWR will install monitors during construction near levee construction sites and levee crossings of the tunnel alignment to determine if subsidence occurs. The analysis in the Delta Conveyance Design and Construction Authority Intake Flood Management technical memorandum and the Levee Vulnerability Assessment technical memorandum (Delta Conveyance Design and Construction Authority 2022a, 2022b) published design and maintenance conditions for numerous Delta islands and focused on the need for levee improvements to protect construction workers at larger sites without adversely affecting surrounding lands. Please also refer to the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022d, 2022e). The report addresses construction methods to be implemented that would protect existing levees and that coordination would occur with local reclamation districts during the design phase.
717-7	RD [Reclamation District] 2037's Five-year Plan will be completed in 2023 and does provide a preliminary cost and quantity estimate to build out to the Bulletin 192-82 design standard. The Final EIR should incorporate cost estimates for the entire Delta to meet Bulletin 192-82.	Refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for information about DWR's role and responsibility, along with local governments and special districts, to maintain and improve levees that protect the Delta.

Letter-Comment Number	Comment	Response
717-8	A critical access element for RD [Reclamation District] 2037 is the bridge crossing Disappointment Slough adjacent to Paradise Point Marina which connects RD 2037 to Bishop Tract and is the sole access point for RD 2037 and its landowners. Any movement or settlement caused by the boring of the tunnel could fail this critical RD 2037 feature. The Final EIR should describe how this and other similar features will be monitored and improved in anticipation of the proposed project.	Please refer to Chapter 3, Description of the Proposed Project and Alternatives, in section titled Investigations Prior to Construction Phase and the section titled Investigations During Construction Phase. These sections described the soil boring and core penetration tests, geotechnical pilot studies for settlement and monitoring for ground movement among other field investigations that would be conducted for the proposed Delta Conveyance Project facilities. A ground settlement assessment at critical locations including the Disappointment Slough bridge, will be performed, during the design phase of the project to assess potential impact on the bridge structure and its foundation. As presented in the Tunneling Effects Assessment technical memorandum in the Engineering Project Report (Delta Conveyance Design and Construction Authority 2022c), preliminary settlement analysis performed at various locations along the tunnel alignment shows minimal settlement estimates at the ground surface. If adverse effects due to ground settlement and deformation are anticipated based on future geotechnical investigations and ground settlement analysis, foundation ground improvements will be considered to mitigate any adverse effects due to tunneling.
717-9	Construction Impacts. A primary concern to RD [Reclamation District] 2037 is the impacts associated with the construction of the proposed Delta Tunnel and the extended duration of that construction. The project will rely upon hauling materials between multiple project sites to staging and laydown areas relying on trucking primarily, and local, county, and state roads, bridges and numerous channel crossings. The hauling will primarily be due to the construction of the Maintenance shaft proposed within King Island, which will impact traffic on Eight Mile Road. Impacts due to construction traffic must be monitored and coordinated well in advance to ensure all elements associated	Consultation with San Joaquin County Department of Public Works is a requirement established by DWR for contractors to develop and implement transportation demand management plans (TDMs) and traffic management plans (TMPs) prior to construction of the maintenance shaft on King Island. These San Joaquin County approved documents will monitor and repair the transportation network serving Reclamation District 2037 and King Island, including Eight Mile Road, King Island Road, and Bacon Island Road to their pre-construction condition. These requirements are discussed in Impact TRANS-3. Specific actions in Mitigation Measure TRANS-1 combined with the circulation system roadway improvements included as part of the project description,

Letter-Comment Number	Comment	Response
	with the project have been identified in advance with contingencies, BMP's, and all avoidance measures in place…	including pavement remediation (e.g., fill potholes, asphalt cracking and slurry seals), road widening to a minimum of 12 feet, and roadway design to serve construction traffic, would reduce potential construction impacts on roadways serving Reclamation District 2037. After completion of a project site construction, the condition of the access roads for each construction site will be analyzed, and remediation of roadways will be completed as needed to return the facility to the improved conditions that were constructed by DWR to improve these access roads prior to construction of the Delta Conveyance Project. Refer to Common Response 14, Transportation, for additional discussion on the transportation impact analysis for the EIR.
717-10	[Impacts due to construction traffic must be monitored and coordinated...] along with a robust action plan to repair and replace roadways during construction and rehabilitation post construction. This aspect should be well defined in the Final EIR.	Please see response to comment 717-9 regarding DWR contractors' development and implementation of TDMs and TMPs which could include the monitoring and repair of the transportation network. Construction traffic impacts on vehicle miles travelled and emergency access are addressed in Chapter 20, Transportation, under Impact TRANS-1 and Impact TRANS-4 as well as the mitigation measures presented in the chapter. Please see the section titled Access Roads in Chapter 3, Description of the Proposed Project and Alternatives, for a description of affected roads and the roadway improvements to reduce the project's impact on local roads. Some of these improvements include widening, repaving, and construction of new roads.
717-11	A detailed analysis of all known features along, through and traversing RD [Reclamation District] 2037's boundary, including the buried features, including gas lines, active or abandoned gas wells, which could impact seepage and groundwater levels if damaged during boring thereby causing impacts to drainage, land use, levee seepage and levee stability, must also be conducted and included in the Final EIR.	The Delta Conveyance Project EIR has been prepared in compliance with CEQA and evaluates the full range of potential impacts that may result from construction and operation of the proposed project and its alternatives. Existing and abandoned underground utilities will be identified through a review of historical databases (e.g., DWR and CVFPB permits) and ground truthing the information by conducting geotechnical investigations (i.e., potholing). As discussed in Chapter 21, Public Services

Letter-Comment Number	Comment	Response
		and Utilities, underground utilities would be mapped as part of the final design of the Delta Conveyance Project facilities.
717-12	Other items such as unknown water systems, communication and data portals, and structural elements such as houses, facilities, pumpstations should also be evaluated and documented in the Final EIR and regularly monitored during construction.	All of the project facilities construction and operations effects are addressed in Chapters 7 through 32 of the EIR, including maintenance of proposed facilities. Please refer also to Chapter 3, Description of the Proposed Project and Alternatives, in the discussion of field investigations for other monitoring and investigations required during construction. The EIR includes a mitigation monitoring and reporting plan that would be implemented to ensure mitigation measures are implemented to reduce significant environmental impacts. Please refer to Chapter 21, Public Services and Utilities, regarding specifics on impacts on public services and utilities by alternative.
717-13	The significant trucking limitations caused by the massive project could impact local resources for material delivery and hauling for OMRR&R [operation, maintenance, repair, replacement and rehabilitation] projects and activities for RD [Reclamation District] 2037. There are concerns that local trucking capabilities, or increases in costs, due to scarcity, could impact the ability of RD 2037 to perform work within limited budgets for services year over year. Given a 10+ year timeline for construction, this could have major adverse impacts on the construction economy for many years.	The claim that the project would result in significant trucking limitations is not supported by analysis in the EIR. Chapter 20, Transportation, finds that any impacts related to road access would be less than significant.
717-14	Any construction project areas, or impact areas due to tunneling operations, that require dewatering and drainage must consider self-sufficient and independent drainage through lands within RD [Reclamation District] 2037. The existing system of drainage ditches and canals operated by RD 2037 were designed for existing conditions only. RD 2037's pump stations are not designed for additional construction dewatering for project areas within RD 2037. Evaluation of respective drainage systems should be performed in advance	As described in the Process and Method of Review for Impeding or Redirecting Localized Flood Flow section of Chapter 7, Flood Protection, and in the Local Water Supply, Drainage, and Utilities section of Chapter 3, Description of the Proposed Project and Alternatives, the location and capacity of existing drainage and irrigation facilities that may be affected by construction of the Delta Conveyance Project would be determined and the capacity of this infrastructure to convey drainage or irrigation water would be maintained. A review of RD 2037's drainage systems will be performed to assess the impacts of tunneling operations, dewatering, and

Letter-Comment Number	Comment	Response
	and consideration must be given to how the project's drainage will impact property owners' ability to control water surface elevations, drain lands, and maintain water quality within the RD 2037. Higher water tables could also impact the interior access for RD 2037 and landowners. All these matters must be addressed in the final EIR.	drainage as part of final design of the Delta Conveyance Project facilities. Stormwater runoff and dewatering flows would be captured, treated, stored, and reused onsite. Discharges would occur in a manner that would not compromise existing drainage facility capacity.
717-15	Emergency operations during high water events due to rainfall runoff or emergency flood events occur regularly in the Delta every 5-10 years, depending on many factors. The likelihood of any number of natural emergency events is high during a 10+ year construction period and all potential scenarios need to be evaluated and planned for with local and state agencies in advance and should be explicitly documented in the Final EIR. Any levee integrity or other flood control emergencies that could potentially be caused by the construction or operation of the Delta Tunnel project should also be described in the Final EIR along with the steps DWR [Department of Water Resources] will take to address those emergencies.	Please refer to the Process and Method of Review for Impeding or Redirecting Localized Flood Flow section in Chapter 7, Flood Protection, regarding nonstructural flood risk management measures and measures to minimize effects on existing levees during construction. These flood risk management measures would occur in coordination with reclamation districts, levee maintaining agencies, and state and federal agencies.
717-16	Thank you for the opportunity to provide comments on this project. RD [Reclamation District] 2037 welcomes any feedback or questions regarding this letter.	This information is general closing text. It is not a comment on the contents of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
721-1	On behalf of the Municipal Water District of Orange County [Footnote 1: Municipal Water District of Orange County is a member of the Metropolitan Water District of Southern California, providing imported water to over 3.2 million Orange County residents through 28 retail water agencies. MWDOC is a wholesale water supplier and resource planning agency whose efforts focus on sound planning and appropriate investments in water supply development, water use efficiency, public information, legislative advocacy, water education and emergency preparedness.] (MWDOC), we would like to offer comments regarding the Delta Conveyance Project	The comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	Draft Environmental Impact Report (Draft EIR). As a member agency of the Metropolitan Water District of Southern California (Metropolitan), MWDOC relies on the State Water Project (SWP) to deliver a portion of our water supply from Northern California through the Delta.	
721-2	Our [Municipal Water District of Orange County (MWDOC)] comments reflect our ongoing concern for the need to restore and protect the long-term reliability of California's water supplies, in an affordable manner, and thus the important role of the Delta Conveyance Project. Modernizing SWP infrastructure in the Delta is consistent with the state's Water Resilience Portfolio framework to address California's water challenges and support long-term water resilience and ecosystem health.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support of the project. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for additional information on the relationship of the project to the state's Water Resilience Portfolio.
721-3	As stated within the Draft-EIR, MWDOC [Municipal Water District of Orange County] encourages state certification of the Draft Environmental Impact Report and the advancement of this essential project to: -Address sea level rise or other consequences from climate change -Minimize the potential for public health and safety impacts due to seismic risk -Restore and protect water supply reliability under hydrologic conditions -Provide operational flexibility to improve aquatic conditions in the Delta	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general support for the project. This comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
721-4	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: Support of Proposed Project Alternative	Please see response to comment 721-3 regarding comments stating opinions of support for the project.

Letter-Comment Number	Comment	Response
	We [Municipal Water District of Orange County] support the proposed project, the Bethany Reservoir Alignment (Alternative 5), which extends the eastern corridor to the existing Bethany Reservoir and avoids development of a new forebay in the south Delta, as it will have less impact on agricultural land, cultural resources, and wetlands. Additionally, this alternative should provide the same climate resiliency, seismic resiliency, and water supply reliability as the other 6,000 cfs alternatives that follow the central or eastern alignment evaluated in the Draft EIR, but will have fewer or substantially reduced environmental impacts.	
721-5	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: California's Water Resiliency & Climate Change We [Municipal Water District of Orange County] fully support the separate and complementary efforts to prepare the Delta for our changing climate, particularly the ongoing climate change assessment process under way at the Delta Stewardship Council in conjunction with assistance from the Department of Water Resources.	Please see response to comment 721-3 regarding comments stating opinions of support for the project. Please also see Common Response 6, Climate Resilience and Adaptation, for more information on the range of climate change analyses provided in the EIR and how DWR has exceeded the CEQA requirements by including a dedicated chapter on climate change (Chapter 30), which discusses how trends in observed and projected climate change clearly indicate the need for the project and how it can enable adaptation to potential climate change impacts in the study area.
721-6	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: The state water reliability strategy cannot be successful without the conveyance necessary to capture wet period supplies. Continued development and investment in local water supplies and resiliency depends on high quality SWP	This comment does not raise a significant environmental issue associated with the Delta Conveyance Project. DWR has reviewed all comments and will consider all comments in its decision-making process. Please see response to comment 721-3 regarding comments stating opinions of support for the project.

Letter-Comment Number	Comment	Response
	water as a source for groundwater recharge, recycling, and water-quality blending requirements. Modernizing conveyance through the Delta, in combination with Metropolitan's and its member agencies' past and continued efforts including conservation, provides effective means to deal with droughts and climate change, and guard against disruptions from earthquakes or levee failures in the Delta.	
721-7	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: The Water Supply 2040 Analysis within the Draft-EIR shows that long term average total Delta exports which include both SWP and Central Valley Project (CVP) water exports, decline due to climate change even with the project. However, the Bethany Alternative lessen the decline in comparison to No Project. Based on the Draft-EIR, potential changes to SWP/CVP water supplies in 2040 are reduced compared to 2020 conditions. The overall trend in the deliveries that will be most affected by the project (i.e., total SWP/CVP south-of-Delta deliveries) is that projected increases in water supply deliveries would be less under 2040 conditions than increases projected under 2020 conditions. Additional changes that are expected would be in Article 21 deliveries, which occur when SWP San Luis Reservoir is full.	The comment does not raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
721-8	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: Additionally, long-term progressive risks of levee failures and	This comment does not raise a significant environmental issue associated with the Delta Conveyance Project. DWR has reviewed all comments and will consider all comments in its decision-making process.

Letter-Comment Number	Comment	Response
	diminishing operational efficiency and supply reliability from sea level rise and changes in Delta inflow hydrology are expected as a result of climate change. Continuation of existing management and operation of the Delta is expected to increasingly expose Delta water users and those that depend on water exported from the Delta to risks of water supply interruption and diminishing water supply reliability over time.	
721-9	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: Need for the project remains timely[.] The Delta Conveyance Project is an indispensable project and the environmental planning for such a project should not be based on political beliefs but on sound science, engineering and economics. With this in mind, we fully support the Newsom administration moving forward in the planning process in both a thorough and expeditious manner.	Please see response to comment 721-3 regarding comments stating opinions of support for the project.
721-10	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: The SWP is California's primary water distribution system. It captures and transports water to communities throughout the state--providing an affordable source of high-quality, clean water for more than 27 million Californians. The infrastructure that protects, collects and moves water through the Delta to California homes, farms and businesses was constructed more than 50 years ago and is at ever-increasing risk of failure from climate change and sea level rise. The proposed Delta Conveyance Project is the right project at the right time to help	Please see response to comment 721-3 regarding comments stating opinions of support for the project.

Letter-Comment Number	Comment	Response
	ensure the SWP can continue to meet California's water needs into the future.	
721-11	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: The DCP also addresses impacts to Delta communities. Having worked hard to avoid and reduce environmental and community impacts, today's proposed project is very different from the State's previous proposals. An extensive amount of design refinements has helped avoid or minimize local impacts, and the project includes a Community Benefits Program to ensure the communities most affected by construction of the project are provided the means and resources to also achieve local benefits. It is prudent and responsible to pursue the DCP now. We [Municipal Water District of Orange County] cannot afford to delay modernizing the SWP's Delta infrastructure -- the cost of doing nothing could disrupt our state's primary water supply.	Please see response to comment 721-3 regarding comments stating opinions of support for the project.
721-12	MWDOC [Municipal Water District of Orange County] has identified the following areas of significance that we would like to highlight in this letter: Need for the project remains[.] The governor's Water Resilience Portfolio reflects both the need to make progress locally and with Delta infrastructure. Given how 27 million Californians get some or all of their water from the Delta, it is imperative to prepare this vital segment of our [California's] statewide water delivery system for the future reliability needs.	Please see response to comment 721-2 regarding comments that state opinions of general support of the project and regarding the relationship of the Delta Conveyance Project to the Water Resilience Portfolio.