Table 4-4. Nongovernmental Organizations, Businesses, Conservation Groups, Unidentified Organizations, etc.

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2-1	Apologies -- attached is the letter with a correction on p. 4 -- date of independent technical review of intakes.	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. The Department of Water Resources (DWR) has reviewed all comments and will consider all comments in its decision-making process.
2-2	We wanted to thank you for expressing your support for the review by the Delta Independent Science Board ("Delta ISB") of the Delta Conveyance Project at the Delta ISB's June 8, 2022 meeting. As you stated, the Delta Reform Act requires the use of "best available science" for the project, and one of the components of "best available science" is peer review. This letter is to request that the Department of Water Resources ("Department") clarify the details of the peer review process for the design and proposed operations of the Delta tunnel project. While the Department has been consulting with the Delta Stewardship Council staff as the project has been developed, the Department has not been consulting with the Delta ISB, nor did the Department release the Administrative Draft of the Delta Conveyance EIR for review by the Delta ISB. [Footnote 1: The Delta ISB was also not funded to consult on the Delta tunnel project in FY 2020-21.]	This comment is a request to clarify DWR's interpretation of the Delta Plan's best available science policy (G P1 (23 CCR Section 5002 (b), (3))) and is not a comment related to CEQA or the environmental analysis. DWR is required to release a public Draft EIR for public comment and a Final EIR, per the State CEQA Guidelines. The purpose of the public Draft EIR is for members of the public, including agencies and non-governmental organizations, to comment upon the contents of the EIR. The CEQA process does not require a separate peer review process. However, DWR has been coordinating with the Delta ISB throughout the environmental review process. The public Draft EIR was circulated to the Delta ISB for review and comment and the Delta ISB submitted comments on the Draft EIR to DWR. DWR will consider and respond to the Delta ISB's comments as required by CEQA. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate DWR responses to the Delta ISB letter, which is contained in Volume 2, Chapter 4, Response to Comments Tables.
2-3	With respect to timing of peer reviews, the Delta Stewardship Council's guidelines for best available science state: [i]ndependent scientific peer review shall be applied formally to proposed projects and initial draft plans, in writing after official draft plans or policies are released to the public, and to final released plans" [Footnote 2: Delta Stewardship Council. 2015. Delta Plan Appen	This is the commentor's interpretation of the Delta Stewardship Council's best available science policy and a concern expressed based on that interpretation. Neither CEQA nor the State CEQA Guidelines (not the Delta Reform Act) require a public agency to release an administrative draft public EIR for peer review prior to the release of the public draft EIR. The previous activities of DWR with respect to the Bay Delta Conservation Plan and/or California WaterFix (BDCP/WaterFix) are independent and separate

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	dix 1A, Best Available Science. Https://deltacouncil.ca.gov/pdf/delta-plan/2015-appendix-1a.pdf.] We are extremely concerned that the failure to release the Department's Administrative Draft EIR for the single tunnel has adversely affected the peer review process for the project. As you know, the Delta ISB expressed major concerns in the May 2014 review of the previous project. [Footnote 3: Delta Independent Science Board. 2014. Transmittal from Delta Independent Science Board to the Chair of the Delta Stewardship Council of the Review of the Draft EIR/EIS for the Bay Delta Conservation Plan. Https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/PCFFA&IGFR/PCFFA_09_ISB.pdf.]	and apart from the activities related to the Delta Conveyance Project. The Delta Conveyance Project has followed all requirements of CEQA when preparing and distributing the Draft EIR for public review and comment. The cited May 2014 comments from the Delta Independent Science Board are specific to Delta Reform Act requirements (section 85320(c)) for a peer review for BDCP as a Habitat Conservation Plan/Natural Communities Conservation Plan that are not applicable to Delta Conveyance Project. Please see response to comment 2-2 regarding the distribution of the EIR for public review and comment. Please see Common Response 2, Public Outreach Activities, regarding the length of the comment period including the public comment period extension to a total of 142 days. DWR provides modeling output in electronic format upon request.
2-4	Those concerns [about the previous iteration of the project] were summarized as follows: 1. Many of the impact assessments hinge on overly optimistic expectations about the feasibility, effectiveness, or timing of the proposed conservation actions, especially habitat restoration.	This is a comment submitted on the Bay Delta Conservation Plan/California WaterFix (BDCP/WaterFix) project. 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. The Delta Conveyance Project is an independent and separate project from BDCP/WaterFix. The Delta Conveyance Project includes a Compensatory Mitigation Plan (CMP) with habitat restoration proposed in specific areas. This habitat restoration is different in scope, scale, and purpose as compared to the restoration identified by BDCP/WaterFix in response to differing impacts and resulting compensatory mitigation requirements. The impact assessments contained within the Delta Conveyance Project Draft EIR disclose potentially significant environmental impacts prior to the

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		application of the CMP, and then provides discussions of the potential reduction of impacts as a result of implementation of the CMP. As such, the impact analysis provides full disclosure of all potentially significant impacts of the proposed Delta Conveyance Project and alternatives prior to the application of the CMP. Furthermore, the CMP and other mitigation measures associated with sensitive habitats species include monitoring to assess and ensure effectiveness. Feasibility of CMP actions, including habitat restoration, was evaluated through the application of relevant and objective criteria and ecological restoration practices germane to the Sacramento-San Joaquin Delta (Delta) ecosystem, and is inclusive of relevant information from multiple disciplines. The selection of potential mitigation sites described in this EIR was informed by USACE, EPA, SWRCB, and USFWS mitigation policies and guidance documents and Delta Plan guidance as it relates to site selection and design criteria for special-status species. Please also see Common Response 11, Terrestrial Biological Resources and Compensatory Mitigation Plan, regarding the efficacy and timing of CMP implementation.
2-5	Those concerns [about the previous iteration of the project] were summarized as follows: 2. The project is encumbered by uncertainties that are considered inconsistently and incompletely; modeling has not been used effectively to bracket a range of uncertainties or to explore how uncertainties may propagate.	Please see response to comment 2-4 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. For the preparation of this EIR for the Delta Conveyance Project, the decision to apply a model to analyze impacts of the project to a resource was based on pertinence to each resource and whether impacts were quantifiable. As a result, modeling approaches and analysis, including uncertainties inherent in the modeling analysis, are unique to each resource and are explained in each chapter and their appendices. CEQA does not require bracketing a range of uncertainties or exploring how uncertainties may propagate. Finally, please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental

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		Review Issues, regarding the disclosure and evaluation of uncertainty in the EIR.
2-6	Those concerns [about the previous iteration of the project] were summarized as follows: 3. The potential effects of climate change and sea-level rise on the implementation and outcomes of BDCP actions are not adequately evaluated.	Please see response to comment 2-4 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding climate change and sea-level rise analysis in the EIR for the Delta Conveyance Project.
2-7	Those concerns [about the previous iteration of the project] were summarized as follows: 4. Insufficient attention is given to linkages and interactions among species, landscapes, and the proposed actions themselves.	Please see response to comment 2-4 regarding comments submitted on the BDCP/California WaterFix project. The Delta Conveyance Project is an independent and separate project from BDCP/WaterFix and is not a habitat conservation plan or natural communities conservation plan. EIR Chapter 13, Terrestrial Biological Resources, includes a landscape-scale approach used to assess regional landscape features and existing terrestrial wildlife connectivity resources and their potential to facilitate wildlife movement for a variety of wildlife species inhabiting the project region, in addition to the assessment of special status species (Impacts BIO-1 through Impact BIO-56). This assessment also fully evaluates impacts on wildlife corridors under each of the alternatives (Impact BIO-53). In addition, impacts on individual fish species, habitat, and migration corridors are fully evaluated under each of the alternatives in Chapter 12, Fish and Aquatic Resources (Impacts AQUA-1 through AQUA-19).
2-8	Those concerns [about the previous iteration of the project] were summarized as follows: 5. The analyses largely neglect the influences of downstream effects on San Francisco Bay, levee failures, and environmental effects of increased water availability for agriculture and its environmental impacts in the San Joaquin Valley and downstream.	Please see response to comment 2-4 regarding comments submitted on the BDCP/California WaterFix project. Influences of downstream effects on San Francisco Bay, San Joaquin Valley, levee failures, and operational effects to agriculture are discussed and analyzed in the EIR for the Delta Conveyance Project as appropriate under each project alternative and are characterized by the defined study areas in the EIR chapters, which are clearly described. For example, Chapter 5, Surface Water, describes changes in the Sacramento River and San Joaquin River Basins, including the Delta, based on operations of the project alternatives; Chapter 7, Flood

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		Protection, describes flood management and flood protection facilities in the study area and potential impacts associated with flood protection; and Chapter 15, Agricultural Resources, describes potential impacts within the study area of Alameda, Contra Costa, Sacramento, San Joaquin, and Yolo Counties because operational effects would not extend beyond the physical project boundaries.
2-9	Those concerns [about the previous iteration of the project] were summarized as follows: 6. Details of how adaptive management will be implemented are left to a future management team without explicit prior consideration of (a) situations where adaptive management may be inappropriate or impossible to use, (b) contingency plans in case things do not work as planned, or (c) specific thresholds for action.	Please see response to comment 2-4 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. The EIR provides specific details regarding adaptive management plans required as part of the project. For example, the CMP includes adaptive management related to each identified project site as described in Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources. Adaptive management has a long-standing tradition in the scientific community and as part of implementing restoration projects to refine and adjust as information is obtained prior to implementing a restoration project and throughout the life of a restoration project. In addition to the site-specific habitat restoration adaptive management plans, the Delta Conveyance Project includes an operations adaptive management and monitoring plan (OAMMP). Please refer to Common Response 3, Alternatives Development and Description, for more information regarding the OAMMP.
2-10	Those concerns [about the previous iteration of the project] were summarized as follows: 7. Available tools of risk assessment and decision support have not been used to assess the individual and combined risks associated with BDCP actions.	Please see response to comment 2-4 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. The current project is not a habitat conservation plan/natural communities conservation plan, as such the previous risk assessment and decision support tools are not applicable.
2-11	Those concerns [about the previous iteration of the project] were summarized as follows: 8. The presentation, despite clear writing and an abundance of	Please see response to comment 2-4 regarding comments submitted on the Bay Delta Conservation Plan/California WaterFix project. Please see Common Response 1, CEQA Process, General Approach to

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	information and analyses, makes it difficult to compare alternatives and evaluate the critical underlying assumptions.	Analysis, and Other Environmental Review Issues, regarding the length and complexity of the Delta Conveyance Project EIR. The EIR includes many tables identifying differences and similarities between alternatives for the public and decision makers to understand the alternatives and the different impacts between them. For example, in the Executive Summary there are 27 tables comparing the alternatives. Executive Summary table titled Summary of Key Project Features by Alternative summarizes the key features of each alternative, and the table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures identifies the impact determination of each alternative organized by resource evaluated in the EIR. In addition, the EIR has multiple tables throughout each resource chapter documenting comparisons of the alternatives and potential changes or impacts on the physical environment (e.g., Chapter 9, Water Quality, Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources). Please refer to Common Response 3, Alternatives Development and Description, regarding the approach to describing the project and alternatives.
2-12	Intervening years [since previous iterations of the project] have shown how critically important it is that this project adequately evaluate the potential effects of climate change and sea level rise on the proposed North Delta diversions, as well as thoroughly and accurately assessing cascading risks from climate change and potential levee failure.	In compliance with CEQA, the EIR contains a comprehensive evaluation of the impacts of project operations on a full range of environmental resources. Although not required to do so by CEQA, DWR evaluated climate change impacts in several locations in the EIR using multiple climate change scenarios and timeframes for informational purposes. The EIR includes an entire chapter, Chapter 30, Climate Change, that focuses on how the project could help address impacts from observed and projected climate conditions on water deliveries and how climate change, including sea level rise, could influence the ability of the project to fulfill its intended purpose. Please refer to Common Response 6, Climate Resilience and Adaptation, for a description of all the climate change and sea level rise analyses in the EIR. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of

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		the CEQA project objectives. As noted in Common Response 3, Alternatives Development and Description, the location of the north Delta diversion facility is less vulnerable to salinity intrusion, a potential impact of sea level rise, or levee failure, in the future. By establishing an alternative diversion point for exports, there is added flexibility in the operation of the State Water Project, which would provide the ability to optimize conditions to protect Delta water uses, including habitat conditions. Chapter 7, Flood Protection, presents an evaluation of project construction and operations and levee failure. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding DWR authorities and responsibilities regarding levees.
2-13	For the above reasons, we believe the release of the Draft Delta Conveyance EIR is the appropriate time to start a peer review by the Delta ISB of the Delta Conveyance. However, the ninety-day comment period on the Draft Delta Conveyance EIR is simply not an adequate period of time for a peer review of such a huge and complex project. At the July 14, 2022 Delta ISB meeting, the member's proposed review schedule provided only 60 days to draft the main report. Sixty days is a wholly adequate period of time for review of any of the modeling in the Draft Delta Conveyance EIR, especially if the model outputs are not provided in an appropriate Format. [Footnote 4: The Department should provide the model outputs in an appropriate Excel spreadsheet or other format that is suitable for a 21st century review by scientists and engineers. Scientists and engineers stopped using printed data tables for review over thirty years ago.]	Please see response to comment 2-2 regarding the distribution of the EIR for public review and comment which lasted 142 days. Please see Common Response 2, Public Outreach Activities, regarding the length of the comment period including the public comment period extension. DWR provided modeling output in electronic format upon request.
2-14	Should any other peer review panel be convened under the Department's authority, it would be subject to the requirements established by the Public Works Project Peer Review Act of 2013 (Gov. Code §§ 8847 et. seq.) The following	CEQA does not require a lead agency to establish a peer review group pursuant to the Public Works Project Peer Review Act of 2013 and DWR has not established a peer review group pursuant to this non-CEQA statutory authority to review the EIR for the Delta Conveyance Project.

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	explains how the Public Works Peer Review Act of 2013 applies to the project. The Department intends to construct the Delta tunnel under the authorization of the Central Valley Project Act (Wat Code §§ 11100 et. seq.) [Footnote 5: California Department of Water Resources. 2020. Delta Program Revenue Bond General Bond Resolution. P. 30 of Complaint for Validation with Exhibits. https://water.ca.gov/-/media/DWRWebsite/ Web-Pages/Programs/Delta-Conveyance/Public-Information/Complaint-for-Validation-with- Exhibits-8-6-20received_508.pdf.] The Central Valley Project Act requires that the Department design any works that will be constructed under the Act. (Wat. Code § 11551.) The Central Valley Project Act also requires that "[t]he department shall have full charge and control of the construction, operation, and maintenance of the project and the collection of all rates, charges, and revenues from it." (Wat. Code § 11551.) The Department is an administering agency, as discussed in the Public Works Project Peer Review Act of 2013 because it is the public agency principally tasked with administering, planning, developing, and operating a public works project" (Gov. Code § 8847.1(a).) The Public Works Project Peer Review Act of 2013 defines a "Peer review group" as "a group of persons qualified by training and experience in particular scientific or technical fields related to the public works project under review, who give expert advice on the scientific and technical aspects of the public works project" (Gov. Code § 8847.1(b).)	

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	If the Department or the Delta Conveyance Design and Construction Authority establishes its own peer review group for the Delta tunnel project, the Department must comply with all of the following under requirements of the Public Works Peer Review Act of 2013 (Gov. Code § 8848(b)): (b) If an administering agency establishes a peer review group, the administering agency shall do all of the following: (1) Before establishing a peer review group, develop a transparent process for selecting members of the group. (2) Draft a charter. The charter also shall be posted on the administering agency's Internet Web site as a public document and shall contain all of the following information: (A) The group's official name or designation. (B) The group's objective and the scope of its activities. (C) A statement of the expertise and balance of interests required of the group membership to perform its charge. (D) The name of the administering agency and official to whom the group reports. (E) A description of the duties for which the group is responsible. (F) The estimated number and frequency of group meetings.	

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	(G) The estimated annual operating costs for the group. (H) A statement that authorizes a peer reviewer to conduct his or her duties under the charter impartially, without restriction or limitation, and in a manner the peer reviewer believes is necessary to appropriately review a proposed project. (I) A statement that declares whether the members of the peer review group have signed a conflict of interest disclosure form that would identify real or perceived conflicts between a peer reviewer and the specified public works project.	
2-15	The Delta Conveyance Design and Construction Authority conducted several Independent Technical Reviews (ITRs) of the engineering design of the Delta tunnel project, including a review of the intake design on March 17-19, 2020 [Footnote 6: Delta Conveyance Intakes Independent Technical Review (ITR) Panel, Intakes ITR Panel Report –Meeting 1, March 17-19, 2020. https://www.dcdca.org/wp-content/uploads/2022/03/2020-Intakes-ITRReport-and-Response-V.F-ADA-Compliant.pdf.], and a review of proposed tunneling and shafts on May 13-15, 2020. [Footnote 7: Delta Conveyance Independent Technical Reviews (ITR) Panel, Tunneling and Shafts ITR Report – Meeting 1, May 29, 2020. https://www.dcdca.org/wp-content/uploads/2022/03/2020-Tunneling-and- Shafts-ITR-Report-and-Response-V.F-ADA-Compliant.pdf.] These ITRs do not qualify as peer reviews, because the selection of external reviewers was not transparent, the scope of the technical reviews was limited, and no public document was posted that contained the mandated information about the review panel.	Please see responses to comments 2-2 and 2-14 regarding the role of peer review in the CEQA process. CEQA does not require peer review of an EIR or the underlying project's design, and most of the comment presents the commenter's view that ITRs do not constitute peer reviews or comply with the previously cited Government Code provisions regarding peer review panels for public works projects. Thus, this comment is not a comment on the Draft EIR.

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2-16	Finally, the reviews by the Department of Fish and Wildlife of some aspects of the project for the Incidental Take Permit under the California Endangered Species Act, and the reviews by the United States Fish and Wildlife Service and National Marine Fisheries Service of some aspects of the project under the Federal Endangered Species Act do not constitute peer reviews. These are reviews by biologists. In this circumstance, the appropriate peer reviews must be by scientists and/or engineers with appropriate backgrounds in climate science, hydrology, geology, or civil engineering.	This is not a comment on the Draft EIR, but rather an opinion about other agencies' permitting processes. Thus, no response is required in the Final EIR. For the Delta Conveyance Project, the California Department of Fish and Wildlife is a state responsible and trustee agency with review authority through CEQA. Additionally, the United States Fish and Wildlife Service and the National Marine Fisheries Service are federal cooperating agencies with review authority through NEPA. Please also see responses to comments 2-2 and 2-14 regarding the role of peer review in the CEQA process.
2-17	Therefore, we respectfully request that the Department clarify whether the Delta ISB is expected to do a peer review of the project, whether the Department will be convening its own peer review group for the project and, if so, the process the Department will follow to do so, what the timeline will be and how the full peer review will relate to the Delta ISB's review.	DWR has no plans to convene a separate peer review group for the project. Please refer to responses to comments 2-2 through 2-16 which address comments related to the role of the Delta ISB and how peer reviewed science will be incorporated into the Delta Conveyance Project. CEQA does not require a formal peer review group for preparation of an EIR.
22-1	I would like to get a copy of the DCP Engineering Product Reports and all associated technical memos that are referenced in the DCP Draft EIR.	In regard to the portion of the comment requesting additional information, the Department of Water Resources (DWR) responded to all requests for engineering reports and technical memos within the comment period.
26-1	There are some other DWR documents that are in the Reference chapter but do not have hyperlinks: These are of particular interest: California Department of Water Resources. 2020a. Memorandum: Preliminary Flood Water Surface Elevations (Not for Construction). September 30. Prepared by Delta Conveyance Office, 25 Sacramento, CA. California Department of Water Resources. 2020a. California Department of Water Resources Climate 9 Action Plan Phase 1: Greenhouse Gas Emissions Reduction Plan, Update 2020. July. Sacramento, 10 CA.	References cited in the EIR do not always have website links because not all sources are published online. Per publishing standards, references for materials not readily available should provide sufficient information to enable readers to positively identify them, regardless of whether the sources are published or unpublished or in printed or electronic form. Therefore, website links to references are not a requirement; however, per CEQA requirements, all references were made available upon request.
41-1	The Hood Community Council, on behalf of the Hood residents, are requesting a six-month extension to the 90-day comment period for the Draft EIR.	Please refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, regarding the public meetings and outreach activities conducted throughout the EIR process to provide public

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	We also request that DWR immediately establish a means where the public can ask—and get answers to--basic questions about where information is located in the Draft EIR; and finally, that the virtual public hearings be rescheduled as in-person meetings.	information and encourage public participation and comment. As described in Common Response 2, a phone line and email were established for questions about the project and information requests were able to be submitted to the DWR comment email. DWR responded to information requests in a timely manner directly to the requestor during the public comment period.
41-2	The provided 90-day comment period is inadequate to allow for meaningful public participation and comment. At 220 pages per day, without a day off, it will take the entire 90 days to just read the document. The Draft EIR with appendices and attachments is over 20,000 pages long and is poorly organized; it fails to meet basic requirements of CEQA to inform the public because it requires an inordinate amount of time to find basic information that will allow for meaningful review and comment.	As noted in response to comment 41-1, please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. As described in Common Response 1, in the discussion about the EIR's length and complexity, the EIR necessarily includes a considerable amount of information to adequately analyze potential impacts and was presented in a format with emphasis on information useful to the public. Furthermore, as described in Common Response 1, the EIR followed accepted practices for the preparation of such documents.
41-3	For example [With regard to the DEIR being poorly organized], there is no concise or consistent means of determining where the study area is or how it has been defined for different impact analysis. Is the study area for Chapter 22 Energy the entire grid for the State of California? It should be particularly for the No Project Alternative, because increased conservation due to decreased exports from the SWP would free up electricity for use statewide. The SWP consumes approximately 3% of all electricity used in California. Changes in SWP energy usage affect the whole state. But it is impossible to tell how this has been analyzed, if at all. Table 22-15 appears to indicate that energy savings from decreased exports and increased conservation would accrue only to "Northern Coastal, southern coastal, [and] southern inland" regions. (Table 22-15, p. 22-26.)	The study area for energy impact analysis includes project construction areas where energy is consumed and regional energy sources throughout the State of California that could be affected by the project alternatives' energy demand. In Chapter 22, Energy, the table titled Total System Electric Generation in Gigawatt Hours in 2020 provides a statewide summary of electric generation, which helps place into context the estimated energy required to operate each alternative to statewide generation. See also the table titled Summary of Estimated Annual Average SWP Energy Generation, Energy Use, and Net Energy Consumption in Gigawatt Hours for Operation of the Alternatives Compared to Existing Conditions, which does disclose that energy use would increase under each of the project alternatives. As identified in Chapter 22, in the section titled Thresholds of Significance, the CEQA analysis reflects the requirements indicated in CEQA Guidelines Appendix G. The Draft EIR evaluated and

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	This cannot be correct but there is no way to tell what the drafters of the EIR have in mind.	concluded that although the project would increase the use of electrical energy, this increase was not considered wasteful, inefficient, or unnecessary use of energy and would not conflict with any state/local plan goal, objective, or policy for renewable energy or energy efficiency. In Chapter 22, the table titled Impacts on Energy from the Plans, Policies, and Programs for the No Project Alternative provides a summary of Impacts on energy from the plans, policies, and programs for the No Project Alternative. The project types were identified as part of the No Project Alternative and includes predictable actions that are expected to occur if the project is not constructed and operated. As indicated in the table, these predictable actions would require an increase in energy use, both for construction and operation. For a description of the No Project Alternative, including project types and the geographic location of the project types, see Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions.
41-4	A competently prepared document would have a table identifying the study area for each impact and a concise description of the rationale for choosing that study area. It would include maps showing where the study areas are. The preparers of this Draft EIR have been repeatedly criticized for failing to include summaries, tables, and maps that would allow the public and decision makers to easily and efficiently understand the impacts.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR and discussion of the study areas evaluated in the EIR. The EIR includes a considerable amount of information to enable full disclosure and impact analysis. The Executive Summary includes maps of the proposed alignments and major facilities, and summary tables of impacts for each resource evaluated in the Draft EIR. Descriptions of how study areas were scaled for each resource and the mechanisms that could result in impacts therein are included in the Methods for Analysis sections of the respective resource chapters (i.e., Chapters 7 through 32). Each resource chapter begins with a summary comparison of alternatives and a description of the study area. Maps, figures, and graphics are provided throughout the EIR chapters and appendices and are designed to provide the level of detail appropriate to depict potential affects and orient readers to locational information and to accurately present the effects of the conveyance facilities.

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41-5	Since these basic resources are still lacking [Maps showing study areas; summaries, tables, and maps describing impacts], establishment of a live resource to answer such questions should be established immediately. With this additional resource, a 90-day extension should allow adequate time for meaningful comment.	Please refer to the response to comment 41-1 regarding the telephone and email resources that were available for answering questions and providing information to commenters during the public review period. Please see response to comment 41-4 regarding the length and complexity of the EIR and discussion of the study areas evaluated in the EIR. Please refer to response to comment 41-2 regarding the presentation of information in the EIR and the duration of the comment period and DWR's extension of the comment period.
41-6	As a further example of time needed to provide meaningful comment, after an hour of searching a reviewer had still not located where in the Draft EIR the changes in community character and cohesion wrought upon Hood (ground zero for intake construction) were evaluated. Chapter 18 and Chapter 19 were both consulted. Intake locations and configuration have not changed much from the California WaterFix, and the WaterFix EIR identified substantial impacts on community character and cohesion, so it must be somewhere in the Delta Conveyance EIR, but it is not easy to find.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. Please refer to response to comment 41-2 regarding the duration of the comment period and DWR's extension of the comment period. Chapter 14, Land Use, addresses the issues related to land use and planning that are included in the CEQA Guidelines Appendix G. "Community character and cohesion" are not specifically identified in Appendix G of the CEQA Guidelines and, so, the EIR does not include a heading by that name. However, aspects of these issues are addressed in Chapter 14 as well as in Chapter 17, Socioeconomics, and Chapter 18, Aesthetics and Visual Resources.
41-7	The establishment of a live help line would allow community members to ask where the material could be found, saving many hours of time, and allowing community members to devote their time to making meaningful comments rather than searching endlessly to find relevant sections. Many interested parties who want to comment have full time jobs and other commitments. Meaningful review takes many hours, and an understanding is gained over multiple sessions with the document.	Please refer to the response to comment 41-1 regarding the informational materials that were posted to the EIR webpage and the telephone and email resources that were available for answering questions and providing information to commenters during the public review period.

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41-8	The need for an extension has been exacerbated by DWR's refusal to release the administrative draft EIR to the public. Had this administrative draft been released as many commenters requested, a head start could have been gained and familiarity with the organization of the document accomplished prior to release of the Public Draft.	Please refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, regarding the outreach activities conducted throughout the EIR process to provide public information and encourage public participation and comment. CEQA does not require that an Administrative Draft EIR be released for public review. To keep the public and interested parties informed about the progress related to preparation of the Draft EIR, DWR held a series of public webinars in summer 2021 to share information about specific topics being analyzed, including Fish and Aquatic Resources, Environmental Justice, and Climate Change. Please also refer to the response to comment 41-1 regarding the informational materials that were posted to the EIR webpage about the contents of the EIR and how to review the EIR to assist with review of the Draft EIR.
41-9	Virtual public hearings limit public participation. We know from almost three years of experience with pandemic-related limitations on in-person participation that virtual participation, especially in anything educational in nature, is inadequate. In-person participation in all other walks of life has resumed. There is no good reason to eliminate in-person hearings—unless the goal is to limit the public's understanding of the project and to limit public participation and comment. Please explain in writing your response to our request. Given the many delays in this and the prior renditions of this proposed project, adding six months to allow community members to at least read and review the 20,000 plus pages seems both fair and reasonable. Without this delay all that can be done is "shotgun" style comments, not specifically addressing concerns and potential solutions.	Please refer to Common Response 2, Public Outreach Activities, regarding the public meetings held during the public review period for the Draft EIR. Please also refer to response to comment 41-2 regarding the duration of the comment period and DWR's extension of the comment period.
41-10	Was there a cost-benefit analysis done? If so, where is it in the document and who made the assumptions on cost and benefits?	An economic cost-benefit analysis is not required as part of the EIR. As described in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, and Common Response 7, Implementation Considerations, if a statement of overriding

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		considerations is required to be adopted for project approval, CEQA directs consideration of whether specific economic, legal, social, technological, or other benefits including region-wide or statewide environmental benefits outweigh the unavoidable, adverse environmental effects. In addition, a cost-benefit analysis is part of DWR's overall planning process and will be completed as part of that process before moving forward with the project. Additional information regarding the cost-benefit study is provided in Common Response 7. Chapter 17, Socioeconomics, provides the analysis results of the socioeconomic effects of constructing and operating the project. The focus of the socioeconomic assessment was on the effects occurring primarily within the Delta study area.
42-1	The Delta Legacy Communities Board of Directors, on behalf of the eleven Delta Legacy Communities hereby request a six-month extension to the 90-day comment period for the Draft EIR. Each Community has unique issues that need to be addressed in the Draft EIR. This is also harvest time for many of the farmers and residents of the Delta so without the six-month extension most will have little opportunity to review and comment on the proposal. The provided 90-day comment period is inadequate to allow for public participation and comment. The Draft EIR with appendices and attachments is over 15,000 pages long and so far we have been unable to identify key matters we wish addressed.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR.
42-2	There is no concise or consistent means of determining where the study area is or how it has been defined [In regard to the DEIR being a difficult document to read in 90 days] for different	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR and for a discussion of the study areas evaluated in

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	impact analysis.	the EIR. The EIR includes a considerable amount of information to enable full disclosure and impact analysis. Descriptions of how study areas were scaled for each resource and the mechanisms that could result in impacts therein are included in the Methods for Analysis sections of the respective resource chapters (i.e., Chapters 7 through 32). Each resource chapter begins with a summary comparison of alternatives and a description of the study area.
42-3	What is further confusing is the DCA has not even completed soil test drilling to accurately describe the "project". Just today we see they are test drilling along Highway 160 outside of Hood on the way to Courtland. For the Project Alternatives wouldn't it be important to know the soil at various locations and levels before you select an intake site or tunnel path? Have they mapped all the existing and abandon gas wells? That difficulty apparently shelved the deep-water channel use concept. Where in the draft EIR are the gas wells identified? How will the gas wells be addressed during construction? Please explain where in the Draft EIR we can find this information.	Please refer to Common Response 3, Alternatives Development and Description, regarding the approach to describing the project and the level of detail required for the CEQA analysis. Please also refer to Chapter 3, Description of the Proposed Project and Alternatives, regarding field investigations that will be conducted to gather additional information to be used to inform final design and construction of the project. Regarding the comment about soil test drilling, the purpose of these soil investigations is to inform the development of the Delta Conveyance Project and to contribute to the overall understanding of the Delta's geology. As described in the Field Investigations section of Chapter 3, field investigations would be conducted to identify potential conflicts with abandoned natural gas wells during the design phase and construction phase. Determining the most accurate geophysical methods to locate abandoned natural gas wells will be part of the field test program described in Chapter 3 in the Location of Buried Groundwater and Natural Gas Wells section. As stated in the Potential Future Field Investigation technical memoranda (Delta Conveyance Design and Construction Authority 2022a, 2022b), these investigations would be conducted following adoption of the EIR to focus on the adopted project and to facilitate access to the sites for detailed field investigations. The information presented in the Chapter 3 Field Investigations section also describes activities, such as past and future efforts to identify geotechnical,

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		hydrogeologic, agronomic, and other field conditions that will guide appropriate construction methods and monitoring programs, which would occur during the final engineering design and/or construction phases of the project facilities. As described in Section 4.2.4 of the Delta Conveyance Design and Construction Authority Potential Future Field Investigation – Bethany Reservoir Alternative technical memorandum (Delta Conveyance Design and Construction Authority 2022a), it is assumed that 40% of the area surveyed during design would be subject to additional land surveys, drilling, and trenching to locate these buried features. If there were additional actions not described in the EIR associated with the field investigations, subsequent activities would comply with the necessary state environmental review requirements and may require additional CEQA review, as described in the Introduction section of Chapter 3. Chapter 27, Mineral Resources, provides a discussion of known gas resources throughout the study area. Chapter 25, Hazards, Hazardous Materials, and Wildfire, provides a discussion of the potential for the project to create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. All actions to remove or abandon oil and natural gas wells and pipelines would occur in accordance with state laws, including CalGem and Central Valley Regional Water Quality Control Board requirements. All work would be completed in accordance with Cal/OSHA, Mining and Tunneling Unit. In regard to the deep-water channel use concept, it is not clear what project is being referred to. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3 regarding the alternatives development process and the range and scope of alternatives considered as well as a discussion about how through-Delta alternatives would not meet most of the basic project objectives.

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42-4	A competently prepared document would have a table identifying the study area for each impact and a concise description of the rationale for choosing that study area. It would include maps showing where the study areas are. The preparers of this Draft EIR have been repeatedly criticized for failing to include summaries, tables, and maps that would allow the public and decision makers to easily and efficiently understand the impacts.	Please see response to comment 42-2 regarding the length and complexity of the document and use of maps in resource chapters as appropriate.
42-5	As a further example of time needed to provide meaningful comment, after an hour of searching a reviewer had still not located where in the Draft EIR the changes in community character and cohesion wrought upon Hood (ground zero for intake construction) were evaluated. Chapter 18 and Chapter 19 were both consulted. Intake locations and configuration have not changed much from the California WaterFix, and the WaterFix EIR identified substantial impacts on community character and cohesion, so it must be somewhere in the Delta Conveyance EIR, but it is not easy to find. Many interested parties who want to comment have full time jobs and other commitments. Meaningful review takes many hours and an understanding is gained over multiple sessions with the document.	Please see response to comment 42-1 regarding the length and complexity of the EIR and the duration of the comment period and DWR's extension of the comment period. Chapter 14, Land Use, addresses the issues related to land use and planning that are included in the CEQA Guidelines Appendix G. Community character and cohesion are not included in Appendix G of the CEQA Guidelines and, so, are not analyzed specifically in the EIR. However, aspects of issues related to community character and cohesion are addressed in Chapter 14, Land Use, Chapter 17, Socioeconomics, and Chapter 18, Aesthetics and Visual Resources.
42-6	Virtual public hearings limit public participation. We know from almost three years of experience with pandemic related limitations on in-person participation that virtual participation, especially in anything educational in nature, is inadequate. In-person participation in all other walks of life has resumed. There is no good reason to eliminate in-person hearings—unless the goal is to limit the public's understanding of the project and to limit public participation and comment. Please explain in writing your response to our request and the	Please refer to Common Response 2, Public Outreach Activities, regarding the public meetings held during the public review period for the Draft EIR as well as the duration and extension of the comment period.

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	other questions raised herein. Given the delays in this and the prior renditions of this proposed project, adding six months to allow community members to at least read and review the document seems both fair and reasonable.	
43-1	great letter Dan!	This information describes the background of the organization or individual commenter, clarification on the submittal of the comment letter, or general introductory text. 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.
44-1	I write on behalf of Sierra Club California's more than 500,000 members and supporters statewide to respectfully request a 90-day extension of time to provide public comment on the Draft Environmental Impact Report for the Delta Conveyance Project. Our organization is heavily engaged with the Delta Conveyance Project and management of the San Francisco Bay-Delta and is committed to ensuring that this public engagement process is as fruitful as possible for all stakeholders.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR.
44-2a	The Draft EIR was circulated for public review on July 27, 2022, with the deadline for public comment October 27, 2022. The document totals nearly 20,000 pages, including technical appendices. CEQA Guideline (14 CCR) section 15141, however, states, "The text of draft EIRs should normally be less than 150 pages and for proposals of unusual scope or complexity should normally be less than 300 pages."	Please see response to comment 44-1 regarding the duration and extension of the comment period and regarding the length and complexity of the EIR.
44-2b	This Draft EIR is enormous, requiring a corresponding amount of time to review and analyze. There is a vast difference between reviewing a 300-page Draft EIR and one approaching 20,000 pages. Moreover, a related EIS for the Delta	Please see response to comment 44-1 regarding the duration and extension of the comment period and regarding the length and complexity of the EIR.

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	Conveyance Project is also anticipated to be released during this comment period. In this context, 90 days does not provide adequate time for grassroots organizations and community members to adequately review the draft EIR, let alone have the ability to engage meaningfully in providing feedback as expected from this process. The Environmental Impact Report is an important step in evaluating the feasibility of the proposed project, its alternatives, and their environmental consequences, while creating greater visibility, transparency, and public engagement in the Proposed Project. Its impact on the Delta and communities will be enormous and permanent. It is fundamental that all stakeholders have adequate time to engage in this process. Our organization has been awaiting this document's release for nearly two years and needs to have adequate time to provide meaningful feedback on this document. For these reasons, we request to extend the comment deadline to January 25, 2023. We respectfully request that you provide us with a decision no later than September 9, 2022.	
45-1	We would like digital copies of the input and output files for the computer models used in hydrologic modeling of the Delta Conveyance Project. We would like both the input and the output files for the following models used in the study: 1. CALSIM 3 2. DSM2 3. C2VSIM 4. SCHISM 3D. If you have any questions or need any additional information, please let me know.	In regard to the portion of the comment requesting additional information, the Department of Water Resources (DWR) responded to all requests for detailed modeling information within the comment period.
46-1	Is there a contact person that I can call and talk to about the files? We have a very short time to review this material, and I want to make sure that what they are sending us is what we	In regard to the portion of the comment requesting additional information, the Department of Water Resources (DWR) responded to all requests for detailed modeling information within the comment period.

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	need. It might save on a few back and forth iterations in the email process.	
48-1	After reviewing the EIR document, Freeport Citizens Community will need additional time to thoroughly review the document. Due to the size and scope of this project that will affect our community and others for years to come it is imperative that all our concerns are addressed and mitigated. We don't possess the staff to work on this 100% of the time since we are all volunteers with other obligations. We are requesting an extension of 6 months.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period.
55-1	As you know, the Delta Conveyance Project Draft Environmental Impact Report was released for public review and comment on July 27, 2022, for a comment period ending October 27, 2022. The comment period is not long enough to allow interested parties, especially those in agriculture, to comment. Please take into consideration, this is a busy time for all California farmers who are harvesting, and the time period does not grant sufficient time to review the document thoroughly.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period.
55-2	We are requesting at minimum, a 90-day comment period extension to allow adequate time to review the proposed changes and make comments. The Draft EIR with appendices and attachments is over 20,000 pages long and poorly organized without a definitive project plan which makes reviewing and commenting on the actual impacts challenging.	Please refer to response to comment 55-1 regarding DWR's extension of the comment period. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. As described in Common Response 1, in the discussion of the length and complexity of the EIR, the EIR necessarily includes a considerable amount of information to adequately analyze potential impacts and was presented in a format with emphasis on information useful to the public. Furthermore, as described in Common Response 1, the EIR followed generally accepted practices for the preparation of such documents.
55-3	Changes in the Delta Conveyance Project Draft Environmental Impact Report would make a significant impact on California agriculture and warrant a longer period for review and	Please see Chapter 15, Agricultural Resources, regarding project impacts on agricultural lands. Please see Common Response 12, Agricultural Resources, regarding construction traffic and effects on agricultural

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	comments.	practices. Please also see Chapter 17, Socioeconomics, ECON-6, regarding changes in agricultural economics in the Delta and project area. Please refer to response to comment 55-1 regarding DWR's extension of the comment period.
56-1	I am writing this letter to you to request an extension to the public comment period on the Draft Environmental Impact Report (Draft EIR) for the Delta Conveyance Project. We have been tasked by several stakeholders in the Delta to review the hydrologic studies of the project and its potential impacts.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period.
56-2	There are several hydrologic models that have been used to evaluate the environmental impacts from the projects. These models are complex and require a detailed evaluation in order to assess their proper use. Some of the models have been made available for the public to evaluate. Altogether there are over 5,600 files of model input and output data that will need to be evaluated, and that just represents what has been made available to this date. We are already over one-third of the way into the evaluation period and are still waiting on the data for the most important, and most complicated model to be made available to the public. This model "SCHISM" will require us to buy time on a supercomputer or commercial server farm in order to run it and evaluate its output. The short time period for review, and the delay in making the model data available makes it nearly impossible to develop any reasonably through evaluation of the hydrologic aspects of the EIR.	Please see the response to comment 56-1 regarding the extension of the comment period. In regard to the portion of the comment requesting additional information, DWR responded to all requests for detailed modeling information within the comment period. Please also see Common Response 9, Hydrologic Modeling and Approach, regarding the models used in the analysis.
56-3	Given the complexity of the project, the wide ranging area that can be effected by its operation, and that all the model data has yet to be made available, we are requesting that the comment period be extended by an additional 90 days to January 27, 2023. A six month review of a project of this size and complexity is much more appropriate and reasonable.	Please see the response to comment 56-1 regarding the extension of the comment period. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR.

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79-1	I am reaching out about the virtual public hearing tomorrow at 9 AM. Do we need to RSVP for this, or do I just need to click on the Zoom link below?	The Department of Water Resources (DWR) responded to all requests for additional information within the comment period.
151-1	Thank you. Good morning. My name is [speaker name]. And I'm here on behalf of Associated General Contractors of California.	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.
151-2	We [Associated General Contractors of California] are here in strong support of the Governor's plan to protect the reliability of our state and local water supplies by fixing the water distribution network through the Delta. The release of the Environmental Impact Review documents represents progress in moving the Delta Conveyance Project forward.	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. 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.
151-3	The Bethany alignment is a step in the right direction. Assisting to kill off old conflicts in the past, while also pushing a project that is sufficient to protect water supplies and the economy that relies on a reliable system. Investments in our water infrastructure in doubt will pay dividends in the future as we can secure our water supplies and protect hundreds of thousands of regional jobs that depend on the stability of this water source.	This comment does not raise any significant issues regarding the environmental analysis. DWR has reviewed all comments and will consider all comments in its decision-making process.
151-4	The proposed Delta Conveyance Project will engineer systems that better captures water when it is abundant, so it is available during periods of extreme drought.	Please see response to comment 151-2 regarding comments in support of the project.
151-5	We're [Associated General Contractors of California] eager to work with the administration to move this project forward and see it through to completion. Thank you.	Please see response to comment 151-2 regarding comments in support of the project. Please also refer to Common Response 7, Implementation Considerations regarding community and interested party engagement during project implementation.

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152-1	Thank you. Hi, my name is [speaker name]. I am here on behalf of The California Alliance For Jobs. We represent over 2,000 heavy construction companies and 80,000 union construction workers, and advocate for responsible investments in public infrastructure projects.	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 or adequacy of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
152-2	We strongly support Governor Newsom's Delta Conveyance Project. More than two-thirds of Californians rely on water distribution systems that are outdated and vulnerable to threats of climate change and natural disasters. California has changed significantly in the last 60 years. And this system is no longer suited for our current hydrological conditions. Droughts will be drier, last longer, while rainy years will be wetter and carry increased risk of flooding. Our current water distribution infrastructure is incapable of handling the changes associated with this new water future. A modernized Delta conveyance will improve our ability to capture and move water during and after stormy events to better prepare for future dry years. It will also fortify our infrastructure and withstand the hazards posed by earthquakes and floods. We strongly support this proposal. Thank you.	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.
155-1	Good morning. Thank you for the opportunity to comment today. My name is [name redacted], and I'm a policy advocate with Sierra Club California, and I'm here on behalf of more than half a million members and supporters statewide to provide comments on the draft EIR for the Delta Conveyance Project	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 EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
155-2	And we [Sierra Club California] respectfully request that the DWR extend the public comment period to allow additional time for review and public feedback on the DEIR.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period.

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155-3	The environmental impact report is an important step in evaluating feasibility of the proposed project, its alternatives, and the environmental consequences while creating greater visibility, transparency, and public engagement. It's fundamental that all stakeholders have adequate time to engage in this process.	Please refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, regarding the outreach activities conducted throughout the EIR process to provide public information and encourage public participation and comment. Please also refer to response to comment 155-2 regarding the duration of the comment period and DWR's extension of the comment period.
155-4	The draft EIR totals roughly 20,000 pages including technical appendices. Given the size of this document, a comparative amount of time should be provided to allow the organizations and community members to review and provide meaningful feedback on the document.	Please refer to response to comment 155-2 regarding the duration of the comment period and DWR's extension of the comment period. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR.
155-5	I respectfully request the DWR extend the comment period and provide an additional 90 days for public review.	Please refer to response to comment 155-2 regarding the duration of the comment period and DWR's extension of the comment period.
155-6	Second, I would like to urge DWR to ensure that the proposed alternatives and analysis reduce reliance on the Delta consistent with the Delta Reform Act and the State Water Board's proposed update to the Bay/Delta water quality control plan.	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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws, including the Delta Reform Act. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for more information regarding the project's relationship to the Delta Reform Act and the Bay-Delta Water Quality Control Plan.
155-7	Lack of fresh water flows moving to the Delta has worsened in recent years, causing high water temperatures, violation of Delta salinity standards, and proliferation of harmful algal blooms in the Delta. These effects have severe consequences for aquatic species and Delta communities.	Please refer to Chapter 5, Surface Water, which describes potential changes to surface water resources that could result from implementation of the project. Please also refer to Chapter 9, Water Quality, and supporting appendices, for discussion and analysis of temperature, salinity, harmful algal blooms, and other potentially significant environmental impacts as a result of project construction and operations, which were determined to be less than significant.

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		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). Please also refer to Common Response 3, Alternatives Development and Description, regarding how the project would be operated to increase deliveries during excess flow conditions while meeting regulatory requirements. Additionally, the EIR addresses potential environmental impacts on aquatic species in Chapter 12, Fish and Aquatic Resources, which were determined to be less than significant or less than significant with mitigation incorporated.
155-8	The State Water Board is currently working on an update to the Bay/Delta water quality control plan which would likely require increased flows through the Delta reducing the water that's available for diversion. Likewise, the Delta Reform Act established a state policy of reducing reliance on the Delta. However, the draft EIR shows that the Delta conveyance project will divert more water from the Delta than the state water project currently does, and even more so during critically dry periods when this ecosystem is at greatest risk of having other water quality impact. To be consistent with the Delta Reform Act and the State Water Board's proposed update to the Bay/Delta plan, the DWR must analyze alternatives that would increase Delta outflows and reduce exports.	Please refer to response to comment 155-6 regarding the project's purpose and objectives and the project's relationship to the Delta Reform Act and the Bay-Delta Water Quality Control Plan. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, regarding the alternatives development process, the range and scope of alternatives considered, and alternatives suggesting demand management and reducing or eliminating exports. 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). The analyses provided in Chapters 5–32 evaluate the potential impacts of the proposed operations for all alternatives. Please refer to Chapter 5, Surface Water, including the table titled

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		Comparison of Surface Water Resources by Project Alternative, regarding the magnitude of anticipated changes to Sacramento River Basin flows and SWP/CVP reservoir storages that are expected to result from the project alternatives.
155-9	I urge the DWR to include an alternative that would achieve the same water supply reliability goals while reducing reliance on Delta exports by pursuing regional and local projects to increase water conservation efficiency and additional demand reduction measures.	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. Common Response 3 also includes a discussion regarding alternatives suggesting demand management and reducing or eliminating exports. 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 users to ensure California's water resources are being used efficiently and sustainably.
156-1	Personally, I also wanted to address concern over the allotted time given for this comment period. On paper 90 days to respond to a draft EIR may seem like plenty of time; however, in practice, that is not so. Given the length of the document and the depth that interested parties want to put into the examination of the DEIR documents, allotting 90 days for interested parties to review such an extensive and detailed document is not nearly enough time. Larger organizations may have the ability and resources to review the DEIR than NGOs will have, and small NGOs will have more resources than the average person. But to spend the time we would like to meaningfully review the	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. Please also refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period.

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	documents, much of our time would need to be dedicated solely to the DEIR. However, many do not have the resources to dedicate much more time to this because our organizations also have many other projects. I've heard from multiple organizations that because they're busy attending other events and other projects, they were unable to fully begin studying the DEIR until this month. The document is so large that there are also several organizations trying to organize and work together to ensure the entirety of the DEIR is reviewed. The Delta Conveyance Project is one that has been decades long in the making and is one of the most, if not the most, controversial water project in the state. And I would like to suggest the DWR consider an extension of the comment period to benefit the numerous interested parties.	
156-2	Next I wanted to address the concern over the threat that this project poses for Tribal cultural resources. All the draft EIR or DEIR alternatives result in the disturbance of cultural resources, including historic [T]ribal villages and mounds from before European contact which cannot be adequately mitigated. The DEIR explicitly states the project would result in significant impact on Delta [T]ribal cultural resources. This is unacceptable. Tribes and [T]ribal members deserve to have their cultural history and places preserved. California has a history of purposeful erasure of California's indigenous cultures and traditions. And to move forward with this project would mean once again the state is taking affirmative action to harm	DWR recognizes and affirms Executive Order N-15-19 which apologized on behalf of the citizens of the State of California to all California Native Americans for the many instances of violence, maltreatment, and neglect California inflicted on Tribes. Please refer to Common Response 16, Tribal Cultural Resources, regarding how DWR's efforts to identify and analyze impacts on Tribal cultural resources was consistent with current State policies regarding Indigenous people in California. Although the EIR concludes that impacts on cultural resources and Tribal cultural resources would be significant and unavoidable, mitigation measures have been identified to avoid or minimize impacts in consideration of input from Tribes and with an emphasis on providing Tribes the opportunity to continue to consult with DWR toward protection

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	indigenous Californians.	of places with cultural value to Tribes. For example, as described in Chapter 32, DWR would implement Mitigation Measure TCR-1a to incorporate preconstruction surveys and feasible avoidance or protection measures in the design, construction, operations, and maintenance activities to avoid or protect Tribal cultural resources. Where avoidance or protection is not feasible, DWR would implement other mitigation measures (Mitigation Measures TCR-1b, TCR-1c, and TCR-1d), as applicable. This would include mitigation by way of resource-specific treatment in consultation with affiliated Tribes and the incorporation of Tribal knowledge, including Tribal Ecological Knowledge, into the preparation and implementation of the Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources (Appendix 3F) and other measures for mitigating impacts on terrestrial biological resources, fish and aquatic resources, and cultural resources. DWR is committed to continuing consultation and engagement with Tribes regarding the implementation of the mitigation measures to minimize and mitigate the project's potentially significant impacts. Comments regarding the approval of projects with significant and unavoidable impacts are addressed in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please also see Common Response 16, Tribal Cultural Resources, regarding the consideration of Tribal perspectives in DWR's decision on whether to approve the project.
156-3	To move forward with this project would just be another act of cultural genocide from the State of California against Native Americans. And DWR needs to reexamine the impact of this project and how it will impact [T]ribal cultural resources and consider -- it should consider the type of relationship it wants to have with the [T]ribal communities in the future.	DWR recognizes and affirms Executive Order N-15-19, which apologized on behalf of the citizens of the State of California to all California Native Americans for the many instances of violence, maltreatment, and neglect California inflicted on Tribes. Please refer to Common Response 16, Tribal Cultural Resources, regarding how DWR's efforts to identify and analyze impacts on Tribal cultural resources was consistent with current State policies regarding Indigenous people in California.

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		Chapter 32, Tribal Cultural Resources, section titled Consultation and Engagement with Tribes, describes DWR's good faith effort to foster meaningful consultation that recognizes Tribal expertise in the identification and consideration of Tribal cultural resources. DWR is committed to continued understanding and incorporation of Tribal knowledge through close collaboration and engagement on the implementation of the mitigation measures as described in Chapter 32.
156-4	Lastly, this project results in a significant impact on the Delta and possibly the San Francisco Bay, Trinity, and Sacramento Rivers, toxic algal blooms and fish runs at a time when our rivers and Delta and Bay are in crisis. This is much more than a construction project and the impact to cultural resources and Delta ecosystems are far too great to move forward with this project.	The assertion that the project would have significant impacts on the San Francisco Bay, Trinity River, and Sacramento River upstream of the proposed intakes is not consistent with the analyses in the EIR; see Chapter 5, Surface Water, Chapter 6, Water Supply, Chapter 9, Water Quality, and Chapter 12, Fish and Aquatic Resources, for a description of the effects of the project in these regions. Chapter 9 specifically addresses toxic algae blooms under Impact WQ-14, which concludes that the impact of project alternatives on CHABS would be less than significant. Chapter 12 concludes that potential impacts on fish and aquatic resources would be less than significant with mitigation. Potential impacts on cultural resources are discussed in Chapter 19, Cultural Resources, which concludes that potential impacts would be significant and unavoidable. The analysis also includes mitigation measures to avoid and reduce effects to the extent feasible. Comments regarding the approval of projects with significant and unavoidable impacts are addressed in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please also see Common Response 1 regarding comments that state opinions of general opposition to the project.
157-1	Hi. My name is [commenter name]. I'm a Delta farmer in	This information states the name and occupation of the commenter. It is

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	Walnut Grove.	not a comment on the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
157-2	My comment today will focus more on the no project alternative. This tunnel project will take almost two decades of construction and billions of dollars before it's in operational mode. This tunnel does not create any new water and does not store any new water, but will permanently destroy the environmental, our historic communities, and the economy. If water is unavailable, that tunnel will be empty and no benefit to the communities that are looking to use it will be there.	As described in Chapter 2, Purpose and Project Objectives, 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, potentially, CVP water deliveries south of the Delta, consistent with the State's Water Resilience Portfolio in a cost-effective manner. The comment assertions regarding the significance of project impacts are not consistent with the analyses in the EIR. Please refer to Chapters 7-32 of the EIR for analyses of potential significant environmental impacts of the project and proposed mitigation measures, including those related to the environment, local communities, and socioeconomics. An analysis of significant impacts and associated mitigation measures related to historical and cultural resources is contained in Chapter 19, Cultural Resources, and an analysis of socioeconomic effects is contained in Chapter 17, Socioeconomics. An analysis of potentially significant impacts on fish and aquatic species is provided in Chapter 12, Fish and Aquatic Resources, which were determined to be less than significant with mitigation. Please see Chapter 13, Terrestrial Biological Resources, regarding potentially significant impacts on wildlife and habitats, which were determined to be less than significant with mitigation. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding the project's anticipated water supply reliability benefits.
157-3	Specifically in the groundwater chapter, and I assume in several other chapters, the no project option identifies local alternatives in which the EIR states that with most of them, there will be no impact to the Delta or to those local communities that implement them. These options would actually help those communities with local control and	The assertion that the No Project Alternative would have no impacts or limited impacts is not supported by the Draft EIR. Rather, not implementing the project would have a wide range of impacts on multiple environmental resources in different geographies. 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,

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	economic boost which will increase jobs and job security and actual water sustainability for themselves to be reliant.	a discussion of the impacts under the No Project Alternative, and commenter preference for the No Project Alternative.
157-4	In addition, these alternatives [Local alternatives listed in the Groundwater Chapter] would be cheaper to construct, be in operation sooner, and be more resistant to natural disasters, including earthquakes, water quality, and also reliability for those local communities.	Please refer to response to comment 157-3 regarding the No Project Alternative. Please also see Common Response 3, Alternatives Development and Description, regarding the alternatives development process and the range and scope of alternatives considered in the EIR.
157-5	I suggest that this project move forward with the no project option, and take the money that they're using right now and use it in those local communities to help boost those recycling, conservation stuff that they are trying to implement right now, and help them get those [Local alternatives listed in the Groundwater Chapter] sustained faster for them to actually have water.	This is a comment supporting the No Project Alternative and is not a comment on the adequacy of the EIR. Please see response to comment 157-3 regarding the No Project Alternative and response to comment 157-4 regarding the alternatives development process and the range and scope of alternatives considered in the EIR. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project.
160-1	[Speaker Name]: Good morning. This is [speaker name] from Catholic Charity.	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.
160-2	I am -- I'm in agreement with several of the comments that have been made in hopes that folks will be given an ample amount of time to be able to engage. I understand that this is a public comment, but I'm really remiss to say that.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period.
160-3	There are a lot much people that would be commenting right now had they been given the opportunity. And I would really strongly recommend more time to allow people to review a document that is over 20,000 pages long and is using a language somewhat of a higher register, I think it's only fair that you allow the public to really get an opportunity so for us to even be able to engage with the community and extend,	Please refer to response to comment 160-2 regarding the duration of the comment period and DWR's extension of the comment period. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR.

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	give them an opportunity to understand and break down the document.	Please also refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, regarding the outreach activities conducted throughout the EIR process to provide public information and encourage public participation and comment.
160-4	This is obviously going to make some changes for our communities at large. And we need to be conscious and mindful of the fact that there are folks out there that are not aware of these changes that are happening. And perhaps the outreach that has been conveyed for these such sessions and sessions of today, were not suffice in the sense that most folks would have been on this call had they known the gravity of this type of decision-making.	Please refer to response to comment 160-3 regarding the outreach activities conducted throughout the EIR process to provide public information and encourage public participation and comment.
160-5	And that's pretty much the end of my comment. Thank you so much.	This comment provides general closing text. It is not a comment on the proposed project or the contents of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
172-1	[Speaker name]: Okay. My name is [speaker name]. I am the chairman of the Delta Legacy Communities Corporation that represents the 11 Delta Legacy Communities in the Sacramento Delta.	This information states the name and background of the commenter. 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.
172-2	And there's some very difficult ability to even understand and review the draft EIR, and we [Delta Legacy Communities Corporation] requested that they give us some additional time and the response was maybe. Well, the problem with that response is, is that the time is clicking and our ability to really even analyze the environmental impact report is unavailable and we're running out of time.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period.
172-3	The other problem is, is that the science upon which they're basing this latest Environmental Impact Report has not been updated to accurately reflect the seismic problems and other issues that may exist on the Delta.	The assertion that the EIR is not based on the best available science is not consistent with the EIR. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available science.

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172-4	And, finally, there is no real good cost benefit analysis. The whole purpose of building this tunnel is to make it financially attractive. Metropolitan Water District is not going to finance this project if the costs are as high as they seem to be without any guarantee of water.	Please see Common Response 7, Implementation Considerations, regarding a cost-benefit analysis, project costs, and funding. Please also refer to Chapter 2, Purpose and Project Objectives, regarding the project's purpose and objectives.
172-5	And then the final thing that the State of California needs to do is examine the system that exists. They already have a water conveyance system. It's called the Sacramento River and what they need to do is maintain the existing levees, not allow them to become in disrepair, and to bolster those levees that can then transfer the water depending on how much or how little water we have. If we have extra water, great. If we don't, great. At least the system, the infrastructure will exist to maintain it.	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 response to comment 172-4 regarding the project's purpose and 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, including levee improvements.
172-6	These intakes and this tunnel will do nothing but destroy the Delta, and if the Delta stewardship council does their job, this project will never be certified. Thank you.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. The comment assertions regarding the significance of project impacts on the Delta are not consistent with the analyses in the EIR. Please refer to Chapters 7-32 of the EIR for analyses of potential significant environmental impacts of the project and proposed mitigation measures. Please also refer to the Efforts to Minimize Delta Community Effects technical memoranda in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022a, 2022b), regarding the engineering and design modifications made to reduce Delta community effects.
176-1	California's water issues are well documented and well known, but chief among them is that we are unable currently to adequately move water when it's available to us. For example, we know that if the Delta Conveyance Project had been in	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.

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	operation at the end of last year when we saw record breaking storm events, we could have moved and stored enough water for more than 2,000,000 Californians. But we lacked the infrastructure to enable us to do so. I think it's hard to say that we can, you know, conserve our way out of this drought. It's not a matter of conservation versus recycling versus conveyance. It's an all-of-the-above approach. We need everything possible in order for us to prepare for the new hydrological conditions that California is facing due to the effects of climate change. This project is absolutely necessary in order for us to ensure that our main water distribution infrastructure that provides water for more than two-thirds of the state, does not become a stranded asset. If we are not able to move the water when it is available, then the entire state will suffer. Conserving and developing new local water resources is crucial, but we still need to invest in conveyance. It's the only way to make all the proposed solutions work most effectively. We [Californians for Water Security Coalition] encourage the state to move forward with the Bethany alignment, because it is a viable solution to improve the reliability of our water distribution network.	
180-1	All right. Hello, members of the Board of Trustees. I am a senior intern with Restore the Delta and a metropolitan planning and GIS student at Sacramento State. As I welcome fall today, I say bye to my second summer conducting microcystin tests in the waterways surrounding Stockton, a Central Valley community within Region 5.	This information describes the background of the commenter. 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.

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180-2	Over the past weeks, I have begun to analyze the observations throughout my fieldwork with the Restore the Delta Science Program and how it plays a role in the drafting of the EIR.	This information describes the background of the commenter. 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.
180-3	Harmful algae blooms are one threatening layer to the spacial [sic] issues within the Delta and it's most vulnerable populations. Planning for water management infrastructure must reflect this concern and address the demands of climate change impact and the livability of Delta's most vulnerable populations.	Please refer to Chapter 4, Framework for the Environmental Analysis, and Chapter 30, Climate Change, for an explanation regarding how climate change was incorporated into the EIR's analysis. 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). Please see Chapter 9, Water Quality, Impact WQ-14, which concludes that potential impacts related to cyanobacteria harmful algal blooms could be less than significant. Please also 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 refer to Chapter 29, Environmental Justice, regarding Delta communities, residents, and environmental justice.
180-4	The results from our microcystis tests can be found in the HABs, or Harmful Algal Blooms, report map maintained by the California Water Boards. Our findings demonstrate the importance of increasing water monitoring along Region 5. From that data source, it is known that in this year, 2022, the total and most common HABs reports labeled as caution where 494 cases, 209 of those cases, almost half of these reports were spotted in Region 5, Central Valley.	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. Please see response to comment 180-3 regarding the EIR's water quality analysis related to cyanobacteria harmful algal blooms.
180-5	The socioeconomic disparities across the Central Valley are widely known. Witnessing the impact heat waves and heavy water diversions can have on the compromised Delta and Environmental Justice Communities only aggravates the stressors under which these communities survive. The sections on the Draft Environmental Impact Report covering cyanobacteria and Environmental Justice must reflect these	Please refer to response to comment 180-3 regarding how climate change was incorporated into the EIR's analysis and the EIR's water quality analysis related to cyanobacteria harmful algal blooms. Chapter 29, Environmental Justice, specifically addresses Environmental Justice and includes an in-depth discussion of the impacts and mitigation measures. This includes state and federal policies for consideration of

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	concerns and act upon them more adequately.	minority and low-income populations. As described in Chapter 29, several impacts were found to be significant and unavoidable and would have a disproportionately adverse effect on environmental justice. Please also refer to Chapter 17, Socioeconomics, regarding potential socioeconomics effects in the Delta.
180-6	Further neglecting the demands of climate change will deteriorate the Delta ecology and worsen disparities and displacement conditions among the Environmental Justice Communities.	Please refer to response to comment 180-3 regarding how climate change was incorporated into the EIR's analysis and how the project will provide climate change resilience to the State Water Project. Please also see response to comment 180-5 regarding the environmental justice analysis.
182-1	I am [speaker name] with the California Chamber of Commerce, CalChambers is the largest broad-based business advocate government in California. Our membership represents one quarter of private sector jobs in California, and includes companies of all sizes from every industry within the State.	This information states the name and background of the commenter. 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.
182-2	California's water issues are well documented and well known, but chief among them is that we're unable to adequately move water when it's available to us. Every year water flows out to sea because our current infrastructure is unable to move high flows to where it is needed.	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. Please refer to Common Response 3, Alternatives Development and Description, 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).
182-3	If the Delta Conveyance Project had been operational at the end of 2021 when we saw record-breaking storm events approximately 236,000 acre-feet of water could have been captured and moved into storage. That would have been enough water for 2.5 million Californians for a full year.	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.

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182-4	In times like the current drought, it becomes especially apparent that we need to be able to capture water when it's available. This can only be done with modernized conveyance infrastructure. We cannot solve our water supply issues through conservation or developing water -- local water sources alone.	Please see response to comment 182-3 regarding comments that state opinions of general support for the project.
182-5	This is not either or, but it is an all-of-the-above approach that's needed. Conserving and developing new local water resources is an important piece of the puzzle, but we must invest in our conveyance system. It is the only way to make all of these proposed local solutions work most effectively.	Please see response to comment 182-3 regarding comments that state opinions of general support for the project.
182-6	We encourage the State to move forward with the project. It is an affordable and viable solution to improve the reliability of our water distribution system.	Please see response to comment 182-3 regarding comments that state opinions of general support for the project.
183-1	Hi. Hello. Can you hear me?	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.
183-2	So, my name is [speaker name]. I am here on behalf of the Valley Industry and Commerce Association. We are here in strong support of the governor's plan to protect our State and local water supplies by fixing the water distribution network through 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.
183-3	The release of the Environmental Impact Review represents progress in moving the project forward, with Bethany Alignment being a step in the right direction with attempts to end old conflicts, pushing a project that is sufficient to protect water supplies. The economy relies on reliable water systems. Investments in our water infrastructure now will pay dividends	Please see response to comment 183-2 regarding general support for the project.

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	in the future as we secure our water supplies and protect hundreds of thousands of regional jobs that depend on the stability of this water source.	
183-4	The proposed Delta Project will engineer a system that better captures water when it is abundant, making it available during periods of extreme drought, which we are currently suffering through. We're [Valley Industry and Commerce Association] eager to work with the administration to move this project and see through completion.	Please see response to comment 183-2 regarding general support for the project.
187-1	Thank you for opportunity to comment. My name is [name redacted]. I am an intern for Restore the Delta. I have spent a lot of last two months working on harmful Algal bloom monitoring in both the water with Restore the Delta and in the air with the University of North Carolina's Institute of Marine Sciences.	This information states the name and the background of the commenter. 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.
187-2	I have some concerns with the Delta Conveyance Project in relation to the increasing bloom problem in the Delta. First off, it has been recognized by many that there isn't enough monitoring being done, which leads to gaps in data or lack of understanding of the greatest threats these blooms pose.	Please refer to Chapter 9, Water Quality, Impact WQ-14, for the analysis of potential environmental impacts related to harmful algal blooms, which were determined to be less than significant. DWR's analysis meets the CEQA requirement to make a good-faith effort at full disclosure, and every effort has been made to base the analyses on up-to-date and accurate information. 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 preparation of the EIR.
187-3	I believe that we need to increase our [HABS] monitoring as well as finding solutions before a greater issue is created by exporting more water. If bloom activity in the Delta makes its way into the water during the exporting process, we can be seeing more blooms where the water is stored, which widens the expanse of these blooms problem.	Please see response to comment 187-2 regarding effects on cyanobacteria harmful algal blooms resulting from facility operations and maintenance. Please also refer to Common Response 10, Surface Water Quality and Groundwater Resources, for additional information regarding the EIR's water quality impact analysis.

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187-4	Not only is this [HABS] a water quality concern, it is also an air quality concern. Not to mention exporting water from the upstream of the Delta will likely increase residence times downstream where we have been seeing our worst blooms.	Chapter 9, Water Quality, addresses harmful algal blooms under Impact WQ-14, which concludes that the impact of project alternatives would be less than significant. Please also refer to Common Response 10, Surface Water Quality and Groundwater Resources, for additional information regarding residence time modeling. Please refer to the methods and thresholds for the evaluation of impacts described in Chapter 23, Air Quality and Greenhouse Gases, as it pertains to air quality concerns from harmful algal blooms. Please refer to Chapter 26, Public Health, regarding the assessment of potential impacts on public health associated with exposure of sensitive receptors to local criteria pollutant emissions.
187-5	I feel like there are too many problems that need solving within the Delta, including the HABs problem that we need focus on before moving forward with a tunnel project.	Please refer to Chapter 2, Purpose and Project Objectives, and Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's purpose and objectives. 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, operation, and maintenance of the proposed project and its alternatives. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7–32 of the EIR. Please see response to comment 187-3 regarding potential effects on cyanobacteria harmful algal blooms resulting from facility operations and maintenance.
188-1	[Speaker Name]: Good afternoon. I'm [speaker name], the community organizer and government liaison for Restore the Delta. And I'm here today to provide a comment on behalf of South Stockton Environmental Justice Communities.	This information states the name and the background of the commenter. 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.

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188-2	Restore the Delta urges you to investigate and collect analyses for the sea level rise that will flood intakes in Sacramento.	Please refer to Chapter 4, Framework for the Environmental Analysis, and Chapter 30, Climate Change, for an explanation regarding how climate change was incorporated into the EIR's analysis. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding how the Delta Conveyance Project will provide climate change and sea level rise resilience to the State Water Project. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, and Impact FP-1 in Chapter 7, Flood Protection, for a discussion of the design standards for the intake structures. Please refer to Appendix 7A, Flood Protection 2040/2072 Analysis, for an evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions. This analysis incorporates assumptions regarding changes to hydrology and sea level rise as a result of climate change.
188-3	The Delta Stewardship Council shows that California is already experiencing warmer temperatures, more extreme heat, harsher storms that increase flood risks and rising sea levels. With the combination of these factors, there's a high probability that the intakes will become flooded. If you do not decrease these impacts in San Joaquin County, you will hurt the existing pumps and endanger the lives and homes of Environmental Justice Communities living in one of the most vulnerable flood points in the State.	Please see response to comment 188-2 regarding the design standards for the intake structures, the evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions, and how the Delta Conveyance Project will provide climate change and sea level rise resilience to the State Water Project. The EIR provides impact analyses of the environmental resources raised by the comment, including flooding in Chapter 7, Flood Protection, and environmental justice in Chapter 29, Environmental Justice. As described in Chapter 7 and Chapter 29, impacts on flood protection were found to be less than significant or less than significant with mitigation, and would therefore not have a disproportionately adverse effect on environmental justice.
188-4	According to the Delta Stewardship Council Vulnerability Assessment 17,000 homes will be affected by flooding and $28 billion in damages will be accrued for critical	Please see response to comment 188-3 regarding potential project impacts on flood protection and the environmental justice analysis.

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	buildings and that will ensue for the City of Stockton. Additionally, families living at Conway homes behind the levees are just one example of the communities that will be affected by this.	
188-5	There is no sufficient evidence or analysis in the Environmental Impact Report to suggest that the Sacramento intake pumps will not be affected by sea level rise due to intense heavy rains based on climate change.	Please see response to comment 188-2 regarding the design standards for the intake structures, the evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions, and how the Delta Conveyance Project will provide climate change and sea level rise resilience to the State Water Project.
188-6	Modeling in the EIR suggests that there will be a very gradual capturing of wet winter flows that on average will be a .08 increment increase of sea level rise because intakes crowd the channel. This will displace the water and raise a small amount of water, but this analysis completely ignores massive flooding.	Please see response to comment 188-2 regarding the evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions and how climate change was incorporated into the EIR's analysis.
188-7	Based on the Delta Stewardship Council's findings, don't you think that your project is also in danger of experiencing flood events? There is no evidence in your EIR reports to suggest that Sacramento intake pumps will not succumb to flooding, thus raising concerns for cities like Stockton, which need protection from flooding induced by the tunnels and climate change.	Please see response to comment 188-2 regarding the design standards for the intake structures. Please also see response to comment 188-3 regarding potential project impacts on flood protection.
188-8	Calculations of the EIR downplayed the rate of climate change while overinflating (audio distortion) progress measures.	Please see response to comment 188-2 regarding how climate change was incorporated into the EIR's analysis. DWR's analysis meets the CEQA requirement to make a good-faith effort at full disclosure, and every effort has been made to base the analyses on up-to-date and accurate information. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding best available science and the climate change projections used in the EIR.

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188-9	The EIR acknowledges that Stockton will be affected by Delta flooding as the region is dependent on Delta water supply. Though inland, the Delta is vulnerable to rising seas, the stability of the levees protecting us are tested daily by tides, river inflows and raising sea levels. However, there is no analysis on how flooding will affect this particular area. Stockton is a port city surrounded by bodies of water with decaying levees systems that were built long ago before climate change and water diversion tactics.	Please see response to comment 188-3 regarding potential project impacts on flood protection. 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, which includes helping to address anticipated rising sea levels and other reasonably foreseeable consequences of climate change and extreme weather events. Although the Delta Conveyance Project is not a flood control project, it would not affect current or future flood control activities within the Delta. The levee improvements discussed in the EIR will be made following the appropriate guidelines, design standards, and permitting requirements. These standards and guidelines establish minimum criteria for levee design and maintenance. Please refer to the section titled Regional Planning Efforts Related to Delta Flood Management in Chapter 7, Flood Protection, for a discussion of levee programs that DWR manages that are critical to Delta flood risk management, including levee maintenance and improvements.
188-10	These [These levees will not] withstand the pressure from -- from the broadly under-appreciated risks of severe floods. Delta -- the data from UCLA climate scientist, Daniel Swain, reveals that the coming super storms in a rapid procession of atmospheric rivers and that will be the ultimate test of current dams and] levees will not withstand the pressure from -- from the broadly under-appreciated risks of severe floods. Delta -- the data from UCLA climate scientist, Daniel Swain, reveals that the coming super storms in a rapid procession of atmospheric rivers and that will be the ultimate test of current dams and levees.	Please see response to comment 188-2 regarding an evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions. Please also refer to response to comment 188-2 regarding potential impacts on flood protection. Please also refer to response to comment 188-9 regarding the purpose and objectives of the project, and regarding programs related to Delta flood risk management.

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188-11	It is known that levee failures can also damage key features of the Delta ecosystem existing on heavily altered landscape including managed wetlands.	Please see response to comment 188-9 regarding the purpose and objectives of the project, and regarding programs related to Delta flood risk management.
188-12	Additionally, levee failure could degrade the Delta water quality if water is rushed into heavily subsided Delta islands pulling together -- pulling higher salinity into the water.	Please see response to comment 188-9 regarding the purpose and objectives of the project, and regarding programs related to Delta flood risk management.
188-13	Lastly, I would like the EIR to address the degradation of levee roads due to high volume truck traffic during tunnel-related construction. It will add another cost to maintain these roads to ensure that the flooding does not occur once these pumps become operational.	Please refer to Common Response 14, Transportation, regarding road rehabilitation. Except at the intakes, levee modifications, and bridges, all construction would be set back by at least 300 feet from existing levees to reduce the potential to affect the levees. Construction traffic would be prohibited from using levee roads except along State Routes 4 and 12 during construction and State Route 160 to repave the road areas moved during construction of the intakes.
188-14	[Speaker name]: Yes. Current flood prevention measures are insufficient and need further analysis. And then lastly, as you can see, there are a variety of reasons why further analysis and mitigation are needed to make sure that the intakes are not flooded by the mega storm and the projected intense heavy rains to come.	Please see response to comment 188-2 regarding the design standards for the intake structures and the evaluation of potential project impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions. Please also see response to comment 188-3 regarding potential impacts on flood protection.
189-1	MS. MEDINA: Good afternoon. I am [name redacted], the Sustainable Agriculture Coordinator with Restore the Delta representing the Central Valley.	This information describes 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.
189-2	According to DWR approximately 37,000 acres identified as prime farmland will be affected either permanently or temporarily while this project is being built. The Draft EIR states that it is estimated that from these 375,000, there will be 4.6 billion in economic output. And according to the San Joaquin Council of Government in California, three out $4.6 billion coming out, which is two thirds of the economic output come from San Joaquin alone. This is because San Joaquin	The figures cited in the comment are not consistent with the Delta Conveyance Project EIR. Acres of prime farmland affected are analyzed in Impact AG-1 in Chapter 15, Agricultural Resources. The maximum amount of prime farmland that would be converted would be 5,736 acres under Alternative 2a. ECON-6 in Chapter 17, Socioeconomics, analyzes effects to total value of agricultural production, and finds that the largest possible effects would be under Alternative 4a. Under this alternative, there would be an estimated reduction of $5.7 million in total value of agricultural

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	grows various crops.	production per year. This is less than 1% of the estimated total value of production in the statutory Delta and surrounding project area.
189-3	In the study -- in the case study, we looked at Figure 15.1, Crop Distribution in the Study Area where the map outlines the different crops growing in each location. Why is there no clear identification where the tunnel will cross through on the map or not even mentioned on the legend on this figure? There is no clear clarification of what exact types of crops will be affected by the project from this map, unless one goes back and forth between maps to find the answer.	As discussed in Common Response 12, Agricultural Resources, current and future crops choices by agricultural operators are largely driven by market forces which can be highly dynamic. The figure entitled Crop Distribution in the Study Area (found in Chapter 15, Agricultural Resources) and referenced by the comment is only meant to depict the general distribution of crop types within the study area with latest information available at the time of the preparation of the EIR. This map or figure is not intended to be used to project potential crop conversion associated project construction, since each alternative considered in the EIR has different alignments and configurations. Please refer to Chapter 17, Socioeconomics, regarding the potential effects that construction activities would have on general crop categories such as field crops, forage crops, and orchard and vineyards.
189-4	Another reason why it is important to have clarification as to what crops will be around the construction site is due to the particulate matter which according to DE, the DIR can inhibit normal respiratory and photosynthesis processes on crops. Dust can also create an environment where disease can affect certain plants for years to come. Has there been research on airborne diseases these crops can suffer from such high levels of pollution?	Please refer to Chapter 23, Air Quality and Greenhouse Gases, for information on air quality effects from the project to agriculture. The U.S. Environmental Protection Agency and California Air Resources Board set primary ambient air quality standards to protect public health. Several pollutants (including ozone and PM) have secondary standards, which are set to “provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings” (U.S. Environmental Protection Agency 2021). With environmental commitments, to reduce release of fugitive dust and exhaust-related pollutants and through DWR paying fees to fund emissions-reduction projects, emissions would be reduced to below the threshold levels that would avoid conflicts with ambient air quality plans and ensure that the project would not contribute to degradation of regional air quality (Appendix 3A, Environmental Commitments and Best Management Practices).
189-5	Nitrogen oxide is another air quality issue that according to the DEIR will exceed all heath standards. So how much will this cost the farmers when the surrounding crops are affected by the	The DEIR does not state that nitrogen oxide will exceed all health standards. Please refer to Chapter 23, Air Quality and Greenhouse Gases, for information on air quality effects from the project to agriculture.

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	high nitrogen and dusty environments the project will create? Why is there no clear breakdown as to what types of crops will be affected by the air quality, including the amount of money that this can cost farmers, ultimately decreases everyone's economic output?	With Mitigation Measures AQ-1, AQ-2, and AQ-3, emissions would be reduced to below the threshold levels set by local air quality management and pollution control districts.
189-6	Thank you. MS. SCHANEL: Thank you for your comment. I would like to ask our interpreters if there's anyone in the language rooms that would like to make a comment.	This information is a transcription of comment from a facilitator, 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.
190-1	Hi. Can you hear me okay?	This information describes 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.
190-2	Perfect. Good afternoon. I'm [commenter name]. I'm a Water Advocate for Restore the Delta. The proposed Delta Conveyance Tunnel Project is a flawed proposition that will result in disastrous ecological consequences in surrounding project areas.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. The comment assertions regarding the significance of impacts are not consistent with the analyses in the 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, operation, and maintenance of the proposed project and its alternatives. Please see Chapters 7-32 regarding an analysis of potential environmental impacts and proposed mitigation measures on multiple environmental resources, including environmental resources raised by the comment. As described in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, potential impacts related to aquatic species and wildlife would be mitigated to a less-than-significant level. Additionally, Chapter 9, Water Quality, analyzes potential water quality impacts associated with construction, operation, and maintenance of the project, which were determined to be less than significant.
190-3	While it's stated that the project will contribute to climate change mitigation, the DEIR provides hardly any alternatives for environmental degradation. First, the DEIR fails to account	Please see Common Response 6, Climate Resilience and Adaptation, regarding climate change requirements and analyses in the EIR. Please also refer to Common Response 6 regarding the project's ability to improve

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	for any alternatives that reduce diversions from the Delta.	water supply reliability and adapt to changing hydrologic conditions as a result of climate change. 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 alternatives considered. Please also refer to Common Response 3 regarding alternatives suggesting demand management and reducing or eliminating exports.
190-4	Moreover, all DEIR alternatives involve increased water exports, which will severely impact the lack of flows in the Delta, which will contribute more harmful Algal blooms and less water for both endangered and culturally important species, such as the Delta Smelt, and winter and spring Chinook Salmon.	The EIR provides impact analyses of the environmental resources raised by the comment. The comment assertions regarding project impacts are not consistent with the analyses contained in the EIR. 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 DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please also refer to Common Response 3, Alternatives Development and Description, regarding project operations. Please also refer to Chapter 5, Surface Water, including the table titled Comparison of Surface Water Resources by Project Alternative, regarding a comparison of flows by project alternative. Chapter 5 provides the simulated changes in river conditions, which demonstrate that long-term average monthly flows under project operations would be similar to existing conditions. As described in Chapter 9, Water Quality, Impact WQ-14, potential impacts associated with cyanobacteria harmful algal blooms were determined to be less than significant. As described in Chapter 12, all potential impacts on

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		fish, including smelt and salmon, would be mitigated to a less-than-significant level.
190-5	On that note, how is it concerned that the Delta ecosystem will be assisted by the project's intentions of implementing more reduced and divertive flows and more water is needed, rather than less, for the survivability of fish.	Please see response to comment 190-2 regarding potential impacts on water quality, fish and aquatic resources, and terrestrial biological resources. Please also refer to response to comment 190-4 regarding project operations and surface water flows.
190-6	In addition, we also have the ongoing aridification of the state and uncertainty of how much [water] will be available in the upcoming years.	Please refer to response to comment 190-4 regarding the purpose and objectives of the project, and regarding project operations. Please also refer to response to comment 190-3 regarding climate change requirements and analyses in the EIR, and the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change.
190-7	It seems like this project will only end in high costs and little reward. How can we be comfortable with the investment of a project that could potentially become obsolete while contributing to stressors on the environment and marginalized groups in the communities surrounding? I implore you to reevaluate and reconsider moving forward with this project. Thank you.	Please refer to Common Response 7, Implementation Considerations, regarding project cost considerations and costs to water users. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. 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. Potential significant environmental impacts of the project and proposed mitigation measures are evaluated in Chapters 7-32 of the EIR, including Chapter 9, Water Quality, Chapter 12, Fish and Aquatic Resources, Chapter 13, Terrestrial Biological Resources, and Chapter 29, Environmental Justice. Please also see response to comment 190-3 regarding the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change.

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191-1	Good afternoon. My name is [speaker name] and I'm speaking on behalf of Sierra Club California, the Legislative and Regulatory Advocacy Arm of the Sierra Club in California.	This information states the name and the background of the organization or individual commenter. 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.
191-2	I wanted to reiterate and echo many of the concerns that were voiced at the previous workshop on September 13th, as well as many of the comments heard today [at the Public Hearing]. 30 days is not enough time to review and comment on this document. I wrote 30 days, but I meant 90 days.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and the Department of Water Resources' (DWR) extension of the comment period.
191-3	On September 2nd the Delta Independent Science Board submitted a letter requesting a 30-day extension on the comment period, and the Delta County Coalition requested a 90-day extension back in August. Sierra Club California also submitted a request for an extension back in August, to which we have still not received a response. I urge DWR to heed these requests and grant an extension for the EIR comment and review period.	Please refer to response to comment 191-2 regarding DWR's extension of the comment period.
191-4	Additionally, the Draft EIR bases its impact assessment on a 2020 baseline and specifically excludes the consideration of climate change and that assessment and mitigation of impacts.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA environmental baseline. Please refer to Chapter 4, Framework for the Environmental Analysis, and Chapter 30, Climate Change, for an explanation regarding how climate change was incorporated into the EIR's analysis. Please also refer to Common Response 6, Climate Resilience and Adaptation, regarding climate change requirements and analyses in the EIR.
191-5	The climate change analysis that is included only models the conditions that would be experienced in 2040 when the project would first become operational. To fully understand the impacts of this project, DWR should conduct modeling for the project during its proposed operational period, not just in 2040.	Please see response to comment 191-4 regarding how climate change was incorporated into the EIR's analysis. For informational and disclosure purposes, the EIR contains numerous chapters and appendices that discuss different climate change assumptions and scenarios, including Appendix 4A, Consideration of 2070 Conditions.

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191-6	The public and decision makers need to be informed as to how this project [the DCP] will interact with climate change to fully understand the impacts this project will have over its lifetime, not just in the first year that it will become operational.	Please refer to response to comment 191-4 regarding climate change requirements and analyses in the EIR, the CEQA environmental baseline, and how climate change was incorporated into the EIR's analysis. DWR's analysis meets the CEQA requirement to make a good-faith effort at full disclosure, and every effort has been made to base the analyses on up-to-date and accurate information. 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.
192-1	I'm [commenter name] from the Sacramento County Farm Bureau.	This information states the name and the background of the commenter. 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.
192-2	The conversion of 3,787.9 acres if implementing Alternative 5, but up to potentially 5,737.7 acres with the other considered options of Delta agriculture land is a disregard for human survival in the future. Whereas, new water sources can be created, such as reservoirs or desalination plants, productive farmland cannot be created. Your mitigation of protecting some other piece of farmland as trade for one that you are destroying is a contradiction. If you're going to destroy that land, it's destroyed.	The EIR provides an impact analysis of the environmental resource raised by the comment. As described in Chapter 15, Agricultural Resources, for Impacts AG-1 and AG-2, Mitigation Measure AG-1 would reduce impacts to the extent feasible; however, these impacts would remain significant and unavoidable. Impact AG-3 would be less than significant with the implementation of Mitigation Measure AG-3. Please refer to Common Response 13, Agricultural Resources, regarding effectiveness of mitigation measures and agricultural mitigation considerations. Please also refer to Common Response 13 for more information regarding the EIR's approach to analyzing impacts on agricultural resources.
192-3	This type of mitigation [protecting farmland offsite] is not a valid solution as you can't just create prime farmland. This trade farmland will already be in existence somewhere, and so your proposed trade mitigation results still an overall decrease	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures.

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	of farmland and an overall decrease of food supply in the future.	
192-4	Even worse, is that you're going to destroy farmland that is already protected [under the Williamson Act and Farmland Security Zones]. So saying that you are going protect another piece instead really isn't true as you're ensuring the current protected farmland will actually stay protected.	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures.
192-5	The Delta is a unique area with prime productive farmland. Each acre is extremely important and irreplaceable. Even more of an issue is that 1,217.8 acres of that 3,700 acres are already protected under the Williamson Act and Farmland Security Zones. The purpose of those is to protect farmland to ensure adequate food supply for an ever-growing population.	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures.
192-6	You acknowledged on this project that it could create conflict with both the Williamson Act lands and Farmland Security Zones, but you're still willing to go destroy those prime farmlands and, ultimately, create food shortages for people in the future.	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures.
192-7	Specifically, you state that you will remove between 744 to 902 acres of protected farmland that will be permanently destroyed with this project that are protected under the Williamson Act contract and Farmland Security Zone. In this contradiction prior mitigation strategy of trading farmland, showing your obvious, you know, disregard for the programs that are already there to protect farmland by trying to find a substitute, and not really fully addressing the real impacts that this project will do to the area.	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures.
192-8	The other mitigation of only taking a portion of a parcel of important farmland it still greatly impacts the overall [sus] stainability of that entire farmland parcel. It's harder to efficiently farm those smaller parcels, and it becomes uneconomical and unproductive. In the long run, you have that	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and adequacy of mitigation measures. The EIR does not assume that the remnant farmland areas would necessarily permanently remain in agricultural use but does include prospective options that DWR supports in

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	250 acres of this remnant farmland of little tiny pieces that you're suggesting, but to fill those with hobby farmers that, again, is not being evaluated or looked at --	maintaining agricultural operations in such remnant farmland areas. Ultimately, whether these remnant farmland acreages continue to be maintained in agricultural use is dependent on the interest of local agricultural operators. Thus, as described in Chapter 15, Agricultural Resources, in the section titled Methods for Analysis, and Common Response 13, Agricultural Resources, remnant farmland acreage is conservatively considered to be permanently impacted. As such, Mitigation Measure AG-1 would apply to remnant farmland acreage. In addition, please refer to Chapter 17, Socioeconomics, for the analysis of effects on the economics of agricultural production.
192-9	You're not evaluating or mitigating those changes [to farmland] that would be occurring because of those hobby farmers where it would lead to more residential and industrial uses on those parcels that will evolve.	Please see response to comment 192-2 regarding the EIR's analysis of impacts on agricultural resources, agricultural mitigation considerations, and the adequacy of mitigation measures. Please also refer to response to comment 192-8 regarding the evaluation of remnant farmland areas.
204-1	Okay. Sorry. I'm actually calling in from the road, because DWR -- there was a meeting in Sacramento I had to go to today so I'm calling in today, thanks for having me. My name is Regina Chichizola. I am part of Save California Salmon. If there's any point you can't hear me, please let me know. I do not have a good connection.	This information states the name and the background of the commenter. 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.
204-2	Anyway, I'm calling in today from Redding, California, from Wintu land, and I just wanted to say that I do not support this Delta Tunnel. And I am extremely disappointed by this plan.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project.
204-3	I feel like, one, a lot of different tribes from the Delta have said that they do not support this plan; they're not okay. They don't give consent and don't feel like they've been properly consulted on this plan.	Please see Chapter 32, Tribal Cultural Resources, section titled Consultation and Engagement with Tribes, which describes DWR's good-faith effort to foster meaningful consultation that recognizes Tribal expertise in the identification and consideration of Tribal cultural resources. Please also refer to Common Response 16, Tribal Cultural Resources, regarding Tribal consultation efforts aimed at identification, impacts, and mitigation for Tribal cultural resources.

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204-4	I also wanted to say that coming from the North state, our reservoirs are practically empty. They were having situations where they're regularly having to deal with things like fish kill. And I just -- I think that the North -- the water that's coming into the North Delta is critically important to keeping fisheries alive, and it's critically important in dealing with issues like salinity for people who rely on localized water supplies.	The EIR provides impact analyses of the environmental resources raised by the comment. Please refer to Chapter 12, Fish and Aquatic Resources, and Chapter 9, Water Quality, for the analyses of potentially significant impacts on the environmental resources mentioned in the comment. As described in Chapter 12, potential impacts on fish and aquatic resources would be less than significant with mitigation. As described in Chapter 9, Impact WQ-5, potential impacts on electrical conductivity, a measure of salinity, would be less than significant. Furthermore, as described in Chapter 3, Description of the Proposed Project and Alternatives, section titled Key Existing Delta Operations Criteria, and Common Response 3, Alternatives Development and Description, the project would be operated consistent with regulatory requirements, specifically State Water Board Water Right Decision 1641 (D-1641). Please refer to Chapter 5, Surface Water, and Chapter 6, Water Supply, for a description of potential changes to surface water resources and water supply that could result from implementation of the project and alternatives.
204-5	And I think that this plan, especially being coupled with the storage project at Sites Reservoir will be devastating to salmon fisheries. And I think that the EIR proves this point, and so we've been working on this process for a long time and could not be more disappointed with the plan that's come up with.	Please see response to comment 204-4 regarding potential impacts on fish and aquatic resources. As described in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions, Sites Reservoir is addressed in the cumulative impact discussions, where applicable, in Chapters 7-32.
204-6	If seems like it's just another large water grab from the North state to bring more water South. We're supposed to be making it so it's less reliance on the Delta and on the North State water supplies. Meanwhile, it seems like DWR is willfully not paying attention to the massive fish kills and water quality problems that we're dealing with.	Please refer to Chapter 2, Purpose and Project Objectives, and Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the purpose and objectives of the project, including DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please refer to response to comment 204-4 regarding project

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		operations and the analysis of fish and aquatic resources. Please refer to Chapter 9, Water Quality, for an analysis of potential water quality impacts associated with construction, operation, and maintenance of the project, which 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 3, Alternatives Development and Description, regarding alternatives suggesting demand management and reducing or eliminating exports.
204-7	And I'm extremely disappointed, as I said, and I just would like to encourage all of the water savings and mitigation to go forward under a no tunnel alternative which has been asked for again and again.	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 and commenter preference for the No Project Alternative. 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 users to ensure California's water resources are being used efficiently and sustainably.
204-8	When you came to Redding for the scoping hearing, over 200 people from seven different tribes told you that they do not support this plan and asked for a No Tunnel Alternative and asked for alternatives that do not rely on North State water in taking more water from our rivers and more extraction from us. And DWR willfully ignored those comments. It makes me feel like the public process is not genuine, and it makes me feel like the people of the North, they have not been heard.	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 how the No Project Alternative for the Delta Conveyance Project meets those requirements. 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 alternatives considered.

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		Please refer to response to comment 204-4 regarding project operations and the surface water and water supply analyses.
204-9	And you're just looking to continue to extract [water] at a time when we're having massive fish kills and places like the San Francisco Bay, and we need those fisheries to recover and this plan will make it so they can't.	Please see response to comment 204-4 regarding project operations and the analysis of fish and aquatic resources.
204-10	Anyway, we're going to be turning in written comments that are way more substantive. And we really appreciate everyone being here, and I am very sorry I had to call in from the road. Please have a nice day.	This information provides general closing information. 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.
208-1	I am the Executive Director of the Southern California Water Coalition. We will, too, be submitting some more detailed comments, but our comments tonight are going to focus on three primary themes that are important to the ongoing dialog in consideration with the DEIR advancement of this project. One, the critical need for the Delta Conveyance as a climate adaptation strategy, which was described in your presentation tonight. Two, the importance of the Delta Conveyance embracing its commitment to protection and advancement of the human right to water. And third, the value of the Delta Conveyance to the Southern California and Statewide economies.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of support for the project.
208-2	As described [Described by DWR presentation during the public hearing] between shifting hydrology, warming temperatures, sea level rise, seismic risks, the proposed Delta Conveyance Project, as we see it, is a climate adaptation strategy that was designed to help California address its climate future. Capturing conveyance of water in and through the Delta is an important adaptation strategy to mitigate potential water system losses in other areas due to changing precipitation patterns and seasonal runoff. In fact, this is the source water	Please see response to comment 208-1 regarding comments that state opinions of support for the project.

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	for much of what we're trying to do in Southern California as part of the local supply development.	
208-3	Second, Delta Conveyance embraces the commitment to protection and the advancement of the human rights to water. Many disadvantaged communities and water ratepayers across California need an affordable high-quality water supply, especially since the cost of living continues to escalate and external factors like drought and climate change continue to exasperate water affordability challenges for millions of Californians. Affordability of reliable water directly impacts our society's quality of life. Water supplies delivered through the Statewater Project remain the most affordable option to consumers especially when compared to the development of new local water supply projects. The basic tenet in affordability is to officially use existing infrastructure to the greatest extent achievable. Failure to construct the Delta Conveyance Project risks loss of use and underutilization of investments made by tax payers and ratepayers for the State Water Project for over decades. The Delta Conveyance Project provides you important protections as we see it against potential health and safety impacts for Californians, including millions of disadvantaged Californians.	Please see response to comment 208-1 regarding comments that state opinions of support for the project.
208-4	Water delivered through the State water Project also remains the most cost effective source for Californians and it fuels our State's economy, which is the fifth largest in the world. However, the weakest link in that system is the Sacramento Bay Delta. We see this as important in terms of meeting 27 million residents in Southern California, meeting their future	Please see response to comment 208-1 regarding comments that state opinions of support for the project.

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	water needs and the economy for the State of California.	
208-5	In conclusion there are kind of some additional areas I'll touch on quickly, and that is the protection of water supply, enabling water supply projects to go forward, facilitating capture and storage, guaranteeing flexibility and improving water quality. All those important tenets that this project helps us to expand and manage the entire State, not just one region.	Please see response to comment 208-1 regarding comments that state opinions of support for the project. 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.
209-1	Good evening. My name is [Name], and I represent the Los Angeles Area Chamber of Commerce, a long time supporter of this project. We're here today just to show our strong support for this much needed Delta Conveyance Project. I think as the presentation showed, this project is a long time in the making. Given the current drought conditions, it's needed now more than ever. Our region here in Southern California, is facing critical water shortages. If our infrastructure is not modernized and without action, our water supplies will continue to decrease and our residents will accordingly suffer the consequences.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of support for the project.
209-2	Efforts to develop and improve our local water supplies by waste water recycling, groundwater banking and desalination do rely on the water from the Delta to work. This project has been studied, engineered, reengineered and improved over the course of a few decades, and it's very different from the previous conveyance proposal, which, again, we previously supported as well as it's been downsized, rerouted and redesigned to be the right project for California. Our region in Southern California water security cannot wait, we must act now. Thank you.	Please see response to comment 209-1 regarding comments that state opinions of support for the project.
210-1	[Speaker]: Hi there. Good evening. My name is [speaker name], and I'm the Director of Public Policy for the San Gabriel Valley Economic Partnership. We are here in strong support of this plan to protect the reliability of our state and local water	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of support for the project.

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	supplies by fixing the water distribution network through the Delta.	
210-2	I cannot stress enough how crucial this project is to the San Gabriel Valley and the positive impacts it will make. The project will allow storm flows that are currently lost to the Pacific Ocean to be captured and stored in this - in Southern California for the benefit of the Central Valley and Southern California. That includes the 31 cities that make up the San Gabriel Valley.	Please see response to comment 210-1 regarding comments that state opinions of support for the project.
210-3	The release of the EIR documents represents progress and moving the Delta Conveyance Project forward. The Bethany alignment is a step in the right direction. It exemplifies the collective method of pushing forward a project that is sufficient to protect water supplies in an economy that relies on reliable water systems. Investments in our water infrastructure now will pay dividends in the future as well as secure our water supplies and protect hundreds of thousands of regional jobs that depend on the stability of the water resource.	Please see response to comment 210-1 regarding comments that state opinions of support for the project.
210-4	The Delta Conveyance Project will engineer a system that better captures water when it is abundant so it is available during periods of extreme drought. And we're eager to work with the administration to move forward and see it through completion.	Please see response to comment 210-1 regarding comments that state opinions of support for the project.
213-1	[Speaker]: Okay. Great. My name is [speaker name], and I am the Klamath River Advocate for the Environmental Protection Information Center and I'm also the Executive Director for Nature Rights Council, which also houses Ancestral Guard, a native youth-lead advocacy organization.	This information states the name and background of the commenter. 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.
213-2	I'm a supporter of the No Tunnel Alternative and we do plan to submit substantive comments on the project. I believe that the Draft EIR for the Delta Conveyance Project uses models based on overallocated water rights to analyze the water, the plan's impacts, which would result in severe environmental	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

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	consequences.	objectives, including DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please also refer to Common Response 3, Alternatives Development and Description, regarding water rights and contracts. 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 and commenter preference for the No Project Alternative. Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding the EIR's framework for hydrologic modeling.
213-3	Building more irrigation infrastructure as the DCP proposes is not going to fix drought problems in California, instead these projects will exasperate drought conditions and provide more reliance on overabundant water sources that are not going to be available forever.	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 DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding emergency drought operations and the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change.
213-4	The proposed plan would result in impacts to endangered fish by reducing flows to impaired watershed, draining estuaries that are essential to healthy river ecosystems and allowing the continued operation of pumps that will kill fish that are protected under the Endangered Species Act.	The EIR provides an impact analysis of the environmental resource raised by the comment. The comment assertions regarding impacts are not consistent with the analysis contained in the EIR. Please refer to Chapter 12, Fish and Aquatic Resources, for the analysis of potentially significant impacts on the environmental resources mentioned in the comment as a result of construction and operation of the project. As shown in Chapter

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		12, potentially significant impacts on fish and aquatic resources would be mitigated to a less-than-significant level. Additionally, Chapter 5, Surface Water, provides the simulated changes in river conditions, which demonstrate that long-term average monthly flows under project operations would be similar to existing conditions. Please also refer to Common Response 3, Alternatives Development and Description, regarding project operations.
213-5	I propose the Conveyance Project - as proposed, the Conveyance Project is flawed and should be abandoned or revised to reduce exports that take water out of rivers. It should instead prioritize Delta recovery and improve water conservation, recycling and storm water capture measures.	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 alternatives suggesting demand management and reducing or eliminating exports. Please see response to comment 213-2 regarding the No Project Alternative.
213-6	Additionally, as you can see, when you go over Los Angeles and places like that, everybody has a green lawn and a pool. I believe that that is unsustainable at this point in time. North State Water should not be shipped down to Southern California for people to have green lawns.	Please refer to response to comment 213-5 regarding alternatives suggesting demand management and reducing or eliminating exports. 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 users to ensure California's water resources are being used efficiently and sustainably.
213-7	Although, it seeks to increase water supply contracts from the Trinity River, the project does not analyze impacts to the Trinity or lower Klamath because, quote, "An initial screening of model outputs suggested detailed biological analysis is not required for the Trinity River system." Based on this statement, it is my assessment that the Delta Conservation Plan, or the DCP document, fails to disclose cumulative effects to the rivers and 5 salmon and the North State	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding why Trinity River and Klamath River operations would not be affected by the Delta Conveyance Project.
213-8	The DCP also contains major flaws resulting in irreversible environmental impacts. The Trinity River and lower Klamath River are already impaired and regularly faces with massive fish	Please see response to comment 213-7 regarding the Trinity River and Klamath River operations. Please also see response to comment 213-4 regarding fish and aquatic resources and response to comment 213-2

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	kills like the one we saw earlier this year, where thousands of adult fish washed up on the banks of the Klamath River due to low dissolved oxygen and fish disease. I urge you to abandon this project and adopt the No Tunnel Alternative.	regarding the No Project Alternative.
214-1	Thank you. This is [speaker name]. Good evening. I'm from the Sierra Club California and I'm calling from Los Angeles or Occupied Tongva land.	This information states the name and the background of the commenter. 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.
214-2	I'm hoping that you will consider more seriously the No Tunnel Alternative. The DEIR even states in Chapter 32 that it is what all of the tribes you consulted prefer. You have heard from thousands of Delta residents, tribal members and ratepayers from around California for years that this is one of the most hated projects in California history.	Please see Common Response 4, No Project Alternative Description and Analysis, regarding reasonably foreseeable actions that are considered part of the No Project Alternative and commenter preference for the No Project Alternative. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project.
214-3	It's[the DCP] Owens Valley 2.0. The State has a track record for passing out TUCPs [Temporary Urgency Change Petitions] constantly to the point where they're being audited, so the public has no reason to put any faith in the little sip -- part of the big-gulp, little-sip plan.	Please see Common Response 3, Alternatives Development and Description, regarding dry conditions and Temporary Urgency Change Petitions.
215-1	Thank you very much. I'm sorry. I could not do that very quickly. My name is [speaker]. I'm the Executive Director of the California Indian Environmental Alliance, and we are located physically in the Bay Area in El Cerrito.	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.
215-2	We [The California Indian Environmental Alliance] are not in support of the Bay Delta Conveyance Project. We support the No Tunnel Alternative. This is a continued -- a continuance of the failed efforts to move water from Northern California and at the same time support ecosystem health in the Bay Area and in the Sacramento River.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to 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.

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215-3	This project will be at the detriment of local aquatic health of the Sacramento River, Northern California fisheries, Bay Area residents; and, of course, Californian Indian Tribes, who have over and over again said that they are not in support of the project.	The commenter's assertion that the project would be at the detriment of aquatic resources is not consistent with the analyses provided in Chapter 12, Fish and Aquatic Resources, which concludes that project impacts would be less than significant or less than significant after mitigation. Please also refer to the study area as defined in each resource chapter for a discussion regarding the need for evaluating potential impacts on residents of the Bay Area. Chapter 32, Tribal Cultural Resources, identifies Tribal cultural resources, evaluates potential impacts that could result from construction, operation, and maintenance of the project, and provides mitigation measures to reduce the effects of potentially significant impacts where feasible. Please refer to Chapter 32 and Common Response 16, Tribal Cultural Resources, regarding Tribal consultation efforts aimed at identification, impacts, and mitigation for Tribal cultural resources. Please also refer to Common Response 16 regarding the consideration of Tribal perspectives in DWR's decision on whether to approve the project.
215-4	So to add to many individuals that have spoken against this project earlier, which I agree with those statements that were said, I wanted to also remind listeners today and the agencies, Department of Water Resources and EPA, that the State of California is not respecting the free and prior informed consent of California [T]ribes who have stewarded and relied on the waters of the Delta and the traditional -- have eaten traditional foods from this region since time immemorial. The bounty that we have in the State of California was developed by tribes who worked to make sure that the strongest of the species of the fish were able to move through the system. Watching the fish kills that we have seen throughout the last few decades of my life has been heartbreaking.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. Please refer to Common Response 16, Tribal Cultural Resources, regarding how DWR's efforts to identify and analyze impacts on Tribal cultural resources was consistent with current State policies regarding Indigenous people in California and regarding Tribal consultation efforts aimed at identification, impacts, and mitigation for Tribal cultural resources. Additionally, Chapter 32, Tribal Cultural Resources, in the section titled Consultation and Engagement with Tribes, describes DWR's good faith effort to foster meaningful consultation that recognizes Tribal expertise in the identification and consideration of Tribal cultural resources. Please refer to response to comment 215-3 regarding the analysis of

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		potential impacts on aquatic resources. Finally, 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.
215-5	There is no reason for us to continue to do -- to move forward these failed policies -- and move water at times when we can see that the growers in [the] Central Valley are using un[su]stainable methods for doing this. It's the same if you look at Southern California, you can see full reservoirs, and if [you] look at Northern California, empty reservoirs over and over and over again. And harmful algal blooms that are taking place along the Sacramento River, the tributaries, all through the Bay. We need those flushes of water to keep those fisheries healthy, so that we can continue to have traditional foods, not just for Tribal individuals, but for the rest of us that are here. It is very important.	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. Please also refer to Chapter 3, Description of the Proposed Project and Alternatives, for a description of how the project would be operated consistent with regulatory requirements, specifically Delta Outflow Criteria to meet State Water Board Water Right Decision 1641 (D-1641). In addition, the Chapter 3 section titled Delta Conveyance Project Preliminary Proposed Operations Criteria provides information regarding how the project would be operated to minimize effects on aquatic species. Chapter 9, Water Quality, specifically addresses harmful algal blooms under Impact WQ-14, which concludes that the impact of project alternatives on CHABS would be less than significant. Lastly, please see response to comment 215-3 regarding the analysis of potential impacts on aquatic resources.
215-6	Why are we spending so much money to destroy a habitat and food sources that should remain in Northern California? And we could be exporting and throughout the state, people could be eating healthy foods from Northern California, instead we're using healthy clean water when there's other alternatives that others have spoke about.	Please refer to response to comment 215-3 regarding the analysis of potential impacts on aquatic resources. As described in Chapter 12, Fish and Aquatic Resources, Chapter 13, Terrestrial Biological Resources, and Chapter 15, Agricultural Resources, the project would not destroy habitat and food sources. Please refer to Chapter 2, Purpose and Project Objectives, as well as

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		Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the purpose of the project. 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.
215-7	We will be providing [written] comments, but I also -- in closing, I wanted to remind everyone that right now we have the Truth and Healing Council where we're talking about the atrocities that took place in California and the fact that every California Native person and native people over the United States, we are all survivors, and it is disingenuous with one hand to apologize and the other hand to remove the ability for the people to continue our cultural practices and to continue to survive and to continue to help the other residents in California to be able to enjoy what California offered and why people first moved here to begin with. There was food; there was water. We cannot continue.	DWR recognizes and affirms Executive Order N-15-19 which apologized on behalf of the citizens of the State of California to all California Native Americans for the many instances of violence, maltreatment and neglect California inflicted on Tribes. Please refer to Common Response 16, Tribal Cultural Resources, regarding how DWR's efforts to identify and analyze impacts on Tribal cultural resources was consistent with current State policies regarding Indigenous people in California. As described in Chapter 32, Tribal Cultural Resources, DWR is committed to continuing consultation and engagement with Tribes as part of the project's mitigation measures and DWR will continue to consult with affiliated Tribes regarding the implementation of the mitigation measures to minimize and mitigate the project's potentially significant impacts.
224-1	As a concerned resident of Northern California frequent fisherman in the Sacramento Delta, I am writing to submit comments on the draft Environmental Impact Report (DEIR) for the proposed Delta Conveyance Project (Delta Tunnel).	This information describes the background of the commenter and provides general introductory information. 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.
224-2	The California aqueduct has already had adverse impacts on Delta recreational resources since its introduction in the 1970s. The Delta Tunnel intakes will only continue to exacerbate the adverse environmental impacts to which the aqueduct has already contributed. The slots on the intakes which are supposed to be designed to prevent dish from getting trapped in them yet will the addition of intakes will raise the amount of fish which will be invariably be sucked into them and killed.	As described in Chapter 16, Recreation, the potential impacts that could result from construction, operation, and maintenance of the project would be less than significant, and none of the facilities when combined with future plans and actions would result in fewer recreation opportunities or conflict with plans to improve recreation conditions and management in the Delta. See Common Response 13, Recreation and Recreational Opportunities, regarding an evaluation of recreational opportunities and construction effects on recreational opportunities.

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		Additionally, the analysis in the EIR concludes that all potentially significant impacts on fish and aquatic species would be mitigated to a less-than-significant level, as described in Chapter 12, Fish and Aquatic Resources. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, regarding the intake fish screens, operational criteria, real-time operational decision making, and adaptive management, which seek to avoid impacts on fish and aquatic resources, as well as Chapter 12 regarding the impacts and mitigation measures related to fish.
224-3	Occasionally the Department of Fish and Wildlife ("DFW") drag nets through the Delta to determine the amounts of fish in the river system. DFW's most recent survey showed no Delta smelt were recorded in the Delta, exemplifying the species disappearing from the Delta.	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. Please see response to comment 224-2 regarding the EIR's analysis of fish and aquatic resources.
224-4	Too many intakes prevent the natural annual flushing of the Delta, which is needed to replenish the Delta water resources. This lack of flushing leads to stagnation pools in the Delta, which when combined with high temperatures creates red tides. Given that California is already experiencing permanent drought conditions, does not get the needed flushing or replenishment. This leads to problems like algae blooms, an event so destructive in can lead to the death of fish outside the Sacramento-San Joaquin Delta, such as in Oakland's Lake Merritt.	The comment assertions are not consistent with the analysis contained 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). Please also refer to Common Response 3, Alternatives Development and Description, regarding project operations. Please refer to Chapter 5, Surface Water, regarding potential changes in Sacramento River Basin flows that are expected to result from the project alternatives. Chapter 5 provides the simulated changes in river conditions, which demonstrate that long-term average monthly flows under project operations would be similar to existing conditions. As described in Chapter 30, Climate Change, the project alternatives would increase resiliency in managing combined effects of sea level rise and changes in upstream hydrology. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding the project's anticipated

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		water supply reliability benefits. As described in Chapter 9, Water Quality, the analysis in the EIR concludes that all potential impacts analyzed would result in less-than-significant impacts on water quality; see Impact WQ-14 regarding the analysis of impacts on harmful algal blooms.
225-1	Is there a recording available of the Tribal Representatives comment hearing from last Wednesday?	DWR responded to all requests for additional information within the comment period.
243-1	Good afternoon. My name is [speaker name]. I am a Pomo and Paiute Tribal member. I was born and raised in the Bay area and now live in Sacramento.	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.
243-2	Like others, I oppose this project. The Delta Conveyance Project is one that's been decades-long in the making, and it's one of -- if not the most controversial water projects in the state.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to 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.
243-3	I do appreciate the extension of the comment period given the massive amount of documents that Tribal members, governments, everyone will have to go through in order to make effective comments.	Please refer to Common Response 2, Public Outreach Activities, regarding the duration of the comment period and DWR's extension of the comment period. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the Draft EIR.
243-4	This project will result in significant impacts on the Tribal cultural landscape, not only in the Delta, but in the San Francisco Bay and the Trinity and Sacramento Rivers.	DWR recognizes that the Tribes perceive that project effects would extend beyond the study area due to the interconnectedness of waterways. As described in Chapter 32, Tribal Cultural Resources, in the section titled Study Area, no construction would occur outside of the Delta counties, and the proposed project and alternatives would not change operational criteria associated with upstream reservoirs. Some indirect operational changes could occur because of the interconnectedness of the waterways, but modeling analysis has indicated that these changes would be negligible (see Chapter 5, Surface Water). Because changes to reservoir storage and

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		river flows would be minimal, they would not have the potential to affect resources upstream from the Delta and those areas are not included in the study area. Additionally, there would be no physical alterations and minimal variations in surface water flows south of the Delta in SWP and CVP service areas. Therefore, the study area does not include the potential for physical impacts in areas upstream of the Delta region or the south-of-Delta SWP and CVP service areas. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of the selection of the study areas evaluated in the EIR. Although the analysis in Chapter 32, Tribal Cultural Resources, concludes that impacts on Tribal cultural resources would be significant and unavoidable, mitigation measures have been identified to avoid or minimize impacts where feasible. For example, DWR would implement Mitigation Measure TCR-1a to incorporate preconstruction surveys and feasible avoidance or protection measures in the design, construction, operations, and maintenance activities to avoid or protect Tribal cultural resources. Where avoidance or protection is not feasible, DWR would implement other mitigation measures (Mitigation Measures TCR-1b, TCR-1c, and TCR-1d), as applicable. This would include mitigation by way of resource-specific treatment in consultation with affiliated Tribes and the incorporation of Tribal knowledge, including Tribal Ecological Knowledge, into the preparation and implementation of the Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources (Appendix 3F) and other measures for mitigating impacts on terrestrial biological resources, fish and aquatic resources, and cultural resources. DWR is committed to continuing consultation and engagement with Tribes regarding the implementation of the mitigation measures to minimize and mitigate the project's potentially significant impacts.

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243-5	This is much more than just a simple construction project. It impacts the cultural resources and Delta ecosystems. It's far too great to move forward with this project.	Potential impacts on cultural resources are discussed in Chapter 19, Cultural Resources, which concludes that potential impacts would be significant and unavoidable. The analysis also includes mitigation measures to avoid and reduce effects to the extent feasible. Please refer to response to comment 243-4 regarding the analysis and mitigation measures included in Chapter 32, Tribal Cultural Resources. Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, evaluate impacts on fish and wildlife species, respectively. Impacts disclosed in those chapters were determined to be less than significant or less than significant with mitigation. Comments regarding the approval of projects with significant and unavoidable impacts are addressed in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please also see Common Response 1 regarding comments that state opinions of general opposition to the project.
243-6	Like others, I wanted to address the concern of the threat this project poses for Tribal cultural resources. All Draft EIR alternatives result in disturbances of cultural resources, aside from the No Project Alternative, including historic Tribal villages and mounds from before European contact which absolutely cannot be adequately mitigated. The DEIR explicitly states the project will result a significant impact on the Delta Tribal cultural resources. This is simply unacceptable. All of the [a]ffected Tribes and Tribal members deserve to have their cultural history and places preserved.	Please see response to comment 243-5 regarding impacts on resources in the Delta disclosed in the EIR. Please see the response to comment 243-4 regarding the mitigation measures included in Chapter 32, Tribal Cultural Resources. DWR is committed to continuing consultation and engagement with Tribes regarding the implementation of the mitigation measures to minimize and mitigate the project's potentially significant impacts. Comments regarding the approval of projects with significant and unavoidable impacts are addressed in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. Please also see Common Response 16, Tribal Cultural Resources, regarding the consideration of Tribal perspectives in DWR's decision on whether to approve the project.

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243-7	I would like to express my support for [previous speaker name] comments on the need to classify salmon as a Tribal cultural resource, because they play such a vital role in many Tribal traditions, including a food source, ceremonial purposes and in some cases, they are a part of creation stories.	DWR understands and recognizes that salmon are a key species for Tribes. DWR has consulted with Tribes and considered the impacts on salmon and other native fish species habitats as a character-defining feature of the Delta as a Tribal Cultural Landscape. Please see Chapter 32, Tribal Cultural Resources, regarding DWR's consultation and engagement with Tribes on the project, the definition of Tribal cultural resources, and those resources identified as Tribal cultural resources. Please see Common Response 16, Tribal Cultural Resources, regarding DWR's consideration of individual Tribal cultural resources, including salmon, as well as the documentation in the record regarding DWR's evaluation of Tribal cultural resources. Chapter 32, Impact TCR-1 considers multiple variables (described as character-defining features) as part of the Delta Tribal Cultural Landscape, including those identified in the table titled Tribal Views on Delta TCL Character-Defining Features. For example, terrestrial and aquatic plant and animal species and their habitats, including that of salmon, are identified as part of both the Delta's ecosystem and character-defining features that represent heritage and cultural significance to Tribes pertaining to sustenance, traditional knowledge, ceremony, spiritual practices, and stewardship. As such, the impact analysis in Chapter 32 considers the various resources identified by Tribes, including salmon, and the values these resources contribute to the Tribal Cultural Landscape.
243-8	I do have some concerns over the amount of Tribes that were notified for this project versus the amount of participants in this meeting today. Clearly this project will affect many Tribes since 121 were notified, and there aren't that many people here today. That is concerning that there's not that many Tribal members here. Since the comment period was extended, may I suggest offering an additional Tribal representative meeting to ensure maximum participation from Tribal communities?	Please refer to Common Response 2, Public Outreach Activities, regarding the Tribal representative meetings held during the public review period for the Draft EIR. This comment was received during a Tribal representatives meeting held on October 12, 2022, for Tribal leadership, Tribal government representatives, and Tribal communities to provide verbal comments on the Draft EIR. Please note that per requests such as this, DWR held a second Tribal representatives meeting on December 7, 2022.

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		Please see Chapter 32, Tribal Cultural Resources, regarding DWR's consultation and engagement with Tribes on the project, and the analysis of potential impacts on Tribal cultural resources.
243-9	And I will also be submitting further written comments later on.	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 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.
243-10	Thank you for the opportunity to comment today.	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.
304-1	Please see attachment from The Locke Foundation regarding the Delta Conveyance Project and the Draft EIR. Please acknowledge receipt of this communication.	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. Confirmation emails were sent automatically to all senders upon receipt of emailed comments during the public review period for the Delta Conveyance Project Draft EIR.
304-2	This purpose of this letter is to provide comments on the Department of Water Resource's Delta Conveyance Project Draft Environmental Impact Report (EIR) A mission of the Locke Foundation (501(c)3 Public Benefit Corporation) is to educate the public about the history, culture and PRESERVATION of Locke, Ca. The largest, most complete example of a rural agriculture Chinese American community in the U.S. (NPS).	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.
304-3	In 1971 Locke was placed on the National Register of Historic Places. In 1990 Locke was granted the rare status of National Historic Landmark. The unique status of Locke designates our	Potential impacts on cultural resources are discussed in Chapter 19, Cultural Resources, of the EIR. Section 106 review and compliance will be carried out pursuant to a programmatic agreement (PA) that will set forth

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	town as a Heritage Community and qualifies Locke under Section 106 of the National Historic Preservation Act of 1966 (NHPA) which requires federal agencies to consider the effects on historic properties they carry out, assist, fund, license, or approve throughout the country.	federal agency responsibilities under the NHPA. The PA will require the United States Army Corps of Engineers to complete the management steps for all future undertakings necessary to implement the proposed 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.
304-4	The LF [Locke Foundation] also states the Delta Conveyance Project should be subject to State Preservation Laws: California Penal Code 622, California Health Code 7050.5, California Administrative Code, Title 14, Section 4307, and California Code of Regulations, Section 1427.	Please refer to Chapter 4, Framework for the Environmental Analysis, regarding applicable laws, regulations, and programs. As discussed in Chapter 4 as well as Chapters 5-32, applicable laws regulations, and programs are considered in the assessment of project impacts and are discussed in the Methods for Analysis sections. The applicable laws and regulations noted in the comment pertaining to the analysis of cultural and historic resource impacts are described Chapter 19, Cultural Resources. The applicable laws and regulations noted in the comment pertaining to the analysis of Tribal cultural resources are described in Chapter 32, Tribal Cultural Resources.
304-5	Having read the DWR EIR Executive Summary and background information contained in the draft EIR, the Locke Foundation has deep concerns regarding the impact of the Delta Conveyance Project (DCP) on Locke, other Heritage Communities and the entire north Delta.	Please refer to Chapters 7–32 of the EIR for analyses of potentially significant environmental impacts of the project and proposed mitigation measures, including those related to local communities. Locke is outside the area of impact for built-environment resources analyzed in Chapter 19, and no cultural resource impacts on the historic characteristics of the town were identified. Please see Common Response 7, Implementation Considerations, for discussion of how the project may affect community character. Please also refer to the Efforts to Minimize Delta Community Effects technical memoranda in the Engineering Project Reports regarding the engineering and design modifications made to reduce Delta community effects (Delta Conveyance Design and Construction Authority 2022a, 2022b).

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304-6	There is no doubt construction of the DCP will adversely affect Locke's fragile wooden structures, regardless of DWR claims to construct an alternate roadway.	Please refer to Chapter 24, Noise and Vibration, Impact NOI-2: Generate Excessive Groundborne Vibration or Groundborne Noise Levels, regarding the EIR's analysis of groundborne vibration generated by project construction. As described in Chapter 24, Groundborne vibration from heavy equipment or tunnel boring machines (TBMs) is not expected to result in damage to building structures. 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 7–32. Please also see Chapter 4, Framework for the Environmental Analysis, regarding the approach to evaluating study area boundaries, which vary for each resource topic depending on impact mechanisms and the extent of the area in which impacts are expected to occur for a resource. Please see response to comment 304-5 regarding engineering and design modifications made to reduce Delta community effects.
304-7	Tourism, which Locke relies on, will suffer.	Please refer to Chapter 17, Socioeconomics, and Chapter 16, Recreation, for impacts on socioeconomics and recreation in the surrounding area. As described in Chapter 17, the potential impacts analyzed are not expected to result in adverse effects. As described in Chapter 16, the potential impacts analyzed would result in less-than-significant impacts. Please also see Chapter 34, Community Benefit Program Analysis, and Appendix 3G, Delta Conveyance Project Community Benefits Program Informational Resources Framework, regarding the Community Benefits Program. As described in Appendix 3G, the Community Benefits Fund could be used to support actions to enhance the local Delta economy and tourism and build on the regional vision to support the unique cultural, recreational, natural resource and agricultural values of the Delta articulated by the Delta Plan, National Heritage Area and Conservancy Grant Program (among many others).

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304-8	Generational farms, families and landscapes will be negatively affected.	The EIR evaluates environmental impacts and proposed mitigation measures regarding multiple environmental resources in the Delta mentioned in the comment, including those related to land use, agriculture, aesthetics, and local communities. As described in Chapter 14, Land Use, the impacts analyzed would result in no impacts, or less than significant impacts. Please see Chapter 15, Agricultural Resources, for an analysis of potentially significant impacts and proposed mitigation measures related to agriculture. Please see Chapter 18, Aesthetics and Visual Resources, for a discussion of the visual impacts of the project and the mitigation proposed to reduce these effects. Please also see response to comment 304-5 regarding engineering and design modifications made to reduce Delta community effects.
304-9	It is the opinion of the Locke Foundation: The DWR Delta Conveyance Project is a money and resource grab by corporations and individuals who have little or no concern for the Sacramento-San Joaquin River Delta and those who live here.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. Please refer to Chapter 2, Purpose and Project Objectives, and Common Response 1 regarding the purpose of the project.
306-1	Recreational Boaters of California [RBOC] opposes the Delta Conveyance Project that would negatively impact the ability of the recreational boating public to navigate in the waterways of the Sacramento-San Joaquin Delta [Delta].	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. Navigation and potential impacts on navigation and boating are evaluated in Chapter 20, Transportation, Impact TRANS-5. The analysis in the EIR concludes impacts would be less than significant related to navigation and boating.

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306-2	RBOC is the statewide nonprofit advocacy organization that promotes the protection and responsible use of the state's waterways. We have commented previously and consistently as the state has considered the Bay Delta Conservation Plan, the California Water Fix and now the single Delta Conveyance Project.	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.
306-3	This project has several fatal flaws. Specific to recreation, the project would severely disrupt navigation, boating-related commerce and communities throughout the lengthy, fourteen years of construction. It is a false assumption that recreational activity would merely move to other areas.	The comment does not explain nor provide evidence that the project would severely disrupt navigation, boating-related commerce or communities during construction. The Delta covers more than 738,000 acres in five counties, and there are more than 500 miles of waterways, presenting alternative locations for land-based, shoreline, and water-based recreation away from the project's proposed intake construction sites on the Sacramento River. As described in Chapter 16, Recreation, the analysis in the EIR concluded that impacts related to recreation would be less than significant. Impacts on recreational resources are evaluated in Chapter 16 using methods and criteria consistent with Appendix G of the CEQA Guidelines (Environmental Checklist) and professional standards and practices. The analysis of impacts included a site reconnaissance survey supplemented with interviews of recreation providers or managers in the recreation business. See Common Response 13, Recreation and Recreational Opportunities, for further discussion of analysis methods for recreational opportunities and survey methods. Other impact considerations regarding effects on recreation, such as those related to the potential for diminished quality of recreation experiences due to construction, are discussed Chapter 17, Socioeconomics. A qualitative analysis of effects associated with marine transportation are analyzed in Chapter 20, Transportation, and considers the potential for project construction, operations, maintenance, and implementation of mitigation measures to affect the local Delta circulation system and the

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		potential to conflict with programs, plans, ordinances, and policies for transportation systems.
306-4	There is a potential for the project to significantly increase the transport of invasive species into the Delta waterways, and to exacerbate the occurrence of harmful algal blooms. These reduce recreational opportunities on the waterways and already impose significant costs on the boating community.	The comment assertions regarding the significance of impacts on water quality, invasive species and recreational opportunities are not supported by the analyses contained in the EIR. Please refer to the table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures in the Executive Summary for a list of CEQA impact determinations for impacts on water quality and recreation. As shown in this table, the analysis in the EIR concludes that all significant impacts related to water quality and cyanobacteria harmful algal blooms (CHABs) and recreation identified in the comment would be less than significant. The EIR provides an impact analysis of invasive species, including CHABs. Please refer to Chapter 9, Water Quality, Impact WQ-14, and associated appendices regarding analysis of harmful alga blooms. The analysis related to the multiple Delta locations evaluated for CHABs concluded that CHABs "are not expected to cause Delta CHABs to be substantially larger in size, and because bloom size does not necessarily dictate toxin concentration in the water, the project alternatives are not expected to substantially increase microcystin or any other cyanotoxins in the Delta, relative to existing conditions at the Delta assessment locations." The analysis provides evidence that the project will not exacerbate the occurrence of harmful algal blooms. As described in in Chapter 17, Socioeconomics, ECON-5, the project alternatives would not affect Delta water temperatures, nutrients, or water clarity (and thus irradiance) at levels that would substantially affect, or affect at all, frequency or magnitude of CHABs in the Delta and no long-term water quality degradation is expected to occur. Thus, there would be no noticeable changes or effects on recreationists in the Delta and adjoining waterways. Furthermore, please also refer to Chapter 13, Terrestrial Biological Resources, Impact BIO-52, and associated appendices, regarding invasive

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		species. The analysis concludes implementation of Environmental Commitments EC-4a and EC-14 to reduce the potential of the introduction and spread of invasive plants and minimize the potential effects on natural communities and special-status species by restoring temporarily disturbed areas, reseeding areas with noninvasive species, and ensuring equipment is cleaned and inspecting before entering new areas. Impacts related to invasive species would be less than significant.
306-5	These boating impacts [Disrupting navigation, commerce, and communities, as well as invasive species transport and occurrence of harmful algal blooms] would be long-term and even permanent. However, the project fails to adequately identify and fully mitigate these impacts with certainty.	Please see response to comment 306-3 regarding navigation, and boat-related commerce and community effects. The potential for disrupting navigation would be limited to very few specific locations such as where the intakes would be constructed, and would entail only some possible speed reductions and temporary directional routing of boats in those limited locations. There would be some hazard warnings and exclusionary areas immediately adjacent to the shoreline where the intake facilities would be permanently located, but there is no evidence those limited restricted shoreline areas would disrupt the passage of vessels in the open river or otherwise disrupt the utility and utilization of Delta navigation system in the long term. Please see responses to comments 306-3 and 306-4 regarding harmful algal blooms and invasive species transport. The potential effects of harmful algal blooms analyzed in Chapter 9, Water Quality, under Impact WQ-14: Effects on Cyanobacteria Harmful Algal Blooms Resulting from Facility Operations and Maintenance were found to be less than significant, so no mitigation is required under CEQA. The potential impacts from invasive species are analyzed in Chapter 13, Terrestrial Biological Resources, Impact BIO-52: Impacts of Invasive Species Resulting from Project Construction and Operations on Established Vegetation, and associated appendices. The analysis concludes implementation of Environmental Commitments EC-4a: Develop and Implement Erosion and Sediment Control Plans and EC-14: Construction Best Management Practices for Biological Resources to reduce the potential of the introduction and spread of invasive plants and

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		minimize the potential effects on natural communities and special-status species by restoring temporarily disturbed areas, reseeding areas with noninvasive species, and ensuring equipment is cleaned and inspecting before entering new areas. Impacts related to invasive species would be less than significant.
306-6	While the project might enhance the availability of fresh water for transport out of the Delta, the $14 billion expenditure would hasten the demise of aquatic conditions in the Delta as climate change occurs. The foreseeable impacts include higher air temperatures, varying seasonality of inflows, fluctuations in wet weather periods as well as droughts, decreased snow melt, increased risk of wildfires, saltwater intrusion further into the Delta, higher sea levels, and decreased water quality especially during droughts.	Please 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. The comment assertions regarding the significance of impacts on water quality, aquatic biological species, and climate change are not supported by the analyses contained in the EIR. Please refer to the Executive Summary table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures for a list of CEQA impact determinations for impacts on water quality and aquatic biological species. As shown in this table, the analysis in the EIR concludes that all impacts related to water quality identified in the comment would be less than significant. As shown in this table, the analysis in the EIR concludes that all significant impacts on aquatic biological resources identified in the comment would be mitigated to a less-than-significant level. Additionally, Appendix 12C, Fish and Aquatic Resources 2040 Analysis, and Appendix 13F, Terrestrial Biological Resources 2040 Analysis, evaluate whether any of the impact conclusions documented in Chapter 12, Fish and Aquatic Resources and Chapter 13, Terrestrial Biological Resources, respectively, would change when considered under future conditions when construction is complete and the project is fully operational and when considering changes to hydrology and sea level rise as a result of climate change. As discussed in these two appendices, operations of the project are not expected to result in new, different, or more severe effects than those disclosed in Chapters 12 and 13. Chapter 30, Climate Change, presents the latest climate change science and

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		discusses the impacts of the project alternatives and climate change, and considers the comment's characterization of climate change (i.e., higher air temperatures, varying hydrology and precipitation). Appendix 5A, Modeling Technical Appendix, describes how climate change was modeled for the project. Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections, summarizes results under additional 2040 climate scenarios to understand anticipated changes in variables relevant to project operations under a broader range of climate scenarios. The project alternatives are evaluated using a projection of future climate that includes changes in temperature, precipitation and hydrology, and sea level rise. Chapter 25, Hazards, Hazardous Materials, and Wildfires, Impact HAZ-7, evaluates impacts associated with wildfires. As discussed in Appendix 5A, Section F, Sea Level Rise and Delta Water Quality Modeling, the north Delta intakes would not be vulnerable to salinity intrusion due to sea level rise.
306-7	However, the draft environmental impact analysis inadequately analyses these future risks [higher air temperatures, varying seasonality of inflows, fluctuations in wet weather periods as well as droughts, decreased snow melt, increased risk of wildfires, saltwater intrusion further into the Delta, higher sea levels, and decreased water quality especially during droughts]. It unrealistically limits the future conditions only to the year 2040 for the evaluation of the climate as well as social impacts.	Please see response to comment 306-6 regarding the consideration of climate change in the document. Analyses of climate change in the EIR are not limited to the year 2040. Analyses that are based on hydrological modeling mainly focus on 2040 conditions. However, the climate change and sea level rise assumptions used to model 2040 conditions cover a broader period than the year 2040, and as such do not limit evaluations narrowly to 2040. Please refer to Common Response 6, Climate Resilience and Adaptation, and Common Response 9, Hydrologic Modeling and Approach, for additional detail about modeling assumptions. In addition, the 2040 analyses include a scenario with 1.8 feet of sea level rise (H++ scenario) at the San Francisco Bay tide gage. The H++ scenario is considered an "extreme sea level rise scenario for the year 2040" by the California Ocean Protection Council and is not anticipated to be likely, by current climate models, until the 2070–2100 timeframe. This means the

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		sea level rise assumptions used to model 2040 conditions cover a broader period than the year 2040, and as such do not limit evaluations narrowly to 2040. Because the project alternatives would be operational far into the future, DWR also provided a comparison of climate conditions in an even longer-term future timeframe (i.e., 2070s), although not required to do so by CEQA. These analyses are discussed in Appendix 4A, Consideration of 2070 Conditions, to provide readers with an understanding of whether the type and magnitude of impacts disclosed for 2040 may change under a possible 2070 scenario. As discussed in Appendix 4A, because the cumulative uncertainties associated with climate change, socioeconomic conditions, water demand, and regulatory changes are too complex to reasonably foresee, providing analyses beyond 2070 would not have yielded information useful to the public and decision makers and therefore is not considered. Please refer to Common Response 6 for additional information regarding the comprehensive analysis of climate change contained in the EIR, which exceeds CEQA requirements.
306-8	It also fails to either disclose or evaluate numerous uncertainties, unknowns, and assumptions associated with the project.	This comment does not specify any of the allegedly numerous uncertainties, unknowns and assumptions that the draft EIR allegedly fails to disclose or analyze, so no specific response is required. Please refer to Common Response 1, CEQA Process, General Approach to Analysis and Other Environmental Review Issues, regarding the disclosure and evaluation of uncertainty throughout the EIR.
306-9	To the contrary, the laws, policies and projects that are already in place including water conservation, recycling, ground water recovery, desalination plants, surface water storage, ground water management, support a No Project Alternative.	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, including those actions identified by the comment. Please see Common Response 3, Alternatives Development and Description, and Appendix 3A, Identification of Water Conveyance Alternatives, regarding reasonably foreseeable actions identified by the

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		comment and their inability to meet the basic objectives of the Delta Conveyance Project. Please see Common Response 5, Public Water Agencies Water Management Practices, regarding existing efforts and future actions to be undertaken by State Water Project users to ensure California's water resources are being used efficiently and sustainably.
306-10	RBOC [Recreational Boaters of California] remains concerned that this project creates no new sources of water to address the impacts of the drought, climate change, and population growth.	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. 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.
306-11	The primary emphasis is to move high quality water from the Delta, which would leave poor quality water for the inhabitant fish species, wildlife and humans.	Please see response to comment 306-6 regarding water quality for multiple beneficial uses, including drinking water, fish, and wildlife. The comment assertions regarding the significance of impacts on water quality, fish, and wildlife are not supported by the analyses in the EIR. An analysis of potential water quality impacts associated with construction and operation of the project is provided in Chapter 9, Water Quality, which concludes that the project impacts would be less than significant without mitigation. Additionally, the analyses included in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, conclude that potential impacts related to aquatic species and wildlife would be mitigated to a less-than-significant level. Finally, as described in Chapter 2, Purpose and Project Objectives, 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, potentially, CVP water deliveries south of the Delta, consistent with the State's Water Resilience Portfolio, in a cost-effective manner. The above-stated purpose, in turn, gives rise to several

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		related objectives of the Delta Conveyance Project which include, but are not limited to, providing operational flexibility to improve aquatic conditions in the Delta.
306-12	The project does not restore and protect the Delta and its ecosystems.	Please see responses to comments 306-10 and 306-11 regarding the purpose and objectives of the project and response to comment 306-6 regarding the analysis of impacts on water quality, fish, and wildlife. In addition, CEQA does not require that projects fix or somehow remedy existing negative environmental conditions. CEQA requires agencies to adopt all feasible mitigation for adverse direct and indirect impacts specifically caused by the proposed project.
306-13	The mitigations are weak to non-existent and in many instances, impacts are mischaracterized as 'LTS' [less than significant] to 'NI' [No Impact].	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of mitigation measures, general approach to analysis, and use of best available science.
306-14	In summary, the key concerns are: 1. Disruption to navigable waters in the Delta for 14 years during construction	Please see responses to comments 306-1 through 306-5 regarding disruption of navigable waters in the Delta during construction. In addition, there will be a limited amount of barging during preconstruction overwater geotechnical investigations and at the end of intake construction or the placement of riprap. These activities would not disrupt the passage of boats other than possible speed controls and other short-term safety protocols needed in that reach of river. Further detail provided in Chapter 20, Transportation.
306-15	In summary, the key concerns are: Does not adequately address climate change and its impacts on decreased snow melt	Please see responses to comments 306-6 and 306-7 regarding the information related to climate change contained in the EIR, including an evaluation of climate change scenarios and the No Project Alternative in 2040. As described in these responses, the EIR contains substantial analysis of a range of climate change scenarios including changes in snowpack melt and demonstrates none of the relevant project impact conclusions change under anticipated climate change and extreme sea level rise. Impacts of decreased snowpack melt are described in Chapter 5, Surface Water: "The projected reduction in snowpack under climate change can significantly change the availability and pattern of surface water resources because

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		Sierra Nevada snowpack is the primary source of water supply and natural groundwater recharge in California ….These decreases [in long-term average monthly flows] are also due to altered inflow patterns as a result of climate change with diminished snow accumulation and an earlier snowpack melt….” Changes in runoff and drought impacts are described as a result of climate change in Chapter 30, Climate Change.
306-16	In summary, the key concerns are: 3. Unquantified Groundwater Impacts (for Example Table 8.0) non meaningful LTS - Less Than Significant	Please see Chapter 8, Groundwater, which uses modeled results to quantify potential impacts on groundwater in Impacts GW-1 through GW-5. The quantified results are summarized in the summary table titled Comparison of Impacts of Project Operations on Groundwater by Alternative. Thresholds of significance are described near the end of the section titled Approach for Analysis. Refer to the section titled Impacts of the Project Alternatives on Groundwater for the results of the impact analysis.
306-17	In summary, the key concerns are: 4. Does not create any new sources of water.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding project objectives and response to comment 306-10 regarding new sources of water.
306-18	In summary, the key concerns are: 5. Will wreak havoc on the aquatic species, wildlife, inhabitants, recreational users and supporting industries	The comment assertions regarding the significance of impacts on aquatic species, wildlife, recreational users, and recreational opportunities are not supported by the analyses contained in the EIR. Please refer to the table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures in the Executive Summary for a list of CEQA impact determinations for impacts on water quality, recreation, wildlife, and recreation users. As shown in this table and described further in Chapter 9, Water Quality, and Chapter 16, Recreation, the analysis in the EIR concluded that impacts related to water quality and recreation would be less than significant. As also shown in this table and described further in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, potential impacts related to aquatic species and wildlife would be mitigated to a less-than-significant level. Please see response to comment 306-4 regarding impacts on recreational

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		opportunities described in Chapter 17, Socioeconomics. Please also see responses to comments 306-3 and 306-4 regarding the project and cyanobacteria harmful algal blooms, water quality, biological resources, and socioeconomics with respect to recreation. In addition, CEQA does not specifically require analysis of impacts on "supporting industries" unless the impact can be tied to an adverse effect on the physical environment. This comment does not raise a significant environmental issue associated with effects of the Delta Conveyance Project on supporting industries.
306-19	For these reasons, RBOC [Recreational Boaters of California] is opposed to the project [1.Disruption to navigable waters in the Delta for 14 years during construction. 2. Does not adequately address climate change and its impacts on decreased snow melt. 3. Unquantified Groundwater Impacts (for Example Table 8.0) non meaningful LTS - Less Than Significant. 4. Does not create any new sources of water; and. 5. Will wreak havoc on the aquatic species, wildlife, inhabitants, recreational users and supporting industries].	Please see responses to comments 306-1 through 306-18 regarding navigation, climate change, groundwater impacts, new sources of water, and impacts on aquatic species, wildlife, inhabitants, recreational users, and supporting industries, as well as comments that state opinions of general opposition to the project.
306-20	Thank you for this opportunity to comment on the draft environmental impact report. I can be reached at, or feel free to contact RBOC's [Recreational Boaters of California] advocate, Jerry Desmond	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.
307-1	This letter provides comments related to the Draft Environmental Impact Report on the Delta Conveyance Project, in particular the Bethany Reservoir Alignment. Inland Action is a non-profit, non-partisan corporation of public-spirited leaders who have joined together to be catalysts for the economic well-being of the Inland Empire region of California since 1962.	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.

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307-2	The changing climate, California's growing population, and fragility of the Delta are issues that are well established in public records. These issues are redundantly discussed by both sides of the Delta Conveyance Project issue. What is clear is the California Water Project, perhaps the single largest economic generator in the State, is in jeopardy, and taking no action is irresponsible for the people of California.	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. 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 Project Requirements, regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws.
307-3	Inland Action believes that the critical reason to support this project seems to get lost in the politics and biased positioning.	Please see response to comment 307-2 regarding opinions of general support for the project.
307-4	California is experiencing unprecedented droughts, contrasted by a new breed of severe storms. The California Water Project cannot accommodate sudden surges in water flow because of the placement of the intakes at the southern delta: In that region the water is mostly slack even in high water flows through the delta and increasing the flow into the canal still disrupts flows and can impact environmentally fragile endangered species, as well as the natural spawning patterns of salmon. In general, we are not able to take advantage of high flows. Extremely high water flows in winter generally last no more than two days, and the required protocol for increased pumping at the delta intake is usually three days. In winter, the water cannot be simply stored in the existing reservoirs as they must maintain capacity for flood protection in spring.	Please see response to comment 307-2 regarding opinions of general support for the project and DWR's commitment to operate the State Water Project as modified to include the Delta Conveyance Project. Please refer to Common Response 3, Alternatives Development and Description, 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).
307-5	The answer is to move an intake well upstream so the impacts on the delta are reduced to take advantage of the limited high flow window. Taking a small portion of flood waters creates	Please refer to response to comment 307-4 regarding how the project would be operated. Please also see Common Response 3, Alternatives

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	the least amount of impact on the delta. This water is critical to the sustainability of the minimal water allocations of the California Water Project, without increasing the amount of water allocated. This important aspect of the project must be strongly considered as part of the environmental review.	Development and Description, regarding the range of alternatives evaluated in the EIR, as well as a discussion of the location of the proposed intakes.
307-6	Inland Action looks forward to the execution of the project. Thank you for your consideration.	Please see response to comment 307-2 regarding opinions of general support for the project.
311-1	I am writing to ask for a copy of the spreadsheet model "SWP Power" that is referenced in section A.10.1 of Appendix 5A. Is this an excel spreadsheet? Can it be emailed?	DWR responded to all requests for modeling files in a timely manner within the comment period.
311-2	Also, with respect to your below correspondence with Dan [Attachment 1: Email from Ms. K. Icelow of DWR replying to Dan Whaley which indicates that the Environmental Setting section of each resource area chapter includes a description of the study area for that particular resource], it is true that there is a section titled "Environmental Setting" which then has a subheading "study area." in each chapter of the EIR. However, one does not know any more about the study area after reading this section in many cases-it is not helpful.	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 through 32. Please also see Chapter 4, Framework for the Environmental Analysis, regarding the approach to evaluating study area boundaries, which vary for each resource topic depending on impact mechanisms and the extent of the area in which impacts are expected to occur for a resource.
311-3	For example [With regard to the "study areas" being poorly described throughout the EIR], Chapter 22, Energy, describes the study area for energy consumption during long term operations as "regional energy sources throughout the state of California that could be affected by the project alternatives' energy demand." (p.22-3:25–26) But it does not list or name any of these "regional energy sources" in the study area description. The text of Chapter 22 discusses and tabulates the SWP's own power generation facilities, but the SWP buys power needed to run the pumps from the grid. Which power generating facilities on the grid will be affected by the approximately 35% increase in the SWP's need to buy outside power? (Table 22-12, Alt 5) Is the study area the entire	As described in Chapter 4, Framework for the Environmental Analysis, "Study area boundaries vary for each resource topic depending on impact mechanisms and the extent of the area in which impacts are expected to occur for a resource." In other words, the study area for a particular resource is clearly defined in the resource chapter and depends on the resource being evaluated and the types of impact mechanisms that could occur. Please also see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for more information on the study areas defined in the EIR. As noted by the commenter, the study area for energy impact analysis includes project construction areas where energy is consumed and regional energy sources throughout the State of California that could be affected by

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	California energy grid? We don't know. Some chapters do define the study area in a meaningful way in the Environmental Setting section, but others, like Chapter 22, do not.	the project alternatives' energy demand. In Chapter 22, Energy, the table titled Total System Electric Generation in Gigawatt Hours for 2020 provides a statewide summary of electric generation, which helps place into context the estimated energy required to operate each alternative to statewide generation. See also the Chapter 22 table titled Summary of Estimated Annual Average SWP Energy Generation, Energy Use, and Net Energy Consumption in Gigawatt Hours for Operation of the Alternatives Compared to Existing Conditions, which does disclose that energy use would increase under each of the project alternatives. Chapter 22 also describes the energy sources that would be available for the Delta Conveyance Project. These energy sources would be the same sources that are currently serving existing SWP facilities, including DWR's own hydropower generating facilities. DWR has contracts with CAISO, PG&E, and SCE for transmission interconnection and transmission service for SWP power resources and pumping loads, and the SWP load is served by obtaining energy from CAISO market participants. The CAISO is regulated by the Federal Energy Regulatory Commission, and the California Public Utilities Commission regulates investor-owned utilities that operate in the CAISO market. Publicly owned utilities that may also market to CAISO are regulated by local city councils or other governing bodies. All retail electricity sold in California is subject to legislative requirements such as Senate Bill 100, which sets targets for renewable energy.
319-1	To Whom It May Concern: On behalf of the undersigned, we [Central Valley Air Quality Coalition] submit the following comments regarding Delta Conveyance Project Draft Environmental Impact Report (EIR).	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.
319-2	The San Joaquin Valley air basin remains in extreme nonattainment with the 1979 1-hour ozone standard, set over 40 years ago, as well as with the 1997, 2008, and 2015 8-hour	Please see response to comment 319-9 for a description of the Delta Conveyance Project's potential impacts on regional air quality within the San Joaquin Valley Air Pollution Control District (SJVAPCD), which includes

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	ozone standards. Additionally, the U.S. Environmental Protection Agency currently categorizes the San Joaquin Valley as being in serious nonattainment for the 1997, 2006, and 2012 PM2.5 national ambient air quality standards (NAAQS). Fine particle pollution (PM 2.5) and ozone impact environmental justice (EJ) communities and populations most at risk: youth under 18, pregnant people, elders over 65, people who work outdoors, and people with preexisting health conditions. These pollutants can make their way to the lungs and blood, leading to short-term and long-term health impacts like asthma attacks, and increased risk of lung infection, and potential heart impacts. Therefore, careful consideration and analysis of cumulative impacts should be presented along with the Draft EIR to determine the impacts to Stockton residents and other surrounding communities and address community concerns in a more meaningful manner.	south Stockton. Impact AQ-5 in Chapter 23, Air Quality and Greenhouse Gases, quantifies criteria pollutant concentrations for all alternatives and analyzes whether those concentrations would exceed the health-protective ambient air quality standards or contribute substantially to an existing or projected violation. The criteria pollutants of concern with established annual standards are CO, SO2, NO2, PM10, and PM2.5. Within the SJVAPCD, construction of all project alternatives except Alternatives 2b and 2c would generate maximum 24-hour PM10 concentrations above the NAAQS. Construction of any project alternatives would generate maximum 24-hour PM10 concentrations above the SIL (CAAQS), maximum annual PM2.5 concentrations above the SIL (CAAQS and NAAQS), and maximum 24-hour PM2.5 concentrations above the SIL (NAAQS). Environmental Commitments EC-7 through EC-13 would help minimize construction emissions through implementation of the on-site controls. With implementation of Mitigation Measure AQ-5, the impact would be reduced but would remain significant and unavoidable. The Chapter 23 section titled Cumulative Analysis also presents a health impact assessment that correlates criteria pollutant emissions generated during project construction to potential human health consequences, including asthma cases, cardiovascular disease, and mortality. The estimated changes in ambient air quality and health effects attributed to project-related unmitigated emissions are minimal considering background pollutant concentrations and health incidences. Air quality impacts on environmental justice communities are analyzed in Chapter 29, Environmental Justice, in the section titled Air Quality and Greenhouse Gases. For the purposes of the Environmental Justice analysis, environmental justice communities are minority and low-income populations in the study area as defined in the section titled Environmental

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		Justice Context. Impacts AQ-5 and AQ-6 would result in exposure of sensitive receptors to substantial localized criteria pollutant emissions and exposure of sensitive receptors to substantial toxic air contaminant emissions, respectively. Although the mitigation measures and environmental commitments discussed above would be implemented to address these temporary impacts, the air quality effects would occur in areas with meaningfully greater minority and low-income populations and therefore represent a disproportionately adverse effect on environmental justice. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a description on the process for approving projects with significant and unavoidable impacts.
319-3	San Joaquin County Air Pollution Impacts: The community of South Stockton was selected in 2019 under the Community Air Protection Program established by Assembly Bill 617 as one the of most polluted communities in the State. Stockton was selected due to the numerous pollution sources and the severe health consequences of air pollution in our region, particularly for people living close to major industrial and magnet sources such as the Port of Stockton, Interstate 5, and highway 4. The South Stockton community is "ranked highest in fine particulate matter pollution (PM 2.5) impacts, and second highest in diesel particulate matter (PM) exposure" for the northern region of the San Joaquin Valley air basin. According to CalEnviroScreen 4.0, the cumulative environmental score, PM2.5 exposure, and pollution burden values are all in the 90th percentile. [Footnote 1: San Joaquin Valley Air Pollution Control District. "Community Emissions Reduction Program: Stockton". 2021. Pg 27-45. Available at	The community of South Stockton is within the San Joaquin Valley Air Pollution Control District (SJVAPCD). Please see responses to comments 319-2 and 319-9 for a description of the Delta Conveyance Project's potential impacts on regional air quality within the SJVAPCD. Localized impacts from receptor exposure to criteria pollutant and toxic air contaminants generated during project construction are assessed in Chapter 23, Air Quality and Greenhouse Gases, Impacts AQ-5 and AQ-6, respectively. Localized impacts on sensitive receptors in Stockton were considered to the extent that they are located within 1,000 meters of project construction.

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	https://community.valleyair.org/media/2487/final-stockton-cerp-no-appendix-with-cover.pdf]	
319-4	San Joaquin County Air Pollution Impacts: The impacts for breathers in San Joaquin County and the entire San Joaquin Valley region are severely underplayed within the Draft EIR. The document currently states: "Ultimately, a large portion of the study area does not currently attain the ozone and particulate matter ambient air quality standards. Certain individuals residing in areas that do not meet the ambient air quality standards could be exposed to pollutant concentrations that cause or aggravate acute and/or chronic health conditions, regardless of project construction. The small increase in health incidence estimated for the project is a small fraction of the total background health incidence, demonstrating that project construction would have minimal human health consequences." [Footnote 2: San Joaquin Valley Air Pollution Control District. "Community Emissions Reduction Program: Stockton". 2021. Pg 27-45. Available at https://community.valleyair.org/media/2487/final-stockton-cerp-no-appendix-with-cover.pdf] This statement belies the overall impact for the entire project and fails to consider disproportionately burdened areas like south Stockton that face extreme air pollution burdens. Any increase in health issues is unacceptable and can result in severe health impacts, even death, especially for residents living in already overburdened environmental justice neighborhoods. In San Joaquin County, the top five causes of death are heart disease, cancer, COVID19, stroke and lung disease. [Footnote 3: San Joaquin County Public Health. "San Joaquin County 2022 Community Health Needs Assessment".	Please see response to comment 319-9 for a description of the Delta Conveyance Project's potential impacts on regional air quality within the San Joaquin Valley Air Pollution Control District (SJVAPCD). Please see response to comment 319-2 for a description of the analysis of air quality impacts on environmental justice communities within the SJVAPCD. The project would be implemented in a manner intended to minimize regional and localized air quality emissions and the potential for adverse health effects. As described in Appendix 3B, Environmental Commitments and Best Management Practices, all feasible onsite emissions reduction measures have been incorporated into the project design. These include performance standards to ensure construction contractors utilize newer offroad (including marine and locomotive) and on-road engine technologies that are significantly cleaner and generate fewer emissions than older models. Fugitive dust emissions would be reduced through implementation of a robust dust control plan and best management practices at new concrete batch plants. These environmental commitments will limit onsite construction emissions to the greatest extent practical, reducing both regional and local pollutants in San Joaquin County and associated human health impacts. Remaining regional emissions above SJVAPCD thresholds will be offset through Mitigation Measure AQ-3. These offsets would be purchased through a voluntary emissions reduction agreement with SJVAPCD or through a DWR-sponsored program. The SJVAPCD's Voluntary Emission Reduction Agreement (VERA) program has also operated since 1992 and has a proven track record of reducing ozone precursors in the Central Valley.

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	Pg. 6. Available at http://www.sjcphs.org/assets/20220817_4%2028%2022%20Final%20SJC%20CHNA%20Report.pdf] These top five causes can all be directly linked to air pollution impacts as PM 2.5 and ozone, which can impact the heart, lungs, and result in the conditions mentioned above. The Department of Water Resources cannot ignore these key distinctions among areas the project would cover. Each area impacted by the proposed project must be given careful consideration and the most health protective measures must be implemented.	
319-5	San Joaquin County Air Pollution Impacts: In addition to underestimating impacts of the project, the Draft EIR includes problematic language on addressing exhaust pollution impacts with renewable diesel. Environmental Commitment EC-7 for Off-Road Heavy-Duty Engines points to the use of renewable diesel to mitigate impacts. Diesel pollution in several areas surrounding the project, including census tracts 6077000801 and 6077000900, fall above the 90th percentile for impacts related to diesel pollution and face approximately 0.5 tons per year of diesel particulate matter. [Footnote 4: California Office of Health and Hazard Assessment. "CalEnviroScreen 4.0: Diesel Pollution". Available at https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40] While the Draft EIR mentions the use of electric powered equipment, the project should prioritize fully electric options to prevent any additional impacts to nearby communities.	The commenter generally asserts that the Draft EIR includes problematic language related to its commitment to using renewable diesel to reduce exhaust emissions but does not identify any specific issues or provide recommendations for revision. As described in Appendix 3B, Environmental Commitments and Best Management Practices, Environmental Commitment EC-7 requires that all diesel equipment less than 25 horsepower (i.e., not subject to the Tier 4 Final mandate) use renewable diesel fuel. Renewable diesel would reduce diesel particulate matter emissions generated by Tier 0 to Tier 3 off-road engines by 30% (see the section titled Heavy Equipment in Appendix 23A, Mass Emissions Estimation Methodology). Air quality benefits from use of renewable diesel would occur across all construction sites, including those proximate to the census tracts identified by the commenter (6077000801 and 6077000900). Use of renewable diesel was assumed in the construction health risk assessment presented in Chapter 23, Air Quality and Greenhouse Gases, Impact AQ-6. The analysis demonstrates that cancer and non-cancer health hazard risks would below SJVAPCD's health protective thresholds at all receptors within a 1-km radius of construction sites in the San Joaquin Valley. Note that Environmental Commitment EC-7 has been revised for the Final EIR to include performance standards for zero-emissions equipment and vehicles. Revisions to Environmental Commitment EC-7 do not result in a new significant environmental impact or substantial increase

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		in the severity of an environmental impact or require additional mitigation measures to which DWR was unwilling to commit. Refer to Common Response 15, Air Quality and Greenhouse Gases, for additional information on air quality environmental commitments, including equipment electrification.
319-6	San Joaquin County Air Pollution Impacts: Lastly, as it stands, abandoned idle wells are not being considered during the construction of this project. These wells pose a risk, as any potential leaks resulting from project construction could have serious impacts for the community. Given recent events in Bakersfield with idle wells leaking in close proximity to communities, releasing methane and toxic air contaminants, The Department of Water Resources must plan for these risks and be prepared to share any impacts with the public.	The location of most abandoned and inactive wells is known, as shown in the figure titled Oil and Gas Processing Facilities in Chapter 25, Hazards, Hazardous Materials, and Wildfire. However, the comment is correct that not all well locations are known. Therefore, additional identification efforts would be conducted during the design phase and before construction of the project, as described in Chapter 3, Description of the Proposed Project and Alternatives. Efforts to locate all previously unknown wells will include the use of airborne methods to conduct magnetic surveys followed by surface geophysical surveys. See the Impacts of the Project Alternatives Related to Hazards and Hazardous Materials section in Chapter 25 for a description of identification efforts, which include research of historical mapping and using geophysical methods to identify well casings.
319-7	Addressing Community Concerns: We [the Central Valley Air Quality Coalition] commend The Department of Water Resources on their commitment to outreach to Disadvantaged Communities (DACs) and Severely Disadvantaged Communities (SDACs). However, outreach and surveying is not enough.	Impacts of the project on Disadvantaged Communities (DACs) and Severely Disadvantaged Communities (SDACs) were analyzed in Chapter 29, Environmental Justice. Furthermore, DWR engaged specifically with disadvantaged, historically burdened, underrepresented, people of color, and low-income communities of interest that may be disproportionately affected by the project. This outreach was conducted in addition to the general outreach required for compliance with CEQA. Although an environmental justice analysis is not a requirement of CEQA, the EIR uses NEPA methodology to consider impacts of the proposed project and its alternatives on environmental justice communities. Please see the Chapter 29 section titled Environmental Justice Community Outreach for specific examples of the outreach DWR engaged in with environmental justice communities.

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319-8	Addressing Community Concerns: Chapter 29 [of the DEIR] highlights several concerns with the Delta Project that are not fully addressed or are even dismissed throughout the Draft EIR. Particularly, DACs [Disadvantages Communities] and SDACs [Severely Disadvantages Communities] expressed concern and "provided the most comments for the following priorities, in order of frequency: the natural environment, preserving the Delta and its communities, parks and recreation, clean air and drinking water that also tied with 'no tunnel' (participant generated priority), and preserving agriculture." Preserving the Delta and its communities and "no tunnel" are themes that emerged from the comments that were distinct from the options provided in the ranking list. [Footnote 5: Department of Water Resources. "Chapter 29: Environmental Justice"]	The comment assertion that the EIR does not address or dismiss concerns is not supported by the analysis provided throughout the EIR. As described in Chapter 4, Framework for the Environmental Analysis, the EIR was developed to meet the requirements of CEQA but also included analyses beyond what is required of CEQA to more fully inform the public and decision-makers and support the NEPA process. The analysis in Chapter 29, Environmental Justice, considers environmental justice concerns and discloses potential effects of the Delta Conveyance Project on environmental justice communities. The impact analyses provided in Chapters 7–32 evaluate the potential physical environmental impacts of the proposed operations for all alternatives. As described in Chapter 12, Fish and Aquatic Resources, all potential impacts analyzed would result in less-than-significant impacts with mitigation. As described in Chapter 13, Terrestrial Biological Resources, all potential impacts analyzed would result in less-than-significant impacts with mitigation. As described in Chapter 9, Water Quality, all potential impacts analyzed would result in less-than-significant impacts before the application of mitigation. As described in Chapter 16, Recreation, the potential impacts analyzed would result in less-than-significant impacts. As described in Chapter 19, Cultural Resources, the project could result in significant and unavoidable impacts on historic cultural and archaeological resources. In addition, described in Appendix 3G, Community Benefits Program Framework, the Community Benefits Program would include the Delta Community Fund and Economic Development and Integrated Benefits to address local effects that may occur, beyond the mitigation requirements of CEQA. Please see Common Response 4, No Project Alternative Description and Analysis, for a description of the No Project Alternative.

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319-9	Addressing Community Concerns: Due to the disproportionate impacts in the San Joaquin Valley air basin listed above, The Department of Water Resources should host additional public opportunities to better understand and work with communities to address those concerns.	Please refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, for a description of public outreach activities that DWR conducted during development of the EIR and the public comment period to address public concerns on the project and provide opportunities for public input and education. Furthermore, please see Chapter 23, Air Quality and Greenhouse Gases, Impact AQ-2 for an analysis of potential impacts of the project on regional air quality within the San Joaquin Valley Air Pollution Control District (SJVAPCD). The impact would be significant under all alternatives because construction could result in an exceedance of SJVAPCD's annual NOx (ozone precursor) threshold before mitigation. Construction of Alternative 5 would also exceed SJVAPCD's annual PM10 threshold before mitigation. As outlined under Mitigation Measure AQ-2, DWR proposes to mitigate regional NOx and PM10 impacts in the San Joaquin Valley. With implementation of Mitigation Measure AQ-2, the impact would be reduced to less than significant.
319-10	Addressing Community Concerns: The San Joaquin Valley air basin should ultimately be given deeper consideration when it comes to the EIR as a result of the numerous air pollution burdens and the number of DACs [Disadvantages Communities] within the Air Basin. The Department of Water Resources should carefully consider the cumulative impacts for residents of the San Joaquin Valley air basin and commit to engaging at a deeper level with DACs and SDACs [Severely Disadvantages Communities] to address concerns they expressed in the 2020 survey.	Please see response to comment 319-9 for a description of the impacts from the Delta Conveyance Project on regional air quality within the San Joaquin Valley Air Pollution Control District (SJVAPCD). Please also see the section in Chapter 23, Air Quality and Greenhouse Gases, titled Cumulative Impacts of the Project on Air Quality for an analysis of the cumulative impact of the project. Chapter 29, Environmental Justice, analyzes the project's effects on disadvantaged communities defined in Pub. Resources Code Section 75005(g). Disadvantaged communities, also referred to as "low-income populations" in Chapter 29, are communities with a median household income less than 80% of the "statewide average." As described in the Chapter 29 section titled Air Quality and Greenhouse Gases, although mitigation measures would be implemented to address temporary air quality impacts from construction, the air quality effects would occur in

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		areas with meaningfully greater minority and low-income populations and therefore represent a disproportionately adverse effect on environmental justice communities including low-income communities.
340-1	Everyone who knows the delta – lives here, farms here, fish here, boats here - or simply loves it here - knows that freshwater is the lifeblood of this delta. And taking more of it away will be its demise. Freshwater flows are critical to water quality and the health of the ecosystem. What happens when you take out up to 6000 CFS from the Sacramento River at the TOP of the delta system - somewhere between a third and half of the river's average flow? The DEIR spends 208 pages in the water quality section to say that this is not a problem. But common sense says that less water means we are going to have more salinity and more harmful algal blooms, and that the delta - its ecosystem, its farms, its people - are going to suffer.	Please see Chapter 2, Purpose and Project Objectives, and 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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please refer to the table Comparison of Surface Water Resources by Project Alternative in Chapter 5, Surface Water, regarding the magnitude of anticipated changes to Sacramento River Basin flows and SWP/CVP reservoir storages that are expected to result from the project alternatives. Chapter 5 provides the simulated changes in river conditions which demonstrate that long-term average monthly flows under project operations would be similar to existing conditions. As described in Chapter 3, Description of the Proposed Project and Alternatives, section Key Existing Delta Operations Criteria, the project would be operated consistent with regulatory requirements, specifically State Water Board Water Right Decision 1641 (D-1641). Please see Common Response 3, Alternatives Development and Description, regarding project operations. 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, which were determined to be less than significant. Chapter 9 addresses harmful algal blooms under Impact WQ-14, which concludes that the impact of project alternatives would be less than significant. Please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding cyanobacteria harmful algal blooms and the water quality impact analysis.

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		As described in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, potential impacts related to aquatic species and wildlife would be mitigated to a less-than-significant level. Please see Chapter 15, Agricultural Resources, for an analysis of potentially significant impacts and proposed mitigation measures related to agriculture.
340-2	Sacrificing the delta for the benefit of other regions is not only unsustainable, it also fails the Delta Reform Act's co-equal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem." You cannot protect, restore, and enhance the Delta ecosystem by taking freshwater out at the top of the system and increasing exports.	Please refer to response to comment 340-1 regarding project operations and surface water flows. 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 requirements of the Delta Reform Act and co-equal goals.
340-3	Does that mean the status quo is acceptable? No! One of the PR fallacies surrounding all of the various proposed tunnel projects has been the idea that you're either for a tunnel or you're for the status quo. Another is that only a tunnel can solve the state's water problem. Wrong and wrong! This Draft EIR is a case in point. It offers up only a "no project" alternative - the status quo - or some version of a tunnel. The status quo is not the answer. A tunnel is not the answer.	Please see Common Response 3, Alternatives Development and Description, regarding the alternatives screening process and the range and scope of alternatives considered. 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, which include additional water conservation programs, water recycling projects, groundwater recovery projects, desalination of seawater or brackish groundwater, surface water storage, groundwater management, or water transfers and exchanges, that may be pursued by a variety of local, state, and federal agencies. Please see also 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.
340-4	Hundreds of millions of dollars have been spent planning and promoting these tunnel projects. Money that could have been spent on solutions that will improve water reliability without	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project, and Common Response

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	damaging the delta's ecosystem, farms, cities, and towns.	7, Implementation Considerations, regarding project costs and financing. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding the project's anticipated water supply reliability benefits. Please refer to Chapters 7–32 of the EIR for analyses of potential significant environmental impacts of the project and proposed mitigation measures.
340-5	Here are a few of those solutions: -Plug the holes in the canals. If the roof is leaking, don't build a new house. Fix the leaks! -Invest in strengthening Delta levees that protect people, property, and our water delivery system. - Invest in stormwater capture, wastewater recycling, and conservation. The Harvest Water Project in Sacramento County will deliver up to 50,000 AF of clean, recycled water to Sacramento County farms – water that does not have to be pumped out of the ground. -Develop groundwater storage. We don't have good dam sites left in California, but we do have aquifers, and they can be used to store water. -These solutions are not pie-in-the-sky – they're real and being used in California and all over the world.	Please see Common Response 3, Alternatives Development and Description, regarding suggested infrastructure and water management alternatives.
340-6	I strongly urge DWR to abandon this wasteful and damaging Tunnel project and turn your attention and resources to projects that will create a sustainable water future for ALL regions and ALL Californians.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. Please also refer to response to comment 340-3 regarding the range and scope of alternatives considered.

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350-1	The undersigned coalition [Southern California Water Coalition] of interests supports the proposed Delta Conveyance Project identified in the Draft Environmental Impact Report (the Bethany Reservoir Alignment, Alternative 5), which is vital and essential to completing the voter-approved State Water project and modernizing California's water transport infrastructure. The State Water Project and the water that flows through its vast network of infrastructure is the backbone of the state's invaluable water supply for 27 million Californians. The Delta Conveyance Project is a landmark investment in the state's incomplete and aging water infrastructure and a vital project for California's future. The state-of-the-art water conveyance solution described in Alternative 5 of the Draft EIR will ensure that tens of millions of Californians will have clean, reliable, and affordable water for generations to come. The local infrastructure that the State Water Project is reliant upon to protect, collect, and move water through the Delta to California homes, farms, and businesses was constructed more than 50 years ago, and as a result of many factors, is at ever-increasing risk of failure from climate change, sea level rise, and seismic conditions. The Delta Conveyance Project proposed alternative is the right project at the right time to help ensure the State Water Project can continue to meet California's water needs into the future. The proposed alternative evaluated in the Draft EIR has been refined and structured in a manner that avoids and mitigates local environmental and community impacts within the Delta, and provides important assurances that the communities most affected by construction of the project are provided the means and resources to achieve local benefits. These important values	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. 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.

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	are balanced with the urgent need to modernize the State Water Project's Delta infrastructure to avoid a catastrophic disruption of our state's primary water supply.	
350-2	Collectively, our comments below on the Draft EIR focus on three primary themes that are important in the ongoing dialogue and consideration relating to certification of the EIR and advancement of the project: • Critical need for new Delta Conveyance as a climate adaptation strategy • Importance of new Delta Conveyance in embracing the commitment to protection and advancement of the Human Right to Water • Value of Delta Conveyance to the Southern California and statewide economies	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 regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please see 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.
350-3	Delta Conveyance is an Active Climate Adaptation Strategy Climate change is a real and present threat to California's water reliability. Rising temperatures, decreasing snowpack, recurring and prolonged droughts, and heavy precipitation events are threatening our primary water delivery system, clearly demonstrating the need for a proactive solution that protects water supplies for generations to come. The evidence of climate change impact is squarely in front of us today and is exemplified in a review of trends and indices that demonstrate the need for climate adaptation and water use efficiency strategies – like the Delta Conveyance Project – to be undertaken immediately.	Please see response to comment 350-1 regarding comments in general support of the project. Please also refer to Common Response 6 regarding the project's potential to enable adaptation to climate change impacts.
350-4	Shifting Hydrology Experts project a reduction in average California peak snowpack water volume over the next 60-80 years of 79	Please see response to comment 350-1 regarding comments in general support of the project. The comment is generally consistent with the information in Chapter 30,

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	percent, and the peak timing – which has historically been around April 1 of each year – could move up by as much as four weeks, meaning that snow melt will occur earlier in the season, exacerbating the challenges for water managers to ensure that water supplies are available when in most demand. [Footnote 1: Lawrence Berkeley National Laboratory Report – December 11, 2018] In addition, in a recent study by the Lawrence Berkeley National Laboratory, it was found that snowpacks – specifically in the western United States – will drastically decline or become non-existent by the end of the next century. The study predicts that the Sierra Nevada snowpack could decrease approximately 45 percent by 2050.[Footnote 2: Lawrence Berkeley National Laboratory – A Low-To-No-Snow Future and Its Impacts on Water Resources in the Western United States, October 26, 2021] This presents a threat to endangered and threatened fish species as well that can be best protected and managed by the construction and operation of the proposed Project.	Climate Change, regarding future snowpack.
350-5	[Exhibit 1: Map of California showing historical and projected California snow-pack.] [Footnote 3: California Department of Water Resources -- Climate Change and Water -- Climate Change and Water (ca.gov) -- accessed August 2022]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
350-6	Warming Temperatures: Evaluation undertaken pursuant to California's Fourth Climate Change Assessment concludes that mid-century impacts of warmer temperatures (including a +2.5F degree projected increase in California's average annual temperature by 2069), changing hydrology, and sea level rise indicate that the significant stresses exerted by climate change will reduce Delta exports by 500,000 acre-feet per year and north-of-Delta	This comment describes how projected changes in temperature, hydrology, and sea level rise will affect Delta exports. The comment is generally consistent with information contained in Chapter 30, Climate Change, regarding Delta exports. The comment does not raise significant environmental issues related to the analysis of impacts discussed in the EIR.

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	carryover storage will diminish by 1.5 million acre-feet. The analysis indicates that average maximum temperatures are projected to increase around 4.4 – 5.8 degrees Fahrenheit by the mid-century and 5.6 – 8.8 degrees Fahrenheit by the late-century. [Footnote 4: California's Fourth Climate Change Assessment, "Mean and Extreme Climate Change Impacts on the State Water Project," Wang, J., Yin, H., Anderson, J., Reyes, E., Smith, T., Chung, F. – August 2018]	
350-7	Sea-Level Rise: Analysis of sea-level rise indicate that roughly 1-2 feet of sea-level rise is projected by the mid-century, and the most extreme projections indicate up to 8-10 feet of sea-level rise by the end of the century. The effects of storm surges could be more immediate and damaging to existing levees and Delta land behind the levees, below sea level. [Footnote 5: California's Fourth Climate Change Assessment, "Statewide Summary Report," August 2018] As sea levels continue to rise, the Delta will be faced with increasing saltwater intrusion into the inner Delta, which threatens clean water supplies conveyed by the single water diversion point in the South Delta.	This comment describes information regarding sea level rise and storm surge and potential damage to levees and increased saltwater intrusion into the inner Delta. The comment is consistent with information in Chapter 30, Climate Change, regarding the Delta levee system, sea level rise, and flooding. The comment does not raise significant environmental issues related to the analysis of impacts discussed in the EIR.
350-8	Seismic Risk: Rising sea-level could threaten the viability of the local Delta levee system, putting the drinking water supply system for millions of Californians at perpetual risk. According to the U.S. Geological Survey, there is a 72 percent chance of a 6.7 or greater magnitude earthquake occurring in the San Francisco Bay Area by 2043 that could cause levees in the Delta to fail, crippling the state's ability to deliver clean water. [Footnote 6: California Department of Water Resources -- Why Delta Conveyance -- June 10, 2019]	This comment provides information about seismic risk in the Delta. Chapter 1, Introduction, Chapter 7, Flood Protection, and Chapter 10, Geology and Seismicity, provide information and analyses regarding seismic risk to the Delta. The comment does not raise significant environmental issues related to the analysis of impacts discussed in the EIR.

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350-9	Addressing the climate crisis requires transformational, systems-wide changes, and unprecedented collective action. California is driving toward these shifts through an increasingly integrated approach, with a broad range of plans that advance climate action. The proposed Delta Conveyance Project is a climate adaptation strategy that is designed to help California address its changing climate future. While many of scientific evaluations of climate change examine California's potential future under a changing climate, the evidence of climate change is already exemplified in the frequently changing hydrology that the State Water Project has been experiencing over recent years. As evidenced by the annual State Water Project allocations, particularly over the past 15 years, the unpredictability of California's water supply for state water contractors has shifted dramatically. Not only has the State Water Project been unable to achieve a 100 percent allocation of supply in the last 16 years, the unpredictable availability and extreme variability of water supplies on a year-to-year basis has created an untenable situation for water managers planning the reliability and resiliency of water supplies for their communities. Capture and conveyance of water in and through the Delta is an important adaptation strategy to mitigate potential water system losses in other areas due to changing precipitation patterns and seasonal runoff. The Delta Conveyance Project is expected to allow continued water deliveries and operational flexibility should catastrophic levee failure from seismic activity, extreme weather, pressure from sea-level rise, or other disasters that may temporarily disrupt routing or quality	This comment describes information regarding observed changes to California's water supply due to climate change. The comment is generally consistent with the information in Chapter 30, Climate Change. Please see response to comment 350-1 regarding comments in general support of the project.

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	of surface water supplies. The proposed Delta Conveyance Project will ensure that the State Water Project can capture, move, and store water when it is available, even through extreme weather events and climate trends. The proposed project is an essential climate adaptation strategy and a crucial part of Governor Newsom's portfolio approach to water management, helping California water agencies develop their local water supply projects.	
350-10	[Exhibit 2: Bar graph of SWP annual water allocation by percent]	The exhibit is provided in support of comment 350-9. Please see response to comment 350-9.
350-11	Delta Conveyance Embraces the Commitment to Protection and Advancement of the Human Right to Water Many disadvantaged communities and water ratepayers across California need an affordable, high-quality water supply, especially as the cost of living continues to escalate and external factors -- like drought and climate change -- continue to exacerbate water affordability challenges for millions of Californians. Affordability of reliable water directly impacts our society's quality of life. Water supplies delivered through the State Water Project from the Sierra Nevada snowpack source remains the most affordable option to consumers, especially compared with development of new local water supply projects. A basic tenant of affordability is to efficiently use existing infrastructure to the greatest extent achievable. Failure to construct the Delta Conveyance Project risks loss of use and underutilization of the investments made by taxpayers and ratepayers of the State Water Project over decades. Replacement of the water supply available from the State Water Project is not readily affordable,	The commenter has provided a statement of opinion regarding the operability of the project and does not raise 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 350-1 regarding comments in general support of the project. Chapter 2, Purpose and Project Objectives, describes the objectives of the Delta Conveyance Project, including helping to address water supplied through the SWP within the context of changing climate and hydrologic conditions.

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	and certainly not simply feasible to accomplish. Moreover, the water quality benefit of the State Water Project for all users is irreplaceable. More than 27 million Californians rely on imported drinking water conveyed through the Delta. This imported water also serves millions of acres of local agricultural lands and vital wildlife refuges. The reliability of that imported water supply is threatened by a variety of real-time risks, including climate change, sea-level rise, increasing regulatory restrictions, seismic risks, and deteriorating ecosystem conditions. The Delta Conveyance Project will help address many of these challenges. In a catastrophic failure of the existing State Water Project delivery system or inattention to addressing real-time climate change risks to the system, lower-income and disadvantaged populations would be most negatively affected by the impacts. Scarcity of resources and substantially less affordable water supply options would exacerbate water affordability challenges for millions of Californians and strike at the heart of efforts to be stewards of the Human Right to Water.	
350-12	In addition to the increased water security, climate adaptability, and environmental benefits the Delta Conveyance Project would provide, it is particularly important for the approximately 1,500 disadvantaged communities throughout the state that rely on the State Water Project for affordable, clean water. The State Water Project provides approximately three-fourths of California's disadvantaged communities with some or all of their water supplies. The Delta Conveyance Project provides important protections	Please see response to comment 350-11 regarding information related to climate change and the objectives of the Delta Conveyance Project.

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	against the potential for public health and safety impacts on Californians -- including millions of disadvantaged Californians -- from reduced quantity and quality of State Water Project deliveries, ensuring that the promise advanced by the Human Right to Water is recognized and advanced in a meaningful way.	
350-13	[Exhibit 3: Pie chart titled "Disadvantaged Communities (DACs) Served by the SWP".] [Footnote 7: Data represents an approximation of DACs served by the State Water Project per the SB 535 CalEnviroScreen Data]	Please see response to comment 350-11 regarding information related to climate change and the objectives of the Delta Conveyance Project.
350-14	Importantly, the Draft EIR for the Delta Conveyance Project analyzes disproportionate impacts on minority and low-income communities (environmental justice communities) from construction, operation, and maintenance of the project. While an environmental justice analysis is not required by CEQA, state policies and statutes do instruct state agencies to consider the impacts of action on environmental justice communities. This coalition also encourages an evaluation of the benefits to environmental justice communities and the stewardship of the Human Right to Water as a result of advancement of the Delta Conveyance Project to protect drinking water accessibility, availability, affordability, and quality.	Beneficial effects associated with water supply reliability from the proposed project and its alternatives are identified in Chapter 29, Environmental Justice, specifically under the section titled Water Supply. Overall, increases in reliability of the total existing water portfolio are expected with implementation of the proposed project and its alternatives by sustaining and improving water supply reliability and supplementing or reducing groundwater use, which would increase water supply reliability in the export service areas that ultimately serve environmental justice communities. Please see Chapter 6, Water Supply, and Chapter 9, Water Quality, for details on the water supply and water quality reliability changes resulting from the project alternatives. See also Chapter 17, Socioeconomics, for potential effects related to changes in State Water Project (SWP) and Central Valley Project (CVP) export service areas that could experience improved water supply reliability as a result of the project.
350-15	Delta Conveyance Protects the Southern California and Statewide Economies A stable economy relies on solid infrastructure, a healthy workforce, and stable supply chains. Each of these economic pillars is impacted by climate change. With an increasing number of, and more severe, wildfires and droughts,	Please see response to comment 350-1 regarding comments in general support of the project.

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	California's economy is already experiencing the economic instability caused by climate change. Water delivered through the State Water Project remains the most cost-effective source of water for Californians and fuels our state's economy, which is the fifth largest in the world. However, the weakest link of the State's water delivery system -- which is the Sacramento-San Joaquin Delta -- has a local human-made dirt levee infrastructure that is old and highly vulnerable to the natural forces of earthquakes, sea-level rise, floods, and climate change. Over the past several decades, billions of dollars of investments have been made in the State Water Project, and the Delta Conveyance Project is the next essential investment. Building a large-capacity single tunnel under the Delta protects the state's most valuable and affordable water supply and protects the public's investment in the State Water Project.	
350-16	Southern California accounts for approximately 60 percent of the state's population and the region is an economic driver for the state. In an analysis by the UCLA Anderson School of Management, Southern California's gross domestic product reached $1.6 trillion in 2021, which places the region as the 13th largest economy in the world (between Australia and Brazil)[Footnote 8: UCLA Anderson School of Management - Yu, William -- UCLA Anderson Forecast - December 8, 2021]. In most years, water supplied by the State Water Project is the single-largest source of supply into the region, and the economic sustainability is directly tied to the reliability of water supplies conveyed through the State Water Project, which makes the Delta Conveyance Project an essential component of economic sustainability for the region and the state. Water plays many roles in California's economy. Every business and household uses water for a variety of purposes, both to	Please see response to comment 350-1 regarding comments in general support of the project.

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	support daily human needs and in the production of agricultural and industrial products and other goods and services. Safe drinking water is invaluable to the California economy, preventing waterborne illness and death. Water management itself is an important sector of California's economy. Numerous public agencies and private businesses manage water supplies and wastewater, provide flood protection, and help support environmental amenities. These activities directly account for billions of dollars in operating and investment expenditures, as well as value-added economic activity associated with related and indirect industry. [Footnote 9: Public Policy Institute -- Water and the California Economy -- May 2012] Clean, reliable water supplies provide numerous economic benefits to the entire Southern California region and the state. Direct investments in water infrastructure ripple throughout the entire economy by creating new jobs, expanding business opportunities, and fostering economic competitiveness. In a snapshot analysis focusing solely on San Diego County investments in water infrastructure over the past 20 years, the San Diego Economic Development Corporation released an economic analysis relating to water infrastructure investments in 2018. The analysis found $2.4 billion of investments in regional water reliability infrastructure has had the economic effect of generating approximately $4.8 billion in total economic impacts within the region, supported approximately 1,500 jobs annually, and resulted in nearly $1.8 billion in local wages and salaries [Footnote 10: The Importance of Water Reliability to San Diego's Economy -- San Diego Economic Development Corporation -- June 2018]. Similarly, an analysis undertaken by the Los Angeles Economic Development	

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	Corporation regarding the regional economic benefits of the Metropolitan Water District of Southern California's Regional Recycled Water Program, concluded that the direct expenditures on labor, materials, power, construction, and more by Metropolitan Water District will work its way through the economy and create indirect and induced benefits for a wide range of businesses. State and local governments stand to gain as well from the hundreds of millions of dollars in tax revenues that the program will generate [Footnote 11: Metropolitan Water District: Regional Recycled Water Program -- Institute for Applied Economics -- Los Angeles Economic Development Corporation -- August 2021]	
350-17	Not only will the Delta Conveyance Project have the intended effect of protecting and sustaining California's robust and world-leading economy, the project will also create direct economic stimulus through job creation and operations investments, plus the added benefit of the multiplier effect from infrastructure investment by generating tremendous economic activity for related, peripheral, induced, and indirect industries that will also benefit economically from advancement of the Project.	Please see response to comment 350-1 regarding comments in general support of the project. In addition to environmental impacts and proposed mitigation measures regarding multiple environmental resources in the Delta, the EIR also evaluates potential economic effects in Chapter 17, Socioeconomics. The socioeconomic assessment estimated the direct and indirect effects on employment and income with the Delta study area as a result of constructing and operating the Delta Conveyance Project. The assessment also provided a qualitative assessment of socioeconomic effects within the water delivery areas.
350-18	Conclusion Our [Southern California Water Coalition] collective support for the Delta Conveyance Project cannot be underscored enough. There are tremendous multi-benefits associated with this project, and we have focused on emphasizing the direct benefits of the project as a climate adaptation strategy, as a means for providing stewardship toward advancement of the Human Right to Water, and for protection of the Southern California and statewide economies. But, there are many additional positive and beneficial attributes of moving forward	Please see response to comment 350-1 regarding comments in general support of the project.

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	toward approval and certification of the Draft EIR to begin construction on the Delta Conveyance Project, including: -Protection of water supplies against climate impacts, including sea-level rise which threatens to impede fresh water and impact water quality -Enabling local water supply projects by providing baseline flows for recycling, groundwater recharge, and potable reuse -Facilitating capture and storage of water from wet years and large storm events -Guaranteeing flexibility in the statewide water supply grid -Improving water quality -Enhancing affordability by blending costs of State Water Project water and local supply projects	
350-19	The Delta Conveyance Project represents a landmark investment in the state's aging water infrastructure - and a vital project for California's future. The Delta Conveyance Project will modernize and upgrade a key section of the State Water Project, and this state-of-the-art water conveyance solution will ensure that nearly 27 million Californians will have clean, reliable, and affordable water for generations to come. The proposed Delta Conveyance Project is a very different project from previous conveyance proposals. DWR took a fresh look at everything, and the current proposed project reflects significant changes and improvements to minimize impacts. Ultimately, the project has been downsized, refined, re-routed,	Please see response to comment 350-1 regarding comments in general support of the project.

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	and redesigned. In addition to the design changes to minimize impacts, the proposed project also includes a Community Benefits Program to ensure the communities most affected by construction of the project are provided the means and resources to achieve local benefits, and a commitment to ongoing community engagement with environmental justice communities, Tribes, and Delta communities. Now is the time to act and move forward to protect California's water security. We [Southern California Water Coalition] greatly appreciate your consideration of our foregoing comments on the Draft EIR, and we encourage state certification of the Draft Environmental Impact Report and the advancement of this essential project. Please don't hesitate to reach out to [name of contact person] of the Southern California Water Coalition, at [author email and phone number], if you have any questions regarding this comment letter.	
364-1	General comment for the entire Draft Environmental Impact Report (DEIR) -- The DEIR is incomplete and inadequate for description, assessment, mitigations, and alternatives of the Project DEIR and purposefully is not suitable for general public review and comments and does not follow State or generally accepted practices for such documents. I recommend withdraw, massive revisions and eventual recirculation as a supplemental/subsequent DEIR. Any other approach may be the target of eventual litigation for enforcement of circulating an adequate and complete DEIR. The Draft Environmental Impact Report (DEIR) may be voluminous but remains largely unsuitable for public review and commenting upon such a disjointed and almost	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR, general approach and scope of the impact analysis, adequacy of mitigation measures, and use of best available science. As described in Common Response 1, the EIR was prepared fully and adequately meet all CEQA requirements, and in some instances exceed them (e.g., inclusion of environmental justice and socioeconomic chapters and 2040 appendices which are not required by CEQA). As described in Common Response 1, the EIR necessarily includes a considerable amount of information to adequately analyze potentially significant environmental impacts due to the scope and scale of the Delta Conveyance Project. Information is presented in the EIR in a format with emphasis on conclusions and data useful to decision makers and the public. Furthermore, as described in the Common Response, the EIR followed

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	incomprehensible organization. Certification of the current DEIR or similarly composed Final EIR with inadequate and incomplete revisions may lead to litigation and eventual rejection along with decreasing State Water Project reliability and support of users.	generally accepted practices for the preparation of such documents and organizes information primarily by resources topics, with summarizes of impacts and comparisons of project alternatives summarized at the beginning of each chapter. Common Response 1 also describes the requirements for recirculation of an EIR, none of which the current EIR meet. Therefore, the EIR does not require recirculation. Finally, please see Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives and the approach to describing the alternatives using sufficient level of detail and a stable project description.
364-2	[Same as comment 1] General comment for the entire Draft Environmental Impact Report (DEIR) – The DEIR is incomplete and inadequate for description, assessment, mitigations, and alternatives of the Project DEIR and purposefully is not suitable for general public review and comments and does not follow State or generally accepted practices for such documents. I recommend withdraw, massive revisions and eventual recirculation as a supplemental/subsequent DEIR. Any other approach may be the target of eventual litigation for enforcement of circulating an adequate and complete DEIR. The Draft Environmental Impact Report (DEIR) may be voluminous but remains largely unsuitable for public review and commenting upon such a disjointed and almost incomprehensible organization. Certification of the current DEIR or similarly composed Final EIR with inadequate and incomplete revisions may lead to litigation and eventual rejection along with decreasing State Water Project reliability and support of users.	The EIR has been prepared in accordance with CEQA and adequately discloses the scope, severity, and magnitude of potential impacts for the environmental resources analyzed in Chapters 7 through 32. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the adequacy of the purpose and objectives statements for the purposes of CEQA. Common Response 1 also contains information regarding the length and complexity of the EIR. 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. Please refer to Chapter 35, Public Involvement, and Common Response 2, Public Outreach Activities, regarding outreach efforts to help the public understand the contents of the EIR during the public review period for the Draft EIR.

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364-3	Delta Conveyance Project Agreement Description of Nature, Purpose and Beneficiaries of Project: The Delta Conveyance Project's (DCP or project) primary objective is to protect the State Water Project's (SWP) ability to continue to reliably deliver water south of the Delta….Additional objectives include making SWP more resilient to the impacts of climate change and extreme weather events, minimize the impacts from earthquakes (delivery quantity and quality), and providing SWP operational flexibility to improve aquatic conditions and better manage risks of additional future regulatory constraints on project operations General text with bolded words as focal points of comments	The comment is summarizing or referencing content of the EIR. 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.
364-4	Totally confused CEQA/NEPA references to Goals/Objective and Purposes/Needs in EIRs and EISs without clear attribution of satisfaction of alternatives to such goals/objectives in this EIR and without numerical/quantitative comparisons of alternatives. Use of singular and plural forms for Define primary and provide description of primacy or dominant compared to secondary or tertiary objectives. Provide definitions of resilient and reliability and specific distinctions regarding the resilience and reliability of Project and alternatives construction and operations. Relevant document copies are provided for direct relationships to comments which follow. General document text with bolded words as focal points of comments	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA baseline used and the adequacy of the purpose and project objectives statement. Please also refer to Chapter 2, Purpose and Project Objectives, regarding the project's purpose and objectives. Additionally, Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3, Alternatives Development and Description, discuss the alternatives screening process and the range and scope of alternatives considered. A glossary of the technical terms is provided in Chapter 38, Glossary, to make the document more accessible to a wide audience.

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	Totally confused CEQA/NEPA references to Goals/Objective and Purposes/Needs in EIRs and EISs without clear attribution of satisfaction of alternatives to such goals/objectives in this EIR and without numerical/quantitative comparisons of alternatives. Provide definitions of resilient and reliability and specific distinctions regarding the resilience and reliability of Project and alternatives construction and operations.	
364-5	Exec. Summary Delta Conveyance Project Draft EIR Executive Summary 119 pages Read the Document (deltaconveyanceproject.com) ES-8 The following list outlines the issues that were identified by governmental agencies and the public during scoping and points the reader to where these issues are discussed in the Draft EIR. Purpose and Objectives. Commenters varied on whether they agreed with the purpose and objectives stated in the NOP, with some expressing the opinion that SWP export areas should find alternative sources of water. Other commenters requested a broader project purpose and objectives that should include ecosystem restoration and flood safety. The project purpose and objectives are laid out in Chapter 2, Purpose and Project Objectives. Range of Alternatives. The range and adequacy of alternatives is an issue of concern to the public as well as to governmental agencies. The development and screening process of	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.

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	alternatives is discussed in Appendix 3A, Identification of Water Conveyance Alternatives, which provides additional details on the information that was used in developing the alternatives. Primary text references Appendices discussions therefore primary text should not have this.	
364-6	ES-10/2. This Draft EIR, consistent with the requirements of CEQA, discloses the impacts of the alternatives in a comparative and synthesized format to facilitate public and agency review, as described below. CEQA requires numerical and quantitative comparisons of alternatives for ease of public considerations. As only the Do-Nothing alternative provides any non-tunnel alternative Other than tunnel alternatives must be considered and must include: Levee Reinforcements and Local Service Area Water Purification systems for service areas of >5,000 populations. ES-10/3. To facilitate understanding the differences in impacts among the project alternatives, all of the project alternatives are evaluated together in a synthesized manner for each impact described for a resource topic. CEQA requires numerical and quantitative evaluations or tabular rankings of alternatives for public considerations. Provide a Tabular comparison of all alternatives and additional nontunnel alternatives (Levee Reinforcement and Water Purification) for each environmental sector/area.	CEQA does not require a numerical and quantitative comparison of alternatives; however, there are multiple quantitative and numerical comparisons throughout the entire EIR depending on the resource evaluated. For example, Chapter 12, Fish and Aquatic Resources, has approximately 200 tables that provide quantitative comparisons of anticipated impacts by project alternative. Please see Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives evaluated in the EIR that meet the basic project objectives as well as a description of the operations of the project and a description of the approach to the project description contained in Chapter 3, Description of Proposed Project 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 project. The EIR includes many tables identifying differences and similarities between alternatives for the public and decision makers to understand the alternatives and the different impacts between them. For example, in the

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	ES-10/4. CEQA significance conclusions are provided for each of the numbered direct or indirect impacts on the physical environment based on substantial evidence provided in the project alternative analyses and judged against defined impact significance thresholds. Provide Numerical comparisons for all element of the Environment, physical, biological, social, community, and even economic elements of the environment. ES-10/5. Consistent with the CEQA Guidelines requirement to discuss the impacts of mitigation, the effects of implementing resource-specific mitigation measures and the Compensatory Mitigation Plan (CMP) are evaluated for each numbered impact in addition to the impacts of the project alternatives. Provide the Compensatory Mitigation Plan and a draft Mitigation, Monitoring, and Reporting Plan, including reporting monthly on construction progress and mitigation and those of initial operations.	Executive Summary there are 27 tables comparing the alternatives. The table titled Summary of Key Project Features by Alternative summarizes the key features of each alternative; and the table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures identifies the impact determination of each alternative organized by resource evaluated in the EIR. In addition, as described above, the EIR has multiple tables throughout each resource chapter documenting comparisons of the alternatives and potential changes or impacts on the physical (e.g., Chapter 9, Water Quality), biological (e.g., Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources), and socioeconomic (Chapter 17, Socioeconomics) analyses. The compensatory mitigation approach described in Appendix 3F, Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources (CMP), is conceptual and based on anticipated mitigation needs. The final compensatory habitat mitigation needs for the project will be determined once all regulatory permits and approvals are secured. Although the mitigation approaches are described in sufficient detail to meet the requirements of CEQA, and other laws, it is anticipated that additional design and management planning, including more detailed performance standards, monitoring methods, and adaptive management actions, may be needed prior to project approval and initiation. Monitoring and Reporting is a requirement of the CMP.
364-7	Page 15-52, Paragraph 2. Operation of the project's water conveyance facilities would alter salinity regimes relative to existing conditions in the western Delta... would remain in compliance with all water quality standards set by the State Water Resources Control Board to be protective of Delta agricultural beneficial uses. None of the modeled changes to salinity during the times of year when the Bay-Delta WQCP does not identify EC targets for agricultural beneficial uses (i.e., post August 15) would be expected to trigger a substantial	Information on the relationship of the Delta Conveyance Project to the Delta Reform Act's coequal goals is presented in Chapter 1, Introduction. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs for information regarding the relationship of the Delta Conveyance Project to the Delta Reform Act's coequal goals, California's Antidegradation Policy, and State Water Resources Control Board authorities. See also Common Response 10, Surface Water Quality and Groundwater Resources, for information on project compliance with state water quality standards. Please also see Appendix 3E, Delta Reform

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	conversion of Important Farmland to nonagricultural use. DEIR's project description and assessments are inadequate and incomplete with regard to the Delta Protection Act's intent and the Delta Reform Act's coequal goals, while they clearly state the conveyance facilities will alter water quality but that such an impact will be mitigated by the State Water Resources Control Board proceedings and rulemaking. Such mitigation, however, requires delegating mitigative actions without any documentation and agreements to other boards and commissions and therefore must be unacceptable as mitigation.	Act Considerations, for a discussion of the Delta Reform Act's coequal goals and details on how the practical effect of many of the proposed mitigation measures and environmental commitments in the EIR would protect Delta values.
364-8	7-49/1 Ongoing and continuous levee maintenance and monitoring would be critical to reducing flood risk at the shaft sites during project construction and would be closely coordinated with the reclamation districts. It is anticipated that levee maintaining agencies would continue making levee improvements to maintain geometric standards after repairs are completed and as sea level rise can be expected to increase in the future. DWR understands the importance of levee maintenance, reconstruction, and monitoring for quickly identifying vulnerabilities in or damage to levees during Project construction. However, the DEIR does not document any commitment by DWR and partner contractors for defense, indemnification, and hold harmless affected reclamation districts against all claims, liabilities, charges, losses, expenses, and costs (including their attorneys' fees) that may arise from the Project. Such statements must be made as part of the project description.	The issue raised in the comment does not relate to physical effects the project may have on the environment but instead relates to property agreements that DWR may enter into with local reclamation districts. The specifics of these agreements will be negotiated as appropriate. The project would not significantly impact levees maintained by Delta Reclamation Districts, as indicated in Chapter 7, Flood Protection. Levees in the vicinity of project features would continue to be maintained following construction in a manner consistent with current practices. During the design phase of the project, after a project is approved, DWR will coordinate with the local reclamation districts in the vicinity of the project footprint regarding the design of the levee improvements identified as part of the proposed project. Chapter 7 text referenced by the comment regarding ongoing and continuous levee maintenance and monitoring is not suggesting that there would be significant impacts on existing levees not already disclosed in Chapter 7. The text acknowledges, as is acknowledged elsewhere in the chapter, that there are numerous levee monitoring and maintenance activities currently implemented by various entities, including Reclamation Districts and DWR itself, within the Delta as described by the Central Valley

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	Provide further mitigative analysis which must confirm that state funding for the Project will back such local mitigations by others, and that such activities by others will not impose a new burden on the local reclamation districts.	Flood Protection Program. These numerous activities would be expected to continue with or without the approval and implementation of the Delta Conveyance Project because, with or without the project, levee monitoring and maintenance is needed in the Delta. The Delta Conveyance Project would not change DWR's flood control authorities or responsibilities within the Delta. DWR will install monitors during construction near levee construction sites and levee crossings of the tunnel alignment to determine if subsidence occurs and take corrective actions should they become necessary. As described in Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, DWR has a role and responsibility along with local governments and special districts to maintain and improve levees that protect the Delta. Chapter 7, Flood Protection, discloses specific levees that would be impacted by the following project-related activities: construction of the intakes on the Sacramento River for all alternatives, construction of levees along portions of Bouldin Island under Alternatives 1 and 2, levees along portions of Lower Roberts Island under Alternatives 3 through 5, construction of the Southern Forebay spillway for all alternatives except for Alternative 5, operation of the project, and implementation of the CMP. At the jurisdictional levees at all of the intakes, the levee will be realigned around the perimeter of the sedimentation basins and will be maintained by DWR as part of the Delta Conveyance Project. These levees will require USACE Section 408 Permits and Central Valley Flood Protection Board permits. At Bouldin and Lower Roberts Island, the levee improvements would be designed in coordination with the local reclamation districts (RD 756 and RD 684, respectively). The improved levees would not increase maintenance requirements that would continue to be provided by the local reclamation districts.

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		At Southern Forebay, the design of the spillway would need to be coordinated with Reclamation District 800. The spillway is part of the Delta Conveyance Project and would be maintained by DWR. Chapter 7, Impact FP-2, evaluates levee reliability in terms of PL 84-99 during construction. Levee improvements would be warranted in the areas described in the chapter to limit long-term flood risk. Additionally, Impact FP-1 discloses the small incremental change in surface water elevation (less than one inch) under project operations; this small incremental change would not result in a reduction in the flood capacity of existing channel or increase the potential for levee overtopping during a 100- or 200-year flood event. As described in Chapter 3, Description of Proposed Project and Alternatives, sections titled, Investigations to Support Section 408 Permitting and Investigations Prior to Construction Phase, DWR will conduct geotechnical investigate or install groundwater monitoring wells near construction sites (e.g., intake locations, shaft sites, and tunnel alignments) to inform design and in-field soil and groundwater conditions, including those related to levee stability. The information contained in Chapter 7 explains and provides feasible mitigation measures to reduce physical environmental impacts on levees or flood control where necessary, as a result of construction and operations of the project, and implementation of the CMP. U.S. Army Corps of Engineers and the Central Valley Flood Protection Board would evaluate the proposed levee improvements on jurisdictional levees for permitting purposes. During the design phase of the project, after a project is approved, DWR will coordinate with the local reclamation districts in the vicinity of the project footprint regarding the design of the levee improvements identified as part of the project. Please also see Common Response 7, Implementation Considerations, for

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		information on potential financial impacts on reclamation districts from construction and operation of the Delta Conveyance Project.
364-9	ALTERNATIVES The DEIR's alternatives assessments are also limited. The DEIR's alternatives provide various versions of the same tunnel project rather than basic tunneling alternatives, including a dead-straight, shortest length tunnel from inlets to the SWP, by gravity head and with pumping at the southern terminus. No alternatives are presented for other methods to meet DWR's water supply reliability/resilience goals, are more environmentally friendly ways to make California's water infrastructure less reliant on Delta exports, which conflicts with the 2009 Delta Reform Act. Such water purification schemes are currently underway throughout Southern California agencies (LA City, MWD, and Orange County) and could be applied to the San Joaquin Valley with reject concentrates disposed of to deplete oil fields. Provide alternatives and assessments, comparisons, and numerical selection for more dispersed, non-tunnel/non-canal alternatives, such as: Levee Reinforcement/Channel Improvements – deepened and streamline channel walls with internal and external reinforcements/protections, Water Conversation: change to seasonal-annual crops from perennial orchards and vineyards, Rain Water Capture- 3/4in per 24hr rainfall – 100% capture –	Please see Common Response 3, Alternatives Development and Description, regarding the adequacy of the range of project alternatives chosen for the CEQA analysis. Common Response 3 also provides a description of why a non-tunnel alternative, such as the one mentioned by the commenter, would not meet most of the basic project objectives. Generally, these alternatives would not meet climate change/sea level rise, seismic, and water supply resiliency project objectives. DWR has considered shorter, straighter conveyance alignments in the past that were eliminated because of land use and agricultural land conflicts, difficult construction logistics in areas farther west of current alignments, and species habitat effects. Accordingly, such a route would not be anticipated to substantially reduce any of the project's significant unavoidable impacts. The current dual conveyance alternatives would use through-delta and a gravity-fed tunnel to convey water to either the Bethany Complex or Southern Complex, depending on the alternative. Please see Chapter 22, Energy, for a description of the operational energy efficiencies considered and added to the project design, including the use of gravity flow by designing the tunnel to convey water into the Southern Forebay via gravity flow under certain Sacramento River flow conditions for Alternatives 1, 2a, 2b, 2c, 3, 4a, 4b, and 4c. Other alternatives mentioned in this comment including levee reinforcement/channel improvements, water conservation, rainwater capture and water recycling/purification were eliminated as alternatives to the proposed project because they would not meet most of the basic project objectives presented in Chapter 2, Purpose and Project Objectives, and as presented in Appendix 3A, Identification of Water Conveyance Alternatives. Generally, these alternatives would not meet two or more

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	e.g., 400gal/1000sf roofs or other impervious from 10in per year (14 times/yr, 5600 gal/yr) and x 1-2 Million sources transfers to local Public Water Supplies and collection systems Water Recycling/Purification with Reverse Osmosis by Dwelling Unit and per 1000 Dus, 100% Recycling/Purification of Existing Sewage Treatment Plants (LA Plan),	climate change/sea level rise, seismic and water supply resiliency, or operational flexibility objectives. Although not incorporated into the project alternatives, these water infrastructure and management approaches are currently being pursued through the State Water Supply Resiliency Portfolio and are complementary to the proposed project. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the Delta Conveyance Project's relationship to the Delta Reform Act and statewide water management planning considerations. For further details, please refer to the Final Draft Engineering Project Reports. See section titled Development of Facilities Plans in the Central and Eastern Corridors in Volume 1: Delta Conveyance Final Draft Engineering Project Report—Central and Eastern Options (Delta Conveyance Design and Construction Authority 2022p) and section titled Development of Facilities Plans in the Bethany Reservoir Alternative in Volume 1: Delta Conveyance Final Draft Engineering Project Report—Bethany Reservoir Alternative (Delta Conveyance Design and Construction Authority 2022q) for a summary of how tunnel alignments and facility sites were evaluated to minimize effects of the project on Delta communities, habitat, recreational users, and other features.
364-10	DEIR Comments Chapter 1 Introduction 1-1/1 The California Department of Water Resources (DWR), as lead agency…has prepared this Draft Environmental Impact Report (Draft EIR) to inform decisionmakers and the public generally of the potential for significant environmental impacts from constructing and operating new State Water Project (SWP) water supply diversion and conveyance facilities in the Sacramento–San Joaquin Delta (Delta Conveyance Project	Please see Common Response 3, Alternatives Development and Description, for the CEQA statutes and guidelines regarding the reasonable range of alternatives a lead agency must consider in a CEQA analysis and how the alternatives analysis for the Delta Conveyance Project achieves those requirements. Additionally, Common Response 3 addresses the adequacy of the range of project alternatives chosen for the CEQA analysis. Gravity flow efficiencies were considered and incorporated into the project design for Alternatives 1, 2a, 2b, 2c, 3, 4a, 4b, and 4c, as discussed in Chapter 22, Energy. The slope of the tunnel was designed to maintain

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	[project]), to identify possible ways to minimize the significant effects, and to describe and analyze reasonable alternatives to the project. Highlighted DEIR texts are copied from and included herein for specific comments for the DEIR. "New" facilities commonly imply facilities in addition to existing facilities, while elsewhere in Chapter 1 text implies that new intakes on the north will operate under identical constraints on flow diversions as those on the south, and no increase in flow diversion will occur. Provide clear description of total SWP flows (cfs, acft/d, acft/month, acft/yr etc.) currently and those expected from the Project facilities. Provide specific flow-diversion rights for all SWP/CVP Delta facilities. Provide clear, legal definition of "reasonable" alternatives and provide justification for lack of consideration for the shortest conveyance from the north inlets to the southerly connections to the 2022 SWP/CVP systems. Provide for a fully gravity fed tunnel alternative from the north inlets to the southerly connections to the 2022 SWP/CVP systems.	gravity flow within the range of design flows between the intakes and the Southern Complex or the Bethany Complex. Due to topographic elevation changes, the surface water elevations at either Southern Complex or Bethany Complex are lower than the Banks Pumping Plant or Bethany Reservoir; therefore, pumps are required to lift the water into the SWP system. Please refer to Chapter 5, Surface Water, including the table titled Comparison of Surface Water Resources by Project Alternative, regarding the magnitude of the most pertinent changes to Sacramento River Basin flows and SWP/CVP reservoir storages that are expected to result from the project alternatives. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, in the section titled Stream Diversions and Water Rights, discusses water rights in various relevant water bodies and how CalSim 3 incorporates them into the modeling. The level of detail for water supply and surface water changes related to the Delta Conveyance Project and compared to existing conditions is designed to provide reasonable disclosure of these changes and to support EIR resource analyses. While the information is publicly available, the additional detail requested regarding flow-diversion rights for all existing SWP/CVP Delta facilities is not needed for these purposes and is not provided in the EIR. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the project and water rights, including the DWR's intention to petition the State Water Board for approval to add new points of diversion in the relevant water right if the project is approved.
364-11a	1-1/2 The purpose of the project,…is to restore and protect the reliability of SWP water deliveries south of the Sacramento–San Joaquin Delta (Delta) consistent with the California Water Resilience Portfolio (California Natural Resources Agency	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA requirements for describing the objectives of a proposed project. The comments throughout this comment letter regarding terminology are not

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	2020), in a cost-effective manner. The objectives focus on the SWP's ability to: Respond to sea level rise and climate change, Minimize disruption of SWP operations from earthquakes in and around the Delta, Improve water supply reliability, and Provide operational flexibility. Provide definitions of singular or multiple Project purpose(s) and all related objectives. Provide consistent usage of distinctive CEQA and NEPA terminologies for DEIR/DEIS, e.g., CEQA - Goals and Objectives vs NEPA – Purposes and Needs.	comments that raise significant environmental issues relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Terminology has been used consistently throughout the EIR, which has been written in plain language to be clear and understandable. The contents of the EIR meet CEQA requirements and DWR has prepared the EIR for CEQA. However, as discussed in Chapter 1, Introduction, and Chapter 4, Framework for the Environmental Analysis, the EIR has been written with the anticipation that the EIS developed by the U.S. Army Corps of Engineers would reference the Draft EIR, where appropriate. Therefore, the EIR has been designed to meet certain NEPA requirements (e.g., inclusion of Environmental Justice Chapter). Section 15124 of the CEQA Guidelines includes: "The statement of objectives should include the underlying purpose of the project." Thus, DWR used the term "purpose" in the EIR in accordance with CEQA. The language in the EIR clearly communicates the project purpose and objectives for CEQA purposes and the terminology is used consistently throughout the EIR.
364-11b	[1-1/2] Provide CEQA-traditional Goals and their related Objectives for each, also provide traditional related policies and programs for each objective, perhaps on a single table. Assuming purposes (NEPA) = goals (CEQA) and the objectives of the DEIR include objectives and their derived alternatives which are numerically or quantitatively comparable.	Please see response to comment 364-11a regarding the purpose and objectives statements in the EIR and the fact that the EIR is meant to satisfy CEQA requirements not NEPA requirements. 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.
364-11c	[1-1/2] Given the term: restore, provide all original design aspects related to "reliability" of current SWP/CVP facilities and operations and their current levels of performance reliability	The design capacity of the existing facilities is not relevant to the proposed project, its alternatives or the environmental analysis contained in the EIR. As described in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, and Chapter 1, Introduction, in the section titled Regulatory Environment, pumping restrictions applied by regulatory agencies to address water quality and aquatic species concerns at the south Delta diversion continue to prevent the SWP from reliably capturing water when it is available, especially from storm events. Thus, the need to restore and protect the reliability of the

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		SWP is included in the project purpose and objectives. The impact analysis throughout the EIR considers current operations of the existing facilities under regulatory requirements, contract and delivery volumes, and a wide variety of hydrologic conditions, as described in Appendix 5B, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, regarding the proposed operations of the project. Please also refer to Common Response 3, Alternatives Development and Description, regarding water rights and contracts as well as the operational criteria, which are designed to comply with multiple regulatory requirements for water quality, fish protection, etc., regardless of project conveyance capacity. 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.
364-11d	[1-1/2] Provide relations and original design and current levels of operational flexibility (including all aspects of “normal” and flood flows).	Please see response to comment 364-11a regarding the terminology used for describing the objectives of a proposed project; the language in the EIR clearly communicates the project purpose and objectives for CEQA purposes and the terminology is used consistently throughout the EIR. Existing conditions, which include current operations under numerous water year types, including normal and wet years, are captured in the hydrological modeling, and discussed in detail in Appendix 5A, Modeling Technical Appendix. Chapter 5, Surface Water, and Chapter 6, Water Supply, compare the modeled hydrologic existing conditions to the project alternatives, all of which incorporate a range of water year types into the analysis.
364-11e	[1-1/2] Clearly define "cost-effective" and provide cost-effective analyses of all project elements and alternative, including temporal escalations for a long period of construction.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding scope of the project objectives and the discretion CEQA affords lead agencies in describing the objectives of a project. In selecting Alternative 5 as the proposed project, DWR considered anticipated costs of the alternative. However, cost considerations are not included as part of the proposed

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		project's four basic project objectives. Therefore, cost considerations were not used in identifying potentially feasible alternatives for analysis in the EIR, as explained in Common Response 3, Alternatives Development and Description. Please also refer to Common Response 7, Implementation Considerations, regarding project costs and funding sources.
364-11f	[1-1/2] Provide specific references including page-numbers for Objective 2. California Water Resilience Portfolio (California Natural Resources Agency 2020:???).	Please refer to response to comment 364-11a regarding CEQA and the project objectives. Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship between the Delta Conveyance Project and Executive Order N-10-19 and the California Water Resilience Portfolio. As described in Common Response 8 and Chapter 1, Introduction, DWR recognizes there is no one-size-fits-all approach, as does the California Water Resilience Portfolio. This is why the California Water Resilience Portfolio includes more than 100 separate detailed actions needed to ensure California's water systems work in the coming decades. The Delta Conveyance Project is one of many projects that will help meet California's water management needs but is not intended to be the only project that could meet water management needs. The EO 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.
364-11g	[1-1/2] As Project goals include "cost-effective manner", provide adequate, thorough Project-level cost-effectiveness analyses and specific costing for each alternative so as to establish a comparison of costs and effectiveness for each alternative and include such along with numerical comparisons in Chapter 3, as required by CEQA, for alternatives comparisons.	The type of comparative cost analysis requested by the comment is not a CEQA requirement. The purpose of CEQA is to evaluate and disclose potentially significant physical environmental effects. Please refer to Common Response 7, Implementation Considerations, regarding project costs and funding sources. While a comparative cost analysis is not required in an EIR, CEQA recognizes that, in determining whether and how a project should be approved, a lead agency will balance a variety of public objectives including economic factors (further detailed in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, and in Common Response 7).

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364-12	1-1/3 This chapter introduces this Draft EIR and explains the history and complex issues that have led to the development of the project. This chapter also provides…and identifies issues of known controversy and unresolved issues. Provide page-citations and listings for identified controversy (singular or plural) and identified unresolved issues (multiples). Provide practical resolutions for all unresolved issues.	The cited section of Chapter 1 of the EIR points the reader to the resource chapters of the EIR that address the issues of known controversy that were identified throughout the scoping process and development of alternatives. It is beyond the scope of the project or of an EIR to provide solutions to unresolved issues of controversy that are not directly or indirectly caused by the proposed project and alternatives.
364-13	1-1/4 Additionally, this Draft EIR was prepared in anticipation of the fact that the USACE's Draft EIS would reference the Draft EIR as appropriate. For that reason, certain aspects of this Draft EIR also are designed to meet NEPA requirements. For more detail, see Chapter 4, Framework for the Environmental Analysis. Provide specific references and pages within Chapter 4 for sections including NEPA requirements and CEQA inclusions. Provide concordance for CEQA and NEPA terminologies and requirements, e.g., Goals and Objectives and Environmental Impact Report/EIR and Purposes/Needs/EIS. 1-1/5 The Delta, shown in Figure 1-1, is an expansive inland river delta and estuary in Northern California. Portions of six counties—Alameda, Contra Costa, Sacramento, San Joaquin, Solano, and Yolo—make up the Delta, which is defined by statute under California Water Code (Wat. Code) Section 12220. Provide specific references/citations and pages for appropriate sections in Water Code as done elsewhere in EIR. 1-2/2 While the Delta represents less than 1% of California's land area, and Delta land devoted to agriculture represents	Chapter 4, Framework for the Environmental Analysis, section titled Relation to U.S. Army Corps of Engineers (USACE) EIS and NEPA Compliance, includes information on the supplemental analyses included in the EIR that are not required by CEQA but are useful to reviewers for informational purposes and for the USACE's EIS in compliance with NEPA and the NEPA regulations. Additionally, the section in Chapter 4 titled Organization of the Final EIR includes a description of two chapters from the EIR that are also included as a part of the USACE EIS for NEPA compliance: Chapter 17, Socioeconomics, and Chapter 29, Environmental Justice. The comment asks for a crosswalk between CEQA and NEPA terminology and requirements. As discussed above, the Delta Conveyance Project EIR was prepared to meet CEQA requirements and not NEPA requirements. Some additional information was included for USACE's NEPA compliance, but the EIR is not a joint CEQA/NEPA document. Therefore, this crosswalk is not provided in the EIR. The comment asks for specific references and citations for California Water Code Section 12220. However, this is a state statute which does not contain pages or subsections to further reference. Information on state statutes can be found on the state-run California Legislative Information website.

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	approximately 2% of agricultural land in California, Delta agriculture's economic contribution is substantial. Delta agriculture and the food and beverage industries it supports accounted for $2.7 billion in economic output in five\1 Delta counties alone, and about $4.6 billion statewide in 2016 (Delta Protection Commission 2020:38)….State Route (SR) 12, SR 4, and through-Delta railways are also important links in the Delta transportation system (Delta Protection Commission 2012:207). More detail on agricultural resources and recreational opportunities in the Delta is provided in Chapter 15, Agricultural Resources, and Chapter 16, Recreation, respectively. 1-2/3 For millennia before the Gold Rush, the Delta….Change was driven by the seasons and the tides and other periodic natural and human phenomena (Delta Stewardship Council 2013a:3, 8–25 9). Since the 1850s,…. The hydrodynamics of the Delta, as well as downstream locations including Suisun Bay and Suisun Marsh, have been transformed by reclamation, flood control projects, sedimentation from upstream mining, water supply projects, and navigation improvements (California Department of Water Resources 2013:1-9). Unlike other paragraphs and sections in the DEIR, some pages include specific page references for better locating of cross-references. Provide specific references and pages for all appropriate sections in Water Code and DEIR Chapters as done in the following paragraph and elsewhere in Chapters 1-4. 1-2/4 1.2.2 Water Supply Development and Management The development and management of California's surface water resources…Other projects that divert water from the	The remaining comments request specific page numbers for each in-text citation provided in the EIR. CEQA Guidelines Section 15148 describes the requirements for citations within EIRs: "The EIR shall cite all documents used in its preparation including, where possible, the page and section number of any technical reports which were used as the basis for any statements in the EIR." The citation and corresponding reference are provided for each reference source, and the exact page number is provided when possible. All documents referenced in the EIR are included in the project's administrative record. Cross references to sections or chapters within the EIR itself are sometimes included where appropriate and necessary to direct the reader to information about a related topic.

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	watersheds that supply the Delta include the San Francisco Public Utilities Commission's Hetch Hetchy Reservoir and aqueduct system, East Bay Municipal Utility District's Mokelumne aqueduct, and an extensive network of locally constructed dams, canals, and diversions (Delta Stewardship Council 2013a:9; Delta Stewardship Council 2018:76). Page 1-2/1-4 provide references to other documents and DEIR sections throughout all of the DEIR including specific pages for public usage, as partially done in Chapter 1. As in page 1-2, Provide references to specific pages to other documents and to other sections of this DEIR throughout all of the DEIR with specific pages for public usage, as partially done in Chapter 1, pg.1-2 1-7/3 …While these other resources, facilities, and practices are independent from the project, these elements also contribute to the overall water needs of the state, as described in the California Water Resilience Portfolio (California Natural Resources Agency 2020). Moreover, they are collectively vital and relevant to understanding water supply development and management in California. Provided with specific pages and paragraphs for public usage for references to other documents and to other sections of this DEIR. 1-7/4 These water contractors in turn deliver water to wholesalers or retailers, or deliver it directly to agricultural and municipal and industrial (M&I) water users (Bureau of Reclamation and California Department of Water Resources 2005:1-20). Total SWP deliveries 31 averaged about 1.96 million acre-feet [MAF] of water per year from 2009 to 2018	

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	(California Department of Water Resources 2020:18). During the 1999 to 2008 period, SWP deliveries averaged 2.86 MAF/year (California Department of Water Resources 2002, 2008). Of the contracted water supply, approximately 70% goes to M&I users and 30% to agricultural users (Santa Clara Valley Water 2022). SWP deliveries provide water to 27 million Californians and about 750,000 acres of irrigated farmland (California Department of Water Resources 2021a:1). All references to other documents and to other sections of this DEIR must be provided with specific pages/paragraphs for public usage. 1-8/1 CVP Delta exports average about 1.76 MAF per year between 2012 and 2021 (Bureau of Reclamation 1990–2021). During the 2002 to 2011 period, exports averaged about 2.53 MAF per year (Bureau of Reclamation 1990–2021). The relevance of the CVP to the project alternatives is described in Chapter 3, Description of the Proposed Project and Alternatives. More detail on the CVP facilities and service areas is provided in Chapter 6. 1-8/2 1.2.2.3 In-Delta Water Supply and Use In-Delta water use has remained relatively constant over the previous 100 years and averages about 4% (0.9 MAF) of inflows into the Delta (Delta Stewardship Council 2018:83). All references to other documents and to other sections of this DEIR must be provided with specific pages/paragraphs for public usage.	

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	1-48/1 Table 1-2. Summary of Federal Agencies and Review, Approval, or Other Responsibilities, in Addition to Those under NEPA All references in Table to other findings, decisions, and documents and to other sections of this DEIR must be provided with specific pages/paragraphs for public usage.	
364-14	1-50/1 Range of Alternatives. The range and adequacy of alternatives is an issue of concern to the public as well as to some governmental agencies. The alternatives development and screening process is discussed in Appendix 3A, Identification of Water Conveyance Alternatives, which provides additional details on the information that was used in developing the alternatives. Provide page references required for public review. The range of alternatives only includes some tunnels, while no alternative is provided for improvement of existing levees nor for alternative sources of water supplies (e.g., sewage reclamation and direct/indirect potable reuse). Provide alternatives for levee reinforcement and for service areas reuse of treated sewage for direct and indirect potable REUSE. Alternatives do not include the simplest, dead-straight tunnel alignment alternative, between Central and Eastern alignments. Provide straight line alignment from inlets to discharge point with no horizontal curves between shafts, fewer shafts. As an alternative or a mitigation measure use, provide for double TBMs launching from intervening shafts, no single TBM	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, lead agencies develop project objectives to inform the identification of the project and a reasonable range of feasible alternatives. A lead agency is not required to consider every variation of every potentially feasible alternative; alternatives should meet most of the basic project objectives, be potentially feasible, and avoid or substantially lessen one or more of the significant effects of the proposed project. The underlying purpose and basic project objectives of the project are presented in Chapter 2, Purpose and Project Objectives, of the EIR. 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 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. Because no single solution can fully address the state's water challenges, California's Water Portfolio (portfolio) builds on state and local initiatives already underway and months of public input. The Portfolio helps empower local and regional entities to meet their unique challenges, while delivering on the state's responsibility to provide tools and leadership, advance projects of statewide scale and importance, and help address challenges that are beyond the scope of any region. One of the projects identified in the portfolio is new diversion and conveyance

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	launch per shaft. Alternatives do not include a fully gravity powered tunnel with minimal head-loss and appropriate entry and discharge levels/elevations. Provide tunnel alternative without pumping beyond the inlet structures and with no terminal lift facilities.	facilities in the Delta to safeguard the SWP, which is now proposed as the Delta Conveyance Project. Other local regional projects such as levee improvements and wastewater reuse, as suggested in this comment are also identified in the water supply resilience portfolio which would be implemented independent of the Delta Conveyance Project. The project would be operated consistent with the Delta Reform Act and other applicable legislation, regulations, and agreements. Please refer to response to comment 364-10 regarding tunnel elevations and the necessity for pumps to lift water into the SWP system due to topographic elevation changes. Please refer to the Capacity Analyses for Preliminary Tunnel Diameter Selection technical memorandum and the Supplementary Tunnel Information—Bethany Reservoir Alternative technical memorandum in the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022a, 2022n) regarding tunnel alignment characteristics considered to meet water conveyance objectives and minimize environmental impacts; a dead-straight tunnel alignment would not minimize environmental impacts. The Hydraulic Analysis of Delta Conveyance Options—Bethany Reservoir Alternative technical memorandum and the Shaft Siting Study technical memorandum (Delta Conveyance Design and Construction Authority 2022f, 2022l) similarly describe criteria for selecting shaft locations. Please also refer to the Hydraulic Analysis of Delta Conveyance Options—Bethany Reservoir Alternative technical memorandum and the Tunnel Gravity Flow Capacity Analysis technical memorandum (Delta Conveyance Design and Construction Authority 2022f, 2022o, for the Bethany Reservoir alignment and central and eastern alternative alignments, respectively) regarding gravity flow between the proposed Sacramento River intakes and the Southern Forebay.

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364-15	1-50/1 3. DWR will seek to obtain authorization from the State Water Board for new SWP points of diversion. Such changes would not include new water rights; however, there are concerns that the project could result in the potential for increased exports and further reliance on water that moves through the Delta. The DEIR does not adequately or completely verify that existing SWP/CVP water rights for the Delta shall be transferred from all such facilities in the south to the 2-3 inlets on the north and whether such transfers are within the scope of water rights for the Delta. Provide references within DEIR for the closure and removal of all water diversions from the southern Delta. Provide a single table for all water rights including those transferred, those capable under normal Delta flow conditions (first +/-1 standard deviations), and those remaining for flood flow diversions. Provide historic flood flow conditions and any records of SWP/CVP capture of unassigned flood flow water rights.	Chapter 3, Description of the Proposed Project and Alternatives, identifies that the Delta Conveyance Project is not proposing to increase the total quantity of water permitted for diversion under existing DWR water rights. The change in the point of diversion applies to the diversion point of the water, not the quantity of water determined by the water right. DWR is not proposing to close and remove all SWP water diversions, as suggested by the comment, from the southern Delta because that would not meet the basic objective of the project. In addition, DWR does not have authority over diversions made by others from the southern Delta. The impact analysis related to flood flow diversions does not require information from water rights to determine potential impacts associated with flooding. Please also refer to Common Response 3, Alternatives Development and Description, regarding information about water rights. Please also refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the State Water Board authorities and the general process regarding water rights and the change in point of diversion.
364-16	1-51/table Community Issues. Potential community issues, such as construction noise, air quality, and traffic circulation effects, conversion of existing land uses, access to private lands, and changes in the character of Delta communities are areas of concern for Delta residents. These issues have been addressed through evaluation of a wide range of resource impacts addressed in Chapter 24, Noise and Vibration, Chapter 23, Air Quality and Greenhouse Gases, Chapter 20, Transportation, Chapter 26, Public Health, Chapter 14, Land	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 before and after mitigation for each project alternative. Regarding gravity flow and head loss analyses for each tunnel diameter option, please refer to the Hydraulic Analysis of Delta Conveyance Options – Bethany Reservoir Alternative technical memorandum and the Tunnel Gravity Flow Capacity Analysis technical memorandum (Delta Conveyance

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	Use, and Chapter 17, Socioeconomics. The impacts of the proposed Community Benefits Program are presented in Chapter 34, Community Benefits Program Analysis. Provide all references to other sections of this DEIR with specific pages for public usage. Clearly compared in tabular numerical forms the alternatives and provide numerical rankings for each environmental item and with and without mitigations for all alternative tunnels and non-tunnels. Provide numerical comparisons of “least environmental impact” alternative but with different alternative diameters for least head losses and maximum gravitational movement and least pumping.	Design and Construction Authority 2022f, 2022o, for the Bethany Reservoir alignment and central and eastern alternative alignments, respectively). Please refer to Common Response 3, Alternatives Development and Description, regarding the approach to describing the project and alternatives and to Common Response 3 and EIR Appendix 3A, Identification of Water Conveyance Alternatives, regarding the screening and selection of alternatives to be evaluated in the DEIR.
364-17a	Chapter 2: Purpose and Project Objectives Revise to more distinguishing standard terms: Purposes/Needs and Goals/Objectives, NEPA/CEQA, and EIS/EIR. Provide a single usage and grouping of Goals and Objectives in this DEIR as this is a CEQA/State document, which can be switch for use in NEPA/DEIS to Purposes/Needs. OR Provide clear distinct definitions and citations for Goals, Objectives, Purposes, and Needs at the State/CEQA levels. Provide clear matrix table of Purposes/Goals, their Objectives, and policies and provide examples of Project elements which best represent the Goals, Objectives, and Policies of the Project.	Please refer to response to comment 364-11a regarding the EIR contents primarily developed to meet CEQA requirements, but also meet certain NEPA requirements. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA requirements for the objectives of a project and the terminology identified by Section 15124 of the CEQA Guidelines, which include: "The statement of objectives should include the underlying purpose of the project." Thus, DWR used the term "purpose" in Chapter 2 in accordance with this section.

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364-17b	2-1/1 The California Department of Water Resources (DWR) is proposing the Delta Conveyance Project...to restore and protect the reliability of State Water Project (SWP) water deliveries and, potentially, Central Valley Project (CVP) water deliveries south of the Sacramento-San Joaquin Delta (Delta) consistent with the State's Water Resilience Portfolio (California Natural Resources Agency 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...describes the proposed project as well as a reasonable range of potentially feasible project alternatives to meet project objectives. One of the main purposes of this Environmental Impact Report (Draft EIR) is to assess and analyze a reasonable range of alternatives that could feasibly achieve most of the basic project objectives but avoid or substantially lessen any of the significant impacts of the project. It is not the role of the Draft EIR to assess alternatives that do not meet the project objectives or to analyze other concerns not within the scope of achieving the project objectives. Review of this Project shows it to be only a simple element of the SWP/CVP in order to retain water rights into the inlets for SWP for Delta rather than an increase of flows to SWP from the Sacramento River. Provide a clear description and definition of water rights to divert flows of the Delta. Provide definition of "reasonable range" when the alternatives do not include the simple straight tunnel from north inlets to southerly forebays. Provide definitions of cost-effective, feasible, feasibly, and	The comment assertion that the purpose of the project is to retain water rights is unfounded. Please refer to Common Response 3, Alternatives Development and Description, regarding water rights, contracts, and use of water. Please refer to Appendix 3A, Identification of Water Conveyance Alternatives, and Common Response 3 regarding the alternatives development process, the range and scope of alternatives considered, and the attainment of the CEQA requirement to evaluate a range of reasonable alternatives. A glossary of terms is provided in Chapter 38, Glossary. Many terms, such as those the commenter lists, are not included because it is reasonable to expect the public and decision-makers to understand commonly used terminology. Please refer to response to comment 364-19 for additional information regarding terminology and applicability to CEQA requirements. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA requirements for describing the objectives of a project. Please see Common Response 7, Implementation Considerations, regarding costs and funding sources. Finally, please see response to comment 364-11a regarding the adequacy of the purpose and objectives statements and the appropriate use of the terms "purpose" and "objective" pursuant to CEQA. Please also refer to response to comment 364-11a regarding the EIR contents primarily developed to meet CEQA requirements, but also meet certain NEPA requirements.

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	feasibility and whether their use requires/allows for economic/financial considerations within their use. If economic/financial parameters are included, provide a thorough current (subject to change) assessment for the entire Project 2023-2073. Provide clear usage of "goals" and "objectives" and avoid any use of "purposes" and "needs" as these are easily confused with Federal NEPA/DEIS usages.	
364-17c	2-1/4 The primary purpose of the SWP is to convey water to local and regional water suppliers across California that, in turn, supply end users engaged in the beneficial uses of that water; it serves as the foundation for local water supplies. SWP includes acquisition of water from the Delta and others before conveying it to users. Provide all water rights for the current headworks of SWP/CVP for daily, monthly, and annual flows without and with flood flows. Provide coordinated model of water withdrawals for the Project and all other withdrawals within the Delta for a typical and 3rd-4th-5th standard deviation annual flows	Chapter 5, Surface Water, and Chapter 6, Water Supply, provide the summary results of the modeled hydrologic conditions comparing existing conditions to the project alternatives. The tables provided along with the analysis in Chapters 5 and 6 are sufficient for the disclosure of potential hydrologic changes that could result from the project or alternatives. Multiple statistics and approaches to present data and modeled results (e.g., monthly averages, annual averages, and exceedance plots) are provided in these two chapters and Appendix 5A, Modeling Technical Appendix. The detailed modeling results in Appendix 5A include even more statistical presentations than contained in Chapters 5 and 6. Regarding requests for specific information related to water rights and diversions, please also refer to Appendix 5A for information in the CalSim 3 model such as existing water rights, contracts, and water demand north of the Delta. As described in Appendix 5A, information from 1926–2015 was used in the hydrologic modeling. The information provided in the EIR meets or exceeds what is needed for a meaningful public review. Please see Common Response 8, Hydrologic Modeling, regarding the appropriate use of CalSim 3 as the hydrologic model and the modeled representation of baseline existing conditions and the project alternatives.
364-17d	2-2/2 The need for new Delta water conveyance infrastructure to help achieve the State's coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem…"	Please see responses to comments 364-11a, 364-17a, 364-17b, and 364-17c regarding the adequacy of the purpose and objectives statements and water supply modeling.

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	Provide consistent uses of CEQA's goals and objectives vs purposes and needs of NEPA. Provide definition of reliable water supply at daily, monthly, seasonal, and annual basis and provide norms +/- 1-2-3rd standard deviations.	
364-17e	2-2/3 The California Environmental Quality Act (CEQA) requires that an EIR contain a "statement of the objectives sought by the proposed project." "[A] clearly written statement of objectives will help...develop a reasonable range of alternatives to evaluate in the EIR. The statement of objectives should include the underlying purpose [goals] of the project and may discuss the project benefits" (CEQA Guidelines § 15124(b)). The project objectives are a statement of the reasons DWR is proposing the Delta Conveyance Project and what objectives the project is intended to achieve. The following section presents project objectives in compliance with CEQA requirements. CEQA generally requires goals and their objectives to be specified as part of the Project Description, and these form the basis of defining alternatives which will meet most or even all goals and their objectives. As part of evaluations of alternatives for the various environmental elements, established alternatives must be assessed, numerically or quantitatively, regarding the alternatives' impacts but must be numerical/quantitatively compared both for the impacts for individual elements and for the alternatives' overall impacts on the environment and with and without mitigation measures. The DEIR and Project Description confuses purposes/needs and	Please refer to responses to comments 364-11a, 364-17a, and 364-17b, regarding the adequacy of the purpose and objectives statements and the use of consistent terminology throughout the EIR and the appropriate use of "purpose" and "objectives" pursuant to CEQA. The resource chapters (Chapters 7–32) provide qualitative and quantitative comparisons where appropriate for the analysis. The Executive Summary table titled Summary of Impacts lists all impacts, the CEQA impact determination before mitigation and the impact determination after the application of mitigation for all alternatives. Please also see response to comment 364-39 regarding the use of quantitative and qualitative methods for determining impacts throughout the EIR and the comparisons presented throughout the EIR showing all alternative results and impact determinations.

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	goals/objectives as the preparers and reviewers/editors may confuse terminology for CEQA and that for NEPA. The Draft Environmental Impact Statement is also being prepared at the same times as DEIR and probably by same preparers. Provide a CEQA based use of goals and objectives for this DEIR and comply with requirements of numerical/quantified comparisons for each alternative and each environmental element and then for a summary numerical/quantified ranking comparisons of all impacts for all alternatives. Revise all discussions regarding the impacts and comparisons of alternatives and the impact status of the proposed selected alternative.	
364-17f	2-2/4 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, potentially, CVP water deliveries south of the Delta, consistent with the State's Water Resilience Portfolio in a cost-effective manner. Singular usage of purpose or goal does not relate to the multiple issues of needs for diversions/deliveries and protection of reliability of the SWP/CVP, including cost-effectiveness assessments. Provide character/volumes and related facilities that are required to restore previous but unknown SWP/CVP water deliveries. Provide systems and reliability factors that were original and those that must be restored and protected, and specifically and quantitatively what portions of the proposed Delta Project that will do such restoration and protection.	Please refer to responses to comments 364-11a, 364-17a, and 364-17b, regarding the adequacy of the purpose and objectives statements and the use of consistent terminology throughout the EIR. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding CEQA's requirements for the performance of the project objectives. Please refer to response to comment 364-11e for a discussion regarding cost considerations.

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	Define reliability for water supply projects. Define “cost-effective” for each element and project alternative overall and for each alternative with adequate mitigations. Provide all costs and returns for all alternatives and for current facilities when first operational and currently.	
364-17g	2-2/5 The above stated purpose, in turn, gives rise to several related objectives…To help address anticipated rising sea levels and other reasonably foreseeable consequences of climate change and extreme weather events. Define the Delta’s and Central Valley’s Climate vs Weather norms and std deviations Define climate, weather, and extreme positive/negative events by volumes, frequency, and duration and related water flows for the Project Inlets and tunnels. Define “reasonable” and “foreseeable” for the Project and each alternative considered. Provide revised text with all uses of “Purpose”(s) changed to “Goals” in all CEQA elements. Reserve Purposes and Needs for all, and only, Federal and NEPA elements, elsewhere. Provide all goals and associated objectives along with associated Project policies and programs.	Please refer to responses to comments 364-11a, 364-17a, and 364-17b, regarding the adequacy of the purpose and objectives statements and the use of consistent terminology throughout the EIR and the appropriate use of "purpose" and "objectives" in the EIR pursuant to CEQA.
364-17h	[2-2/5] 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	Please refer to responses to comments 364-11a 364-17a, and 364-17b, regarding the adequacy of the purpose and objectives statements and the use of consistent terminology throughout the EIR. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding CEQA’s requirements for the performance of the project objectives.

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	operate in the southern Delta. Provide definitions and descriptions of "Major Earthquake" required to break any levee (provide distance, depths, and Richter magnitudes). Provide specific maps/diagrams for levees protecting existing SWP/CVP pumping stations.	As stated in Common Response 1 and elsewhere throughout the EIR (e.g., Chapter 1, Introduction; Chapter 2, Purpose and Project Objectives; Chapter 10, Geology and Seismicity), the existing State Water Project infrastructure is vulnerable to seismic risk. DWR performs annual levee inspections and a summary report is provided online at https://water.ca.gov/Programs/Flood-Management/Maintenance/Levee-Inspections.
364-17i	[2-2/5] To protect the ability of the SWP, and potentially the CVP, to deliver water when hydrologic conditions result in the availability of sufficient amounts of water, consistent with the requirements of state and federal law, including the California and federal Endangered Species…2-3/1…Acts and Delta Reform Act, as well as the terms and conditions of water delivery contracts and other existing applicable agreements. Provide the hydrologic and climatic conditions producing the "availability" and how many acre-feet would be sufficient. Provide specific flows requirements for species and for water deliveries contracts and agreements.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding CEQA's requirements for the performance of the project objectives. Please also refer to Common Response 1 regarding the project's purpose and objectives, including DWR's continuing commitment to operate the State Water Project as modified to include the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. As described in Common Response 3, Alternatives Development and Description, 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 the EIR Chapters 7–32 evaluate the potential impacts of the proposed operations for all alternatives. Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship of the Delta Conveyance Project to the authorities and responsibilities of the State Water Resources Control Board (State Water Board) to establish water quality control measures and flow requirements to protect beneficial uses in the Delta and managing the state's water rights program.
364-17j	[2-2/5] To provide operational flexibility to improve aquatic conditions in the Delta and better manage risks of further regulatory constraints on project operations.	Chapter 3, Description of the Proposed Project and Alternatives, provides definitions and diagrams of operations of the Delta Conveyance Project. Please refer to the sections titled Intake Operations and Maintenance and Key Existing Delta Operations Criteria. These sections not only describe

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	Provide concise definitions and diagrams for annual operations of the existing and comparatively for future Project operations and with/without operational mitigation measures with and without Project water rights.	existing operations criteria that are required for existing operations, but those criteria that would also be applied to the project. Please see the figures titled Seasonal Diversions and North Delta Diversion Operations Concepts. Please also see the table titled Delta Conveyance Project Preliminary Proposed Operations Criteria. Please refer to Common Response 3, Alternatives Development and Description, regarding additional clarifications of project operations. Please also refer to Common Response 3 regarding the approach to describing the alternatives and the details necessary for adequate CEQA analysis. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of analysis appropriate for a CEQA document and the details of the project alternatives evaluated in the EIR.
364-18	3 Description of the Proposed Project and Alternatives Table 3D-1. Summary of Intake Characteristics Provide Annual and daily expected maximum and minimum intake flows for each alternative in gallons/day and acft/d, /month, and /year. p.3-2/ DWR is not seeking to increase its existing water rights, nor is it proposing any operational changes upstream of the Delta. p.3-10/ The Delta Conveyance Project is not proposing to increase the total quantity of water permitted for diversion under existing DWR water rights. 3E-5/2 The Delta Plan acknowledges that, in some cases, based on the nature of the covered action, full consistency with all	Intake operations will depend on numerous factors at any given time, such as availability of excess water, local conditions, and permitted criteria. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, section titled Delta Conveyance Project Preliminary Proposed Operations Criteria, for the proposed operational criteria; see also the Chapter 3 table titled Delta Conveyance Project Preliminary Proposed Operations Criteria. Additional operational details are provided in the Chapter 3 table titled Proposed North Delta Diversion Bypass Flow and Pulse Protection Requirements. Appendix 5A, Modeling Technical Appendix, presents the modeling approach used for the Delta Conveyance Project, assumptions used, and the results obtained. Common Response 9, Hydrologic Modeling and Approach, provides further explanation of the modeling and results. Please refer to Appendix 3E, Delta Reform Act Considerations, specifically the section titled History, regarding the coequal goals of the Delta Plan: The Delta Reform Act established the coequal goals for the Delta "of providing a more reliable water supply for California and protecting,

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	relevant regulatory policies may not be feasible. In those cases, the agency that files the certification of consistency may nevertheless determine that the covered action is consistent with the Delta Plan because, on whole, that action is consistent with the coequal goals.\23 That determination must include a clear identification of areas where consistency with relevant regulatory policies is not feasible, an explanation of the reasons why it is not feasible, and an explanation of how the covered action nevertheless, on whole, is consistent with the coequal goals. That determination is subject to DSC review on appeal. For more information on how the Delta Conveyance Project furthers the coequal goals see Section 3E.5, Coequal Goals. \21 Cal. Code Regs., tit.2, § 5003-5015. \22 Cal. Code Regs., tit. \23 § 5001 and Appendix B of the Delta Plan.Cal. Code Regs., tit. \23 § 5002.24 Wat. Code § 85225.10. subd. (a) and § 85225.15. Provide clear definitions “full consistency”, “not be feasible” and “not feasible”, “feasible”, “coequal goals”, and “consistent” and “furthers”. 3E-21/1 To the extent that the Delta Conveyance Project will cause potentially significant impacts on the physical environment, such environmental impacts are disclosed and analyzed in the EIR and, where feasible, mitigation measures have been proposed. The practical effect of many of the mitigation measures and environmental commitments is to protect Delta values. Effects and mitigation related to Delta values are discussed in Chapter 14, Land Use; Chapter 15, Agricultural Resources; Chapter 16, Recreation; Chapter 17,	restoring, and enhancing the Delta ecosystem." (Pub. Resources Code § 29702, subd. (a); Wat. Code §§ 85001, subd. (c), 85020, 85054). The meaning of "full consistency," "not be feasible," and "not feasible," "feasible," ...and "consistent" and "furthers" may be understood as the dictionary defines these terms; please also refer to Section 21061.1 of the CEQA statutes for a full definition of "feasible." Because financial feasibility is not a CEQA-related issue, it is not evaluated in the EIR. Please refer to Common Response 7, Implementation Considerations, regarding project funding. Delta values as described in the Delta Reform Act are "unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." Discussions of project impacts on resource areas associated with Delta Values can be found in various locations throughout Chapter 14, Land Use; Chapter 15, Agricultural Resources; Chapter 16, Recreation; Chapter 17, Socioeconomics; Chapter 18, Aesthetics and Visual Resources; and Chapter 19, Cultural Resources. Appendix 3E, Attachment 3E.1, Delta Plan Recommendations WR R12a and WR R12b Crosswalk Table, provides a crosswalk to the EIR chapters and engineering project report documents that contain relevant information regarding project impacts on resource areas that are associated with Delta values.

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	Socioeconomics; Chapter 18, Aesthetics and Visual Resources; and Chapter 19, Cultural Resources. Provide definitions and specific citations for “where feasible” and why not fully feasible. Define feasible and if including commercial or financial issues provide a thorough financial evaluation of the actions and facilities for all such “feasible” issues throughout the DEIR. Provide specific page/paragraphs for Delta Values.	
364-19	Chapter 4 4-1/2. Resource-specific information about the approach and methodology for evaluating project alternatives is provided in this Draft EIR’s respective resource chapters. Provide specific section, page, and paragraph citations by resource chapters for numerical/quantified comparisons and evaluations of each alternative and proposed direct tunnel and additional non-tunnel alternatives. 4-3/3. In addition, the two chapters listed below, which are part of this EIR, are expected to be included as part of the U.S. Army Corps of Engineers (USACE) EIS for compliance with NEPA. [Chapter 17, Socioeconomics; Chapter 29, Environmental Justice] Define "expected" and change to "shall be included". Provide clarification as to whether the EIS is prepared by the ACE or BLM.	Please see response to comment 364-6, regarding the discussion of alternatives in the EIR and compliance with CEQA. Please see response to comment 364-6 for CEQA requirements and alternatives and need for quantitative or numerical analysis. Comments regarding terminology are not comments that raise significant environmental issues relating to the proposed project or address the adequacy, accuracy, or completeness of the Draft EIR. Terminology has been used consistently throughout the EIR, which has been written in plain language to be clear and understandable. Personal preferences are not tantamount to CEQA deficiencies. DWR has responded below referencing information in the EIR and providing CEQA references and citations where appropriate. Please refer to Chapter 4, Framework for the Environmental Analysis, Chapter 17, Socioeconomics, and Chapter 29, Environmental Justice, regarding discussions of these topics and how they comply with NEPA requirements. These chapters are expected to be included as part of the U.S. Army Corps of Engineers (USACE) EIS for compliance with NEPA. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the U.S. Army Corps of Engineers involvement and NEPA.

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	4-3/4. This Draft EIR discloses and presents analysis of the potential environmental impacts\1 of the alternatives and describes ways to mitigate or avoid potentially significant effects. Pursuant to CEQA Guidelines Section 15126.6(a), this Draft EIR describes a range of reasonable alternatives that would feasibly attain all or most of the basic project objectives and, where possible, avoid or substantially lessen significant environmental impacts. FN \1. For the purposes of this Draft EIR, any use of impact or significant impact for the purposes of CEQA conclusions refers to environmental impacts, not impacts generally. Provide herein or by reference the CEQA required numerical/quantitative comparisons of all alternatives for all environmental impacts with and without mitigations. Provide clarifications (and citations pg/par) and definitions of "basic project objectives" and Project Objectives. Provide definitions and clarifications regarding "reasonable and/or feasible alternatives". 4-3/5. Typically, environmental impacts are examined for a specific project and alternatives so that, to the extent possible, once the EIR is certified, no further CEQA analysis is required. To accomplish this for the project, this Draft EIR relies on information in two Engineering Project Reports (EPRs), Volume 1: Delta Conveyance Final Draft Engineering Project Report - Central and Eastern Options and Volume 1: Delta Conveyance Final Draft Engineering Project Report - Bethany Reservoir Alternative, developed by the Delta Conveyance Design and	State CEQA Guideline Section 15364 defines feasible as, “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Alternatives also are discussed regarding what would be reasonably feasible, need not consider every conceivable alternative, and are guided by the rule of reason [CEQA Guidelines § 15126.6(a)]. State CEQA Guidelines do not provide specific definitions for all the terms listed. Where definitions are provided in the Guidelines, they are listed below. When a definition is not provided in the CEQA Guidelines, a definition is provided based on the context the word is typically used in the CEQA Guidelines. State CEQA Guideline Section 15124 discusses project objectives in terms of the “underlying purpose of the project.” Please refer to the Executive Summary, Common Response 1, and Chapter 2, Purpose and Project Objectives, regarding additional information related to the basic and fundamental intent of the project objectives. CEQA does not provide a definition of reasonable, but in context of the guidelines it can be summarized as just, rational, appropriate, usual in circumstance, or appropriate for a given situation. Thus, reasonable and feasible alternatives are those capable of being accomplished and appropriate to satisfy the project objectives. As described in Common Response 1, references used to support the EIR and that constitute substantial evidence are cited in the text of the EIR after the information is provided. Please refer to Chapter 37, References Cited, for a complete list of references used to support the EIR. Regarding the provision of page numbers, CEQA does not require that page numbers be provided but notes all documents used in preparation of the EIR shall be

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	Construction Authority at the direction of DWR (Delta Conveyance Design and Construction Authority 2022a, 2022b). Refer to Section 4.2, Analysis Level of Detail, for a discussion of the analytical detail provided in this Draft EIR. Provide definition of "extent possible". Provide specific references when referring to other chapters, sections, and page numbers, including paragraphs for references. Provide specific references with pages/paragraphs when referencing "engineering reports". Provide description of process using the "relies on" and provide specific report/page/paragraphs for those information "relies ons". 4-14/1. At DWR's direction, EPRs were prepared by the Delta Conveyance Design and Construction Authority.\6 The EPRs document the conceptual engineering efforts for project alternatives (Delta Conveyance Design and Construction Authority 2022a, 2022b). The EPRs are among the technical studies supporting this Draft EIR. Among other things, the EPRs provide technical background information about geologic conditions based on available data, seismic hazards, and potential flood risks, including sea level rise due to climate change, to which conveyance facilities may be subjected. The EPRs also describe some of the design criteria, government codes, and safety standards that would be applied to ensure new conveyance facilities would withstand design-level catastrophic events. Depending on the proposed facility type, these criteria include the ability to withstand 6.5- to 6.9-magnitude seismic events with peak horizontal ground	cited, and where possible, page and section number can be included. As applicable, information from sources such as professional papers cited in the EIR include the page numbers of the cited sources. In other cases, where the EIR generally summarizes information, it is not required or practical, nor would any additional informational value be provided, by citing page numbers from all sources. The design of the project to address seismic and flooding risk is required by DWR criteria as well as a host of other government requirements. Please refer to Chapter 4 for the environmental analysis, which discusses the Engineering Project Reports (EPRs) (Delta Conveyance Design and Construction Authority 2022p, 2022q). The EPRs are provided online: https://www.dcdca.org/info-center/document-library/#Engineering-Project-Reports. The EPRs provide a summary report and associated technical memoranda, engineering concept drawings, and GIS used to develop conceptual project plans. Future investigations (i.e., geotechnical studies) will be conducted during pre-construction and construction phases and based on the specific project element and the environmental conditions, the site-specific design will be finalized. Final designs will include and conform to applicable government codes and safety standards and will be used to identify appropriate construction methods included to ensure the conveyance facilities would withstand a design level catastrophic event. Regarding the EPR, please refer to the following technical memoranda: Conceptual-Level Seismic Design and Geohazard Evaluation Criteria (2022c), Southern Forebay Seismic Sensitivity Evaluation (Delta Conveyance Design and Construction Authority 2022m), Conceptual Design Phase Seismic Site Response Analysis (Delta Conveyance Design and Construction Authority 2022b), Flood Risk Management Delta Conveyance Design and Construction Authority (2022e), Levee Vulnerability Assessment and Flood Risk Management Supplement–Bethany Reservoir Alternative

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	accelerations ranging from 0.3 to 0.85 g and 200-year flood events combined with sea level rise at the year 2100.\7 Provide page/paragraph citations in EPR for seismic and flood criteria. Provide listing of the "Some" versus ALL criteria, codes, and standards. Provide basis for requiring simultaneous (="and") ability to withstand BOTH seismic and flooding risks. 4-14/2. According to CEQA Guidelines Section 15151,...to make a decision which intelligently takes account of environmental impacts. An evaluation of the environmental effects of a project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible."...explains that what is "reasonably feasible" inevitably varies from project to project, based on factors such as (1) the magnitude of the project at issue, (2) the severity of its likely environmental impacts, and (3) the geographic scope of the project. Thus,...what is reasonably feasible is different than what could be reasonably accomplished for smaller projects with relatively simple analysis. The degree of specificity required in an EIR depends on the type of project being analyzed (CEQA Guidelines § 15146). Provide definitions and textual context for use of "intelligently", "exhaustive", "sufficiency", "reasonably", "feasible", "relatively", [and] "simple".	(Delta Conveyance Design and Construction Authority 2022h), and Intake Flood Management (Delta Conveyance Design and Construction Authority (Delta Conveyance Design and Construction Authority 2022g). These are all available at the listed website and discuss the criteria on which they were prepared and the criteria used to discuss the associated project element or design. “Intelligently” can be defined as, in a knowledgeable and insightful way. In context of its use in CEQA it is regarding intelligently accounting for environmental consequences. “Exhaustive” can be defined as considering all elements fully, comprehensive. In context of its use in CEQA, the word “exhaustive” is used regarding the examination of effects, noting that it need not be exhaustive but sufficient in light of what is reasonably feasible. “Sufficiency” can be defined as an adequate amount of something. In context of its use in CEQA, it is generally used regarding the provision of adequate information to inform decision making. “Reasonably” can be defined as in a fair and sensible way. In the context of its use in CEQA, “reasonably” is generally used regarding an action or process, where it would be fair to assume a result would happen, such as a reasonably foreseeable outcome of project implementation. “Relatively” can be defined as in relation to, in comparison, or proportion to something else. In the context of its use in CEQA, it is used regarding greenhouse gas emissions and a project making an incrementally small contribution to GHG emissions compared to state or national emissions. “Simple” can be defined as not involved or complicated, easy to understand. In the context of CEQA, it is used regarding uncomplicated

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		things or projects.
364-20	DEIR Section-Page/paragraph 6-2/2 6 Water Supply 6-2/2 The project alternatives do not include any actions that would modify water deliveries to non-SWP and non-CVP water rights holders, including in-Delta water rights holders. Therefore, only changes to California Department of Water Resources (DWR), Bureau of Reclamation (Reclamation), and SWP water users and CVP water service contractors are included. No specific impact assessment results are presented...because the effects of these changes are not considered environmental impacts under CEQA. Provide definitions of "modify", deliveries, and specific. Provide a list and allocated volumes for non-SWP and non-CVP water rights holders, including in-Delta water rights holders. As the Project is reported to provide protection and assurance of water supplies to the SWP and CVP provide listing of how changes would occur due to Project actions for SWP and CVP users. Provide definitions and citations for Water rights and Flood Flows (and any related rights to divert and use). 6-11/2 DWR and Reclamation operate the SWP and the CVP, respectively, to divert, store, and convey water consistent with applicable laws and regulations, and contractual obligations for agricultural, urban, and environmental beneficial uses in the Sacramento River Basin, the Delta, and south of the Delta.\1 FN	The commenter has requested DWR include definitions for words in common usage. For purposes of clarification, some of these words are defined in the EIR glossary if they have a specific technical meaning relative to the resource being evaluated and are considered critical elements of the resource impact assessments. Others represent a common definition and have not been added to the glossary. Regarding allocated volumes for non-SWP and non-CVP water rights holders Project-related issues that would require new water rights decisions, please see Common Response 3, Alternatives Development and Description. The project alternatives do not include any actions that would modify water deliveries to non-SWP and non-CVP water rights holders. 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. This response consolidates information on the modeling framework, modeling assumptions and guidelines/criteria used to develop, train, and simulate conditions for all alternatives carried forward for analysis in the EIR, including those specific to statutory, regulatory, and water rights requirements. These are outlined in the section titled Regulatory Requirements in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling. The section titled Model Limitations in Appendix 5A, Section B provides a comprehensive discussion of the seven categories of limitations related to the development and utilization of CalSim 3. As described in the section titled Timestep and Period of Simulation in Appendix 5A, Section B, CalSim 3 is a monthly timestep model that simulated monthly water management operations based on inflow

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	\1 The SWP and CVP will continue to be operated in accordance with D-1641 until a new water rights decision is adopted by the State Water Board. Operations For D-1641, provide citations and page/paragraph references. Provide basis and Project-related issues that would require new water rights decisions. 6-12/4 Local agricultural districts, referred to as Settlement Contractors, divert water directly from the afterbay. These diversion points are in lieu of the traditional river diversion exercised by the local districts whose water rights are senior to the SWP. Provide listings of all Delta vicinity senior water rights and current facilities related thereto and references thereto with proper citations including page/par.. 6-16/4 Reclamation coordinates operation of CVP in the Delta with the SWP in accordance with the water rights permits issued by the State Water Board and the Coordinated Operation Agreement (Section 6.2.1.3). Provide listings of all Delta vicinity SWP and COA water rights and current facilities related thereto and references thereto with proper citations including page/par.. 6-16/5 Reclamation operates the CVP under water rights granted by the State of California, including those intended to protect agricultural and fish and wildlife beneficial uses in the	hydrology for a 94-year period. While it characterizes hydrology by water year type as illustrated in table titled Pattern Water Year for Water Years 1922 to 1948, monthly inputs represent increase in flows, but does not specifically address flood flows. The section titled Delta Salinity Compliance in Appendix 5A, Section B provides a detailed discussion related to CalSim 3 outputs to inform DSM2 modeling specific to evaluate compliance with D-1641 salinity requirements. With respect to commenters request regarding a list of water rights, this is available on-line through the State Water Resources Control Board and is not necessary for inclusion in the EIR.

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	Delta. Provide listings of all Delta vicinity CVP water rights and current facilities for normal and flood flows related thereto and references thereto with proper citations including page/par.. 6-19/6 In most years sufficient supplies are not available to meet all water contractor demands because of statutory, regulatory, and water rights requirements. In some dry or critical years, water deliveries are limited because there is insufficient storage in northern CVP reservoirs to meet all statutory, regulatory, and water rights requirements including water temperatures, and to make additional water deliveries... Provide definitions for Flood flows rights and expected/assumed annual flood-flows and Project's diversion rights from the Sacramento River and Delta. Provide definitions and legal sources and deliveries. Provide a flow model as to all Delta and tributaries typical monthly flows and water users. Provide operational model runs include demands, storage, and rights for both "normal flows" and flood flows. Provide definitions and normal and flood flows for dry and critical years. Provide definitions of Insufficient, Sufficient, contracted assigned along with model operations for the median flows years.	

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	6-21/3 DWR and Reclamation coordinate operations of water delivery facilities in the Central Valley. The water rights for the SWP and CVP are conditioned by the State Water Board to protect the beneficial uses of water in the Sacramento Valley. The SWP and CVP coordinate and operate to meet the jointly assigned water right requirements in the Delta. Provide list and volumes involved in "coordinate operations" of SWP and CVP. Provide definitions and references including page/paragraph. For coordinated operations. Provide current jointly and individually assigned water rights for SVP and SWP and those for flood flows. 6-33/3 There is a potential for other voluntary water market transactions that could be conveyed to the Delta for export or environmental purposes. These could include exchanges of non-project water, coordinated or integrated operations of projects other than the SWP or CVP, or sales of water rights that could be used to supplement project water supplies or for increasing instream flows. Provide listing and quantities of "water market transactions" including exchanges[,] integrated operations, and sales. Provide recent annual volumes involved in such transactions and those anticipated for the Project operations periods. 6-33/7 The project alternatives do not include any actions that	

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	would modify water deliveries to non-SWP and non-CVP water rights holders, including in-Delta water rights holders. Therefore, only changes to DWR, Reclamation, and SWP water users and CVP water service contractors are included in this chapter. Provide current and expected annual water deliveries to non-SWP and non-CVP water rights holders, including in-Delta water rights holders. Provide list of changes to water users and contractors related to this Project. 6-49/5 CVP Settlement and Exchange Contractors do not show any change in average annual deliveries and under dry and critical dry water years as those deliveries are under water rights that are unaffected by the operations of the north Delta intakes. Provide listing and flowcharts for all annual deliveries for normal, dry, and critical dry years and list of associated water rights and holders for the Sacramento River and northern Delta.	
364-21	7 Flood Protection Fig. 7-1 / 7/9 "A text description of this figure [3 images] is provided in Chapter 39, Text Descriptions of Figures" Alternatives Central a) 1 & 2 + a,b,c; Eastern: b) 3 & 4 + a,b,c; Bethany: c) 5 All figures in entire document require cross-reference reading for each figure and reading of Text Descriptions for figure in an	The figures provided in Chapter 7, Flood Protection, are preceded by a text description within the chapter. Chapter 39, Description of Figures, was also included specifically for readers who may benefit from descriptive text of figures but do not use assistive devices for screen reading. The objective of Chapter 39 was to comply with applicable accessibility laws and ensure that DWR fulfills its commitment to making the EIR accessible for all reviewers. Please refer to Common Response 1, CEQA Process, General Approach to

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	entirely different chapter of 115 pages. Such cross referencing for text descriptions of figures is not only difficult and time-consuming but contradicts the basic concept that EIRs/EISs are to be read/understood by the general public and not by professional engineers or lawyers, and this entire DEIR defeats CEQA's basic purpose of public review and comments. Provide a thorough revision of the entire DEIR and incorporate all Chapter 39 descriptions along with the appropriate section for each figure. Provide revised DEIR with Chapter 39 eliminated and integrate all descriptive elements to their appropriate chapters/sections. 7-22/5 7.1.3.4 Seismic Activity The Delta's levees are threatened by the active seismic zones west of the Delta, including the San Andreas and Hayward faults. Less active faults, such as the Southern Midland Fault, underlie the Delta. A strong earthquake could damage Delta levees because of the potential for deformation or cracking of levees or the liquefaction of levee embankments and foundations during strong ground shaking. Moderate earthquakes between 1979 and 1984 damaged nearby Delta levees, and many Delta islands' levees failed during floods within a year after the 1906 San Francisco earthquake (Delta Stewardship Council 2020:7). If a levee failed on an island subsided below sea level or during high flows or if a flood were to occur soon after an earthquake, the protected area could be inundated.	Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. As discussed in Common Response 1, the EIR was written and organized consistent with CEQA with an emphasis on clearly and adequately disclosing the project's potential environmental impacts to assist public, agency, and decision-maker review of the EIR. Chapter 10, Geology and Seismicity, provides an assessment of impacts that could result from construction, and operation and maintenance of the Delta Conveyance Project. As described in the chapter, all project alternatives vary with respect to the location of a given impact mechanism, however all the alternatives have similar impact mechanisms and magnitudes. All impacts associated with the Delta Conveyance Project described in Chapter 10 were determined to be less than significant and no mitigation is required. Please also refer to CR1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the project's resilience against earthquake risk. The commenter's requested information regarding wind disturbances in the Delta and a comparison of Delta subsidence/settlement due to compaction by gravity and dewatering vs. oxidation of organic materials is outside of the scope of the analysis for the Delta Conveyance Project. DWR recognizes that subsidence has occurred within the Delta, and as such will install monitors during construction near levee construction sites and levee crossings of the tunnel alignment to determine if subsidence occurs as a result of project construction. Project operations under climate change and sea level rise are evaluated in Chapter 30, Climate Change, and in Appendix 4A, Consideration of 2070 Conditions. This chapter and appendix conclude the project would operate under the modeled sea level rise conditions. DWR used the H++ scenario given the long-term use of the project as infrastructure that may be subject to climate change and potentially extreme scenarios. In addition, Appendix

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	Provide definitions for "threatened", "active", and "less active", "strong earthquake" (=>6, >7 or >8 Movement Magnitude?), strong ground shaking (ground acceleration, x-y-z G), Provide seismic response comparisons and typical design mitigation measures for Levees -- height/width/, internal barriers, slope protection vs Tunnel including tubes/shafts, pumps, substations. Provide an open-channel Project Alternative of reinforced levees and improved channels for improved reliability for deliveries to the SWP. Provide as mitigation for all alternatives, monitoring and locating of seismic events within 20 mi of the Project for 2023-2030. 7-23/1 The study concluded that a major earthquake of magnitude 6.7 or greater in the vicinity of the Delta Region has a 62% probability of occurring sometime between 2003 and 2032 (California Department of Water Resources 2009:2). More recent investigations suggest earthquake-induced ground shaking affecting Delta levees may be less serious but still worrisome (Delta Stewardship Council 2020:7). Although the probabilistic nature of earthquake prediction makes it difficult to quantify the timing and magnitude of seismic threats, it is important to address the threats posed by earthquakes to the Delta levee system because of the potential adverse effects of such events. Provide definitions and comparisons of active and major	5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 4, Climate Change Development for Delta Conveyance Process, provides background information on the input DWR considered when developing the 2040 climate change scenario. Please also see Common Response 6, Climate Resilience and Adaptation regarding project operations under climate change.

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	earthquakes. Provide numerical definitions of "less serious", "suggest", "ground shaking", "affecting", "worrisome", "it", "address", and "threats". Define specifically and provide dimensions for "vicinity"- 500ft, 5000ft, 5miles, 50miles radii. Provide an alternative to any tunnel, including externally/internally reinforced levees. 7-23/2 7.1.3.5 Land Subsidence Delta island subsidence resulting from the biochemical oxidation of organic soils and wind disturbance could pose a significant threat to Delta levees. The areas that are most susceptible to subsidence are the central, western, and northern Delta, where thick organic peat layers predominate (Public Policy Institute of California 2008:9). Provide definition and related records for wind disturbances in the Delta including all wind direction, velocities, and durations and computer models for wind effects on exposed levees within the Delta. Provide records of all reportedly wind damages to Delta levees. Provide definitions and comparisons of delta subsidence/settlement due to compaction by gravity and dewatering vs oxidation of organic materials. Also include influences of widespread production/removal of natural gas from all units beneath the Delta.	

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	For the proposed Delta Conveyance alignments, organic soils are only one part of the overall subsidence system and very little LiDAR survey findings have been conducted or provided for review. With gravity compaction of densifying soils and sediments, increasing densities of overlying materials squeezes groundwater from the deeper fine sediments and with their densification, overall sediment column compacts and soil surface subside. The Delta area has many abandoned gas fields and fewer storage fields within or under the Project vicinity, and their long-term production (>20 years) may have generated collapse/subsidence of deeper grounds beneath the Project area. Provide records of all gas fields and storage facilities and for all wells within 10,000 ft of the Project facilities. Provide mitigation measures for a widespread LiDAR ground surface monitoring of all shaft and tunnel sites/alignments and within 5000ft of both. Reviews and assessment of land subsidence is totally incomplete and inadequate and requires major revisions and documentation. Provide an updated and comprehensive model of all factors contributing to the subsidence beneath the Delta Project area and possible changes of levees, roads, bridges, and other surface features elevations. 7-23/2 7.1.3.5 Land Subsidence ...As the landside ground elevation decreases because of subsidence, the resulting increase in elevation difference between the water surface and ground provides increased	

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	hydraulic loading on the levee and its foundation and associated risks related to seepage, piping, and slope instability. Recently, projects have been implemented in the western Delta for subsidence reversal, carbon sequestration, or both (California Department of Water Resources 2022b). Provide a model for numerical and hydrostatic pressure conditions and changes anticipated during the life of the Project. Provide listings of gas wells, operations (active, idle, abandoned, etc.), current status, and their productions and field pressures by well and by field within 5000ft of tunnel alignment. Provide description and model for future development for CO2-gas injection and long-term storage for CO2 and other available gases. Provide timetable and significance of such programs for stabilizing or elevating current trends of subsidence. 7-24/2 7.1.3.8 Potential Climate Change Effects Climate change has major implications...California Ocean Protection Council's (OPC) most conservative, risk-averse climate change scenario (H++) estimates 10.2 feet of sea level rise at the San Francisco tide gage by the year 2100. By 2050, rising sea levels will more than double the probability of flooding if levees are not only well-maintained, but also improved (Delta Stewardship Council 2020:10). Drainage of Delta islands will also be more difficult, impairing agriculture	

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	on which the finances of many reclamation districts rely. This projected sea level rise could be expected to be exacerbated during high water events, which are discussed in Section 7.1.3.7, High Water Conditions. Provide references for OPC-ocean level estimates and studies including page/paragraph. Provide definition and comparisons of actual practices of "not well maintained", "well maintained", and improved and incorporate into a Levee Project Alternative. Provide definition of "more difficult" and relate to costs for such water level controls. Provide documentation, projections, and models regarding "exacerbation" of future "low-drought" (say -3 Std. Dev.), "typical"/"normal" (+/-1 Std. Dev.), and "high" (+2-+3 Std. Dev.) water conditions/events. 7-26/4 7.3.1.1 Process and Methods of Review for Flood Protection As described in Chapter 3, Description of the Proposed Project and Alternatives, the project alternatives do not include any changes in flood control operations....Therefore, the operations of project alternatives would have no impacts on flood protection upstream of the Delta, and the level of flood protection under project alternatives would remain the same. Since the project would not affect the Sacramento River upstream of the Delta or the San Joaquin River Basin outside of the Delta, the study area associated with flood protection	

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	focuses on the specific areas in the Delta that may be affected by project facilities -- including the intakes, launch/maintenance/reception shafts, and Southern Forebay (although the Southern Forebay is applicable to Alternatives 1, 2a, 2b, 2c, 3, 4a, 4b, and 4c only). Elsewhere in DEIR alternatives and their inlets are established to drain some flood waters from the Sacramento River and divert them to the SWP/CVP and thereby affect flood conditions within the Delta. Provide estimates of any and all expected diversions of flood waters to the SWP/CVP from all such program facilities and operations in the Delta and lower Sacramento River drainage (e.g., within 10 miles of Delta).	
364-22	8-Groundwater 8-12/3 8.1.3.4 Land Subsidence Declining land surface elevations in the Delta are well documented and a major source of concern for farming operations. The oxidation of peat soils is the primary mechanism of sinking lands in the Delta (U.S. Geological Survey 2000), and some areas are below sea level (see…). In portions of the San Joaquin Valley groundwater basin, drops in land surface elevations have occurred as a result of excessive groundwater pumping, below the Corcoran Clay (a regional aquitard) or below other regionally significant clay layers (the predominant mechanism for subsidence in this area). Land subsidence occurs as the result of the compression of the Corcoran Clay and other fine-grained units where groundwater that supports the aquifer framework has been removed by pumping. Elsewhere peat oxidation is mentioned only and not	Chapter 11, Soils, Impact SOILS-3, provides an assessment of the potential for subsidence in the study area resulting from constructing and operating the project. The analysis determined that hazards attributable to subsidence are considered less-than-significant impacts of the project. Chapter 8, Groundwater, Impact GW-6, addressed subsidence as a result of dewatering activities and concluded, similar to the analysis in Chapter 11, that such activities would not result in significant impacts. Additional details regarding the geotechnical and soil considerations can be found in the Engineering Project Reports associated with the project (Delta Conveyance Design and Construction Authority 2022p, 2022q). Diaphragm walls or slurry walls would be installed prior to construction of the vertical tunnel shafts. Then, the bottom of the tunnel shaft would be installed to seal the tunnel shaft from the surrounding groundwater aquifer. Dewatering at the tunnel shaft would only occur once at the end of the shaft construction and would be limited to the groundwater within the shaft. Excessive pumping that could result in subsidence will not occur. The shaft would remain impermeable to groundwater intrusion throughout

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	considered lesser than that of groundwater dewatering beneath various clay layers. Provide known areal distribution of any significant peat deposits and those of the Corcoran and other significant clay aquitards within the Project alternative zones of influences. Provide for shaft Dewatering and reduction hydrostatic pressures and provide pressures at shaft bottom/tunnel depths and effects of any dewatering, especially for shafts. Provide current and historic 2017-2022 gas production and storage facilities near and beneath the Project alternatives similar to production of waters from regional aquitards/clay layers	tunnel construction and operations. 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. Existing geotechnical information and data were reviewed during preparation of this EIR to perform preliminary evaluations of seismic, liquefaction, ground improvement, and dewatering considerations for the planning phase and EIR preparation. Geotechnical, soils, and additional field work investigation would be completed during the design phase of the adopted project prior to completion of the geotechnical and seismic design. Chapter 25, Hazards, Hazardous Materials, and Wildfires, includes figures mapping locations of oil and natural gas wells and processing facilities within the construction footprints to assess the relative risk of disturbing a well or encountering petroleum products or processing chemicals in soil or groundwater. Chapter 27, Mineral Resources, evaluates the impact on natural gas wells and concludes that none of the project alternatives would have an impact on natural gas wells due to construction or operations.
364-23	Chapter 9 Water Quality NA	This information describes the structure or organization 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.
364-24	Chapter 10 Geology and Seismicity 10-2 Table 10-0. Comparison of Impacts on Geology and Seismicity by Alternative. EIR reports All Impacts of Alternatives' "Less Than Significant/LTS" but such assessment is not documented by	The Chapter 10, Geology and Seismicity, table titled Comparison of Impacts on Geology and Seismicity by Alternative is a summary of information and determinations made in the chapter, and the substantial evidence supporting the impact determinations related to the tunnel and other project facilities' seismic design requirements, subsurface geotechnical and geological conditions, the West Tracy Fault, and general geologic and

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	proven seismic analyses. Provide assessment and numerical comparisons of seismic responses/conditions upon each alternative and especially on connectors between different structural elements in each project, e.g., curves/directional changes in tunnel segments, inlet structures and tunnels, tunnel-merging joints, changes of tunnel/shafts, tunnels and pumping stations, and tunnels and fixed discharges. 10-7/3 Both the peat and organic mineral soil types are well above what would be the main tunnel invert elevation (i.e., -143 feet to -...163 feet...for the tunnel from the intakes to the proposed new Southern Forebay Inlet Structure and -145 feet to -164 feet...for the tunnel between Twin Cities Complex and the Bethany Complex). Provide typical expected geologic/soils columns along with boring logs (at least one/mile of each tunnel and for each shaft) including the expected tunnel and shaft depths and zones of influence by the same beneath the Project facilities. Provide identification, listings, and locations on drawings/maps for any piling for shafts and inlets related to the Project. Provide standard tunnel and shaft sections (>-140 feet elevation amsl) for every 10 miles of Project length and shafts. Corcoran Clay 10- / Seismic Hazard. The seismic hazard in the Delta has significant uncertainty because of the difficulty in	seismic hazard can be found in the chapter itself. The following text directs the reader to the data used in the analyses presented in Chapter 10 and explains why this data is sufficient for the purposes of CEQA. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of why it is appropriate to evaluate impacts at a conceptual design level. The comment requests a variety of borehole information (subsurface geotechnical data), although the reason for this data request is not clear. Geotechnical data as it relates to CEQA can be found in the impact analyses in Chapter 10, Impacts GEO-1 through GEO-6. These analyses are supported by information presented in the EPRs and in the technical memoranda prepared for the project, such as the Conceptual Design Phase Seismic Site Response Analysis technical memorandum and the Liquefaction and Ground Improvement Analysis technical memorandum (Delta Conveyance Design and Construction Authority 2022b, 2022i). As described in the and Potential Future Investigations—Bethany Reservoir Alternative and Potential Future Field Investigations—Central and Eastern Corridor Options technical memoranda (Delta Conveyance Design and Construction Authority 2022j:4, 2022k:4), "Soil borings, overwater soil borings, and CPTs would be conducted within the construction boundaries of the intakes, tunnel shafts, tunnel alignments, access roads and bridges, levees, pumping plant, and the entire Southern Complex on Byron Tract and west of Byron Highway." These additional soil data will be used to develop detailed soil profiles, geotechnical cross sections, and engineering properties along the tunnel alignment and at facility locations. Locations of piles, diaphragm walls, cutoff walls, and other foundation features are presented in the Engineering Concept Drawings in Volume 2 of the Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022r, 2022s). It should be noted that all piles will be started as vibratory or drilled piles. Pile driving would occur only when

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	characterizing the activity of Delta faults. Citing Bay Area probabilities reminds the reader that parts of California will have significant large earthquakes in the near term, but does not add much to the understanding of seismic hazard in the Delta. The risk from the West Tracy Fault, a major potentially active fault, is proposed to be explored late in the preconstruction period. This belated investigation is a concern given the potential for the fault to expose the project to substantial seismic risk (pg. 10-46, lines 30-34). The West Tracy Fault along with other, potentially active, faults in the Delta are the primary seismic threats to levee stability. Estimating their activity is challenging but essential to evaluating the seismic hazard in the Delta and the risk to levee stability. Totally inadequate and meaningless description with such generalities - uncertainty, difficulty, characterizing, and does not add anything to understanding of seismic hazards in the Delta for levees, inlets, shafts, and tunnels. Provide definition of risks, late, and pre-construction period of all major faults referenced in DEIR and provide exploration prior to finalizing the EIR. Provide "belated investigation" as part of the DEIR for public review and comment as related to tunnels, shafts, levees, and existing SWP works. As no belated studies are included in the DEIR, and are pivotal to both levees and the Project, provide such studies as part of the DEIR and recirculate a subsequent/supplemental DEIR. Provide all known seismic monitoring data for the Project area and 5 mi./26,000 feet either side of the tunnel alignments, shafts, and inlets[.]	other methods could not be used to insert the pile to the proposed final design depth. Detailed seismic analyses for the project features will be performed for the selected project alternative during the design phase, including seismic responses of connections between different structural elements. The design will be carried out in conformance with the applicable design standards, building codes, and regulations. For characterization of Delta faults, a detailed seismic hazard study for the Delta region is presented in Attachment 1 of the Conceptual Design Phase Seismic Response Analysis technical memorandum (Delta Conveyance Design and Construction Authority 2022b). This study considered uncertainties in regional faults and used the most recent (as of 2022) seismic fault and ground motion predictive models, including the most recent characterization of West Tracy Fault. The impacts associated with surface fault rupture of the West Tracy Fault are presented in Impact GEO-1. Further detail is provided in the West Tracy Fault Preliminary Displacement Hazard Analysis technical memorandum (Delta Conveyance Design and Construction Authority 2022t). Little is known about the fault; however, if required, numerous proven designs and construction means and methods to safely build a tunnel through fault zones are available. Possible designs and construction means to accommodate displacement on the fault and to withstand the change in pressure are described in the Conceptual Tunnel Lining Evaluation technical memorandum (Delta Conveyance Design and Construction Authority 2022d:5). These could include over-excavating the tunnel in the zones of a fault crossing, and backfilling with compressible/collapsible material, using steel segmental lining, and using doweled or bolted joint connections. The design will be refined as data from additional investigations are received. Please see the Environmental Setting section in Chapter 10 for a discussion

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	Provide Project mitigation/monitoring including establish a seismic monitoring program and stations (should have been 10 years ago when starting the review of the Delta) and provide for additional reinforcements based on such studies and analyses before completion and start-ups. 10- / Tunnel capacity use. Average tunnel utilization is small, relative to its maximum conveyance capacity. A review of the report and the data provided by DWR shows that, for Alternative 5, the North Delta exports occur largely in December through March. But even in these months, tunnel utilization is below 40% in 50% of years (Figure 3). This result raises questions about optimal tunnel sizing. Provide definition and explanation of tunnel utilization, small-medium-large, largely, and below 40% in half of the years. Provide explanation and definition of all SWP water rights, rights to flood flows (typical-seasonal and/or stored/released). Provide monthly Project flows for typical design year, modal, and 3rd standard deviation flows for current intake facilities and all proposed project alternatives. Provide operational inflows (cfs, acft/d, acft/month) during typical and maximum Winter flood flows. Provide SWP and CVP water rights for Sacramento River and Delta flood flows by flow volumes. Provide estimated 25-year of flood flows through Project and each alternative.	of relevant geologic and seismic terminology. Definitions of terminology not used in the chapter are not necessary. The level of detail in the environmental setting need not be greater than necessary to understand the significant effects of the project and its alternatives; the chapter adequately characterizes the seismic setting and discloses the seismic risks to meet the needs of CEQA. For these reasons and because the commenter does not raise any significant information, recirculation is not necessary. See also Common Response 1 regarding recirculation. It is unclear how the requested tunnel capacity, operational inflows, winter flood flows, and water rights-related information relates to Chapter 10 or its adequacy under CEQA. However, the tunnel capacity analysis is presented in the Capacity Analysis for Preliminary Tunnel Diameter Selection Technical Memorandum (Delta Conveyance Design and Construction Authority 2022a). Tunnel flow velocities and corresponding hydraulic head loss and transient-surge conditions were examined within the project diversion flow range to establish a range of technically feasible candidate tunnel diameters, including their effects on other project feature configurations (i.e., size and operating depths of hydraulic structures). A construction cost comparison was also conducted as part of the analysis. The technical memorandum made conclusions and recommendations based on the results of the hydraulic and capacity analysis of the tunnel diameters options and the construction cost comparison. Please see the Chapter 3 section titled Integration of North Delta Intakes with South Delta Facilities for a discussion of water rights. Please also see Chapter 2, Purpose and Project Objectives, for a general discussion of project objectives and Chapter 6, Water Supply, for a detailed discussion and analysis of project effects on water supply in the area.

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364-25	11 Soils 11-1/3 Overall, the alternatives would be constructed on near-surface soils having very similar water erosion and wind erosion hazards. Although the southernmost portion of Alternative 5 is in an area where the near-surface soils have a slightly higher water erosion hazard than that of the soils of the other alternatives, this would be offset by the fact that the disturbance area and therefore the area of potential erosion is less because no Southern Forebay would be constructed under Alternative 5. Therefore, the overall potential impact of accelerated water and wind erosion would be similar among the alternatives. Provide definition of "near-surface soils" and provide comparisons of surface and near-surface soils and tunnel muck water/wind erosion hazards once dried out and provide characteristics for lower, medium, and higher erosive hazards. Provide numerical/quantified comparisons of all alternatives, as required by CEQA. Provide comparisons of water/wind erosive hazards for discharge facilities of all alternatives within 5 miles of alternative southerly terminations.	Near-surface soils are those in the upper portion of the soil profile. Descriptions of soil characteristics can be found in Appendices 11A, 11B, and 11C. Appendix 11A, Soil Associations, describes the context of the soil associations in the landscape and summarizes their general characteristics. Appendix 11A also shows which detailed soil map units occur in each association in the study area. Appendix 11B, Soil Map Units, Taxonomic Classifications, Soil Limitations, and Risk of Corrosion, provides detailed soil map unit names and the soils' suitability for certain uses that are relevant to the project. Appendix 11C, Soil Chemical and Physical Properties, Soil Interpretations, and Land Classifications, provides the physical and chemical properties of the upper approximately 5 feet of soils in the study area, including wind and water erodibility. As discussed in Chapter 11, Soils, in the Soil Erodibility by Wind section, much of the study area is underlain by surface layer soils that have a relatively high wind erosion hazard. This information is sufficient to disclose potential environmental impacts associated with soils for the purposes of CEQA. Also, as described in Chapter 11, the soils study area encompasses all the project alternatives and the area affected by the project and alternatives. It includes portions of Sacramento, Yolo, San Joaquin, Contra Costa, and Alameda Counties. Lands outside this defined area were not considered because there are no structures or earthwork being proposed and no ground disturbance would occur outside this area. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues for a discussion of the approach used to defining study areas.
364-26	12 Biota NA 13 Biota NA	This information describes the structure or organization 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.
364-27a	Land Use 14/ 14-3/2 - Certain topics discussed in this section are related to topics discussed in substantially greater detail in other sections	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the length and complexity of the EIR. Chapter 14, Land Use, describes the thresholds of significance used to assess whether the project would result in significant

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	of this Draft EIR: - Provide a listing of "certain topics" and justifications for at least a three-part ranking of minimal, medial, and "substantially greater" details, along with other designated sections. - Provide CEQA references for such differences in settings and assessments. DEIR/DEIS has too many scattered assessments, mitigations, and figure descriptions thereby rendering document as "Not Public Review Friendly" due to cross-sectional assessments and references and lack of proper referencing (page/paragraph) between related sections. - Provide for full integration of information for public reviewing with referencing only to other documents rather than other sections of the D/F-EIR. - Provide a Subsequent/Supplemental DEIR where all subjects are covered equally for all alternatives, including those recommended additional alternatives, e.g., upgraded levees and channels and a straight inlet-southern termini tunnel (42 vs 48 miles).	impacts on land use under CEQA. The chapter also provides appropriate cross-references to guide the reader toward relevant information that is covered in other chapters of the EIR. Please also see Common Response 1 regarding the approach and scope of analysis and Common Response 3, Alternatives Development and Description, regarding alternative selection and alternatives considered but eliminated. Please refer to Common Response 1 regarding the criteria for recirculation under CEQA, which the Draft EIR does not meet. Revisions to the Draft EIR or recirculation based on the concerns identified in this letter is not warranted.
364-27b	14-3/3 This chapter does not describe the land use setting or potential project effects in the State Water Project (SWP)/Central Valley Project (CVP) export service areas; this topic is addressed in Chapter 31, Growth Inducement: - Inadequate and incomplete land uses assessment, mitigation, and alternative comparisons are provided for the	The study area for the land use analysis includes those areas that could be directly affected by construction and operation of the project. Effects related to growth inducement in the export areas are appropriately covered in Chapter 31, Growth Inducement. The impacts listed in Appendix G of the CEQA Guidelines for land use cannot be assessed for more speculative actions that might occur in the export service areas beyond what is included currently in the analysis. Potential temporary or

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	limited array of alternatives, and without numerical/quantified comparisons, this section is totally inadequate and not compliant with CEQA's requirements for alternative comparisons. - Provide construction and operational impacts assessments for all alternatives and provide comparisons of proposed and additional alternative with numerical/quantified parameters of comparisons, including for growth inducements within the Delta and within all service areas based on improvement reliability and annual flows. -Provide direct Project impacts of construction and presence for 100 years or periods equal to those of growth inducements for service areas.	permanent direct or indirect impacts on land use in the SWP/CVP export service areas are evaluated in Chapter 31. In addition, there are no direct construction or operational effects in the SWP service area because the proposed project will restore the historical reliability of SWP water deliveries. Chapter 14, Land Use, consistent with the requirements of CEQA, does provide appropriate quantitative comparison of land use impacts for each of the alternatives in the table titled Land Use Designations (acres) inside the Water Conveyance Footprints by Alternative. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope of analysis and co-equal level of evaluation, comparison of alternatives, analysis of the project as a whole, and the study area.
364-27c	14-9/3 The potential to induce substantial unplanned population growth and the potential to displace substantial numbers of people and housing are also discussed. Indirect impacts related to growth are also discussed in Chapter 31, Growth Inducement, which includes analysis of the direct growth inducement on employment, the extent of indirect growth inducement associated with construction of access roads which may remove an obstacle to growth of lack of roadway infrastructure, and indirect growth inducement associated with increased water supply reliability: - Provide integrated review for land use induced development due to employment increases when no additional water supply will be provided. - Provide Dept. Finance's and relevant Associated Government regional 5-year projections for 25 years (2025-	Social and economic impacts are outside the scope of CEQA unless they result in physical impacts. Nonetheless, the EIR does include discussion of these effects in Chapter 17, Socioeconomics. As discussed in Chapter 17, employment changes resulting from construction and operations of the project are not expected to result in significant changes in population and housing in the Delta region and would therefore not result in changes to land use. Refer to the table in Chapter 17 titled Population by County and Area, 2010–2060 for a summary of population and growth trends between 2010 and 2060 based on data from the California Department of Finance. The discussion of projected growth in the project and service areas is in Chapter 31, Growth Inducement. That discussion includes population growth projections that could result from stabilized water deliveries through 2060. The project would restore historic water supply reliability and would not change water right quantities. That discussion also provides cross-references to supporting information in Chapter 17.

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	2050) of population, households, and jobs for affected project and service area regions, counties, and cities for the period of construction and a 25-year period (2050-2075) for operations. - Provide projected growth due to increased total annual flow including water-rights and flood flows.	
364-27d	14-15/5 Table 14-1. Land Use Impact Mechanisms Alternative Components Land Use Impact Mechanisms North Delta intakes Location of intake facilities if such land uses would be inconsistent with plans and policies protecting the environment. Tunnels None - Tunnel depth and design would be such that surface land uses would not be restricted or otherwise affected. Tunnel shafts Construction activity at shaft locations if it has the potential to divide existing communities. RTM Stockpiles could be inconsistent with land use designations and policies. Temporary RTM stockpiles would occur at all tunnel launch shafts. Permanent RTM stockpiles would occur at Twin Cities Complex, Bouldin Island, Lower Roberts Island, and, under some alternatives, at the Southern Complex. - Provide numerical/quantified values of comparisons for all alternative tunnels including a dead-straight alternative and for new alternative of reinforced levees. Materials transport would utilize road and rail and would not have the potential to divide existing communities.	Chapter 3, Description of the Proposed Project and Alternatives, includes a qualitative and quantitative comparison of key features of the alternatives (see the table titled Summary of Key Project Features by Alternative) and quantifies the overall temporary and permanent acres affected by each alternative (see the table titled Temporary Construction and Permanent Acreage for Each Alternative). Please refer to Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives evaluated in the EIR; this Common Response also addresses alternatives suggested by commenters, including the repair of existing levees. Analysis of anticipated vehicle miles travelled for construction and daily trips for each alternative is included in Chapter 20, Transportation. Spoils and RTM are described in Chapter 3. Volumes of RTM generated and areas for permanent storage would vary depending on tunnel diameter and length and are provided in the summary tables of distinguishing physical characteristics for each alternative in Chapter 3. A description of the electrical facilities needed for construction is also included in Chapter 3. Discussion of potential disruptions to the electrical grid can be found in Chapter 21, Public Services and Utilities, and discussion of electrical energy use is included in Chapter 22, Energy.

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	- Provide numerical/quantified values of construction duration for each alternative, number of round trips through each community, and those for distribution of RTM if prolonged beyond the physical construction period. Disposal of spoils and RTM is described in detail in Chapter 3, Description of the Proposed Project and Alternatives. - Provide definitions and estimated annual volumes of "Spoils" vs RTM for each alternative and their initial construction period and operational permanent dispositions. - Provide long term Electricity Grid Improvements for construction periods and then continuing operations for each alternative and the potential improved electrical services for Project construction and for pumping operations.	
364-27e	14-23/2 The project alternatives would not induce substantial unplanned population growth either directly or indirectly, because the Delta Conveyance Project does not propose to develop new homes or businesses [Pop, Hhlds, Jobs; e.g., concrete batch plants/segment fabrications] and proposed roadways are provided to construct project facilities and access conveyance facilities. [Service areas] The location of project alternatives in the Delta Primary Zone further restricts residential and business development in the study area. Please also refer the Chapter 31, Growth Inducement. - Provide a definition of growth inducement based on induced employments and facilities/ materials provisions. Provide official State/Regional current projections of population, households, and jobs for 2025-2050 and provide comparisons of same for a period of construction for each alternative and	Analysis of growth inducement is included in Chapter 31, Growth Inducement. This chapter provides the CEQA Guidelines' definition of what needs to be analyzed related to growth inducement and summarizes the methodology for the impact analysis. Chapter 31 includes discussion of historical and anticipated population growth, anticipated job growth, and indirect growth inducement from the project. The analysis concludes that the influx of workers during project construction and operations would not induce substantial new housing development, as these workers could be readily accommodated by existing housing stock. The analysis in Chapter 14, Land Use, reflects the anticipated changes in population due to the project. A description of project features required for each alternative, including electrical facilities, access roads, fencing and lighting, RTM, land reclamation, and other construction support facilities, is provided in Chapter 3, Description of the Proposed Project and Alternatives.

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	for initial (e.g., 2040-2065) operations periods. - Provide definitions and numerical/quantitative designations for a three-part designation (minimal, moderate and substantial unplanned growth. As the Project requires major construction efforts far exceeding the governments internal capacities, the Project would support many businesses and commercial entities in the Delta area for many years (e.g., 20-30) and thereby support expansion of populations within the Delta and thereby is Growth Inducing. Provide projections of land uses for each current alternative and for those referenced elsewhere in these comments. Given the services required for the construction and operations of the Project, provide estimates of Project induced Power Grid system/facilities, Roads/Access, Fencing, and RTM remaining and stabilized for agricultural uses.	
364-28	Chapter 15: Agricultural Resources NA Chapter 16: Recreation NA	This information describes the structure or organization 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.
364-29	Chapter 17: Socioeconomics 17-7/1 Historically, many of the agricultural areas in the interior of the Delta exhibit high proportions of minority residents, including Hispanics, Asians, and African Americans, because of a combination of historical and recent settlement trends. Chapter 29, Environmental Justice, Section 29.2.1.1 Minority Populations, further discusses the demographics of minority populations in the Delta region. Population estimates	Chapter 17, Socioeconomics, provides both quantitative and qualitative (or descriptive) analysis of economic and social effects per CEQA guidelines. Please refer to the discussion of economic and financial feasibility in Common Response 7, Implementation Considerations, regarding the role of project costs and financial analysis in an EIR. ECON-1 in Chapter 17 provides an analysis of employment and income changes related to project construction consistent with the construction and field investigation timelines described in Chapter 3, Chapter 3,

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	and growth trends for counties and communities of the Delta region are provided in Section 17.1.1.2, Population. As this section introduces economics into the CEQA process, provide economic/financial analysis and assessments for all construction administration and operations, e.g., 2023-2048, including an assumption of 10% overruns/contingencies. Provide same for a 10-year operations period, 2049-2059. Provide Sources and Regional Government projections based on Department of Finance (2025-2050) and for 5 year projections of Population/Households/Jobs within the Delta area. 17-52/2 Water recycling projects could be pursued in all four regions…. followed by the southern coastal region. The southern inland region would require the greatest number of water recycling projects to replace the anticipated water yield that it otherwise would have received through the Delta Conveyance Project. Water recycling projects would still require a continuous freshwater source for dilution. Provide non-tunnel alternatives for water supplies to fulfil the projected annual Project flows for each water supply entity using the Project waters, e.g., Pure Water ROs throughout Central Valley and SWP service areas. Provide numerical/quantified rankings for comparisons of tunnel and non-tunnel alternatives. 17-52/4 Concrete The table shows both the direct and total	Description of the Proposed Project and Alternatives. Employment and income changes related to project operations are shown on an annual basis because these changes will occur in the long term. California Department of Finance (DOF) population projection and person-per-household estimates are used in combination with the employment estimates from ECON-1 to assess if the project could have a substantial effect on population growth and housing demand in ECON-2. DWR did consider non-tunnel alternatives, however these ultimately were not evaluated because they would not meet the basic project objectives as described in Chapter 3. The commentor is also directed to Common Response 3, Alternatives Development and Description, in the discussion of CEQA and the scope of alternatives, which provides a discussion of the alternatives development process and the selection of the project alternatives evaluated in detail in the EIR. The purpose of the EIR is to analyze potential environmental impacts and their significance across all project alternatives. DWR's decision process will include the EIR and other considerations. Economic impact analysis assumptions are described in the subsection Assumptions and Limitations in the section Delta Regional Employment and Income. Data inputs are described in the subsection Data Sources in the section Delta Regional Employment and Income. Please refer to Common Response 7, regarding the scope of economic analysis in an EIR and the approach used in Chapter 17. Quantifying the value of all individual input costs (e.g., cement) is not the purpose of nor a requirement of a socioeconomic analysis in an EIR per CEQA guidelines. Impacts on noise, air quality, visual resources, transportation, and

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	(i.e., the sum of direct, indirect, and induced) changes that would result from changes in employment. Direct employment changes include a range of activities, such as earthwork, truck driving, tunnel construction, and concrete placement, among others. Indirect employment effects are based on activity created by business-to-business spending associated with the change in direct employment. Provide estimated value of cement, aggregate, and mixing of materials for concrete used in project directly delivered for onsite forming of segments and for indirect deliveries of materials and onsite production of concrete for forming onsite. 17-73/4 Construction activities associated with the launch, reception, and maintenance shafts for the tunnels under all alternatives would also bring undesirable noise and dust and equipment emissions along with changes in the visual environment that could, in limited locations, adversely affect the quality of experiences boaters, anglers, sightseeing public and wildlife viewing enthusiasts currently find in and around the Delta waterways…. Increased traffic on roads can also hinder or slow access for recreationists to Delta destinations or periodic events. Construction is planned to take place for 10 hours a day, Monday through Friday, for most of the construction period. Construction on weekdays would be during a period when fewer people are recreating; however, some particularly sensitive uses (including daytime noise for boaters who often are in stationary anchorages for extended periods during overnight moorages in waterways such as Potato and Little Potato Slough, or Sycamore Slough) could experience unwelcomed noise from nearby construction activities.	recreation are fully addressed in Chapter 24, Noise and Vibration; Chapter 23, Air Quality and Greenhouse Gases; Chapter 18, Aesthetics and Visual Resources; Chapter 20, Transportation; and Chapter 16, Recreation. The direct employment data used as input in ECON-1 are based on assumed operation time of Tunnel Boring Machines and other equipment consistent across other parts of the EIR. The schedule for construction of the project is provided in EIR Chapter 3, Description of the Proposed Project and Alternatives, in section titled Construction Schedule. This section of the EIR also provides a detail graphic showing the duration of major activities at project work sites. The EIR includes a table of contents, list of tables, list of figures, and list of references for the entire document. The EIR fully discloses the sources of information used in the analysis. Each EIR chapter provides citations which are defined in Chapter 31, References Cited. Chapter 31 is organized by EIR chapter to allow readers to easily locate the full citations.

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	Revise and provide entire section with full assumption of 24/7/365 operation during tunnel construction for all segments. Construction of the tunnel will take a 24-7-365 schedule especially after Tunnel Boring Machines are at least 25% into their segment length. TBMs, ventilation, RTM muck transport, and passage through the shafts must be virtually continuous and any interruption becomes very expensive very quickly. Provide typical year-monthly-weekly-daily schedule for tunnel construction activity and revise the above consistent with real TBM operations and all of the other related activities (e.g., ventilation) and their noise levels. Provide Tables of Contents, Tables, and Figures required for/in each section and for overall report. Provide References/Bibliographies in each section and for overall report References by Sections	
364-30	18 Aesthetics and Visual Resources NA	This information describes the structure or organization 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.
364-31	19 Cultural Resources Appendix 19D Impact Analysis of Project Alternatives on Archaeological Resources 19-7/1 19.1.1.2 Area of Potential Impact for Archaeological Resources The AI-A is the area of potential direct impacts from field	The analysis contained in Chapter 19, Cultural Resources, of the EIR and Appendix 19B, Archaeological Sensitivity Analysis Report (Confidential), does not support the assertion that the identification of sensitivity for archaeological resources was deficient. This report includes the results of a geoarchaeological sensitivity analysis, including carbon-14 dating conducted in the Delta for previous studies. The analysis contained in Appendix 19B demonstrates that sufficient research, documentation, and analysis was conducted to identify the sensitivity for buried archaeological

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	investigations, construction, and operations, and maintenance, that the combined footprint of all project alternatives and compensatory mitigation areas...cause to archaeological resources (Figure 19-2)..The AI-A is composed of above-grade project facilities including, but not limited to: intake facilities, tunnel shafts, forebay, pumping plants, aqueducts, outlet and discharge structures, compensatory mitigation areas, and transportation features such as road improvements and park-and-ride lots. The tunnels themselves are not included in the AI-A because they would be conducted at a depth that is below the level at which archaeological deposits have the potential to occur, as explained in the geoarchaeological and buried site sensitivity analysis included in Appendix 19B, Archaeological Sensitivity Analysis Report (Confidential).[The contents of this appendix are confidential and not available for public distribution.] Overall, the analysis reveals that deeply buried landforms and surfaces with the potential to contain archaeological resources are widespread across the study area and may extend to a depth of up to 68 feet below ground level in some areas... Provide carbon-14 dates of all units from surface to 200ft depth and identification of all layers of 150, 1500, and 15,000 years of age for identification of historic, archaeological, and Paleo-Indian deposits which may be encountered, and such impacts must be mitigated or compensated. Provide suitable inspection, monitoring, and trials excavations at 10-foot intervals for potential archaeological remains and depositional contexts and frameworks. Provide for carbon-14 dating of a noticeable "peat deposits"	resources. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of the study area(s) evaluated in the EIR. Please see Chapter 19, Cultural Resources, of the EIR section titled Impacts and Mitigation Approaches which includes Mitigation Measure CUL-3a. Implementation of Mitigation Measure CUL-3a will include procedures for conducting identification of archaeological resources (including subsurface surveys) and procedures for conducting construction monitoring where feasible.

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	(6in or thicker) or other carbonaceous rich deposits. 19-29/2 As a result, specific descriptions of certain archaeological, cultural, and historical resources are not provided in this chapter…Site-specific content and location information will be reviewed by appropriate agency officials on a need-to-know basis, thereby protecting the confidential information regarding location and content of the sites. DWR believes protecting the confidentiality of certain information concerning the location and nature of the resources from public disclosure is the best way to preserve the integrity of the valuable resources within the Delta region. Provide mitigation and compensation measures for archaeological resources including sample excavation and C-14 sampling/dating under the direction of recognized archaeological investigators.	
364-32	20 Transportation NA 21 Public Services and Utilities NA	This information describes the structure or organization 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.
364-33	22-1/ Chapter 22 Energy 22-1/2 Table 22-0 provides a summary comparison of important impacts on energy by alternative…. CEQA findings after all mitigation is applied. If applicable, the table also presents quantitative results after all mitigation is applied. Important impacts to consider include the energy needed to construct the alternatives and the energy required for operation. 22-1/3 All of the project alternatives would require the use of	Chapter 22, Energy, provides quantifications of energy that would be needed to construct each of the Delta Conveyance Project alternatives, as well as the expected energy required for operation (including maintenance).The table titled Estimated Total Temporary Annual and Total Electrical Use Estimates for Construction in Megawatt Hours provides an estimate of the annual consumption of power per year for construction of all the project alternatives over the 14-year construction period. The estimated consumption of energy for all of the project alternatives on an annual (yearly) basis is provided in the following three tables: Summary of Estimated Annual Average SWP Energy Generation, Energy Use, and Net Energy Consumption in Gigawatt Hours for Operation of the Alternatives

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	electricity during both construction and operation, and would initially consume gasoline and diesel fuels through operation of heavy-duty construction equipment and vehicles. The maximum consumption of electricity during construction is expected to occur during tunnel boring for all project alternatives. During construction, it is expected that Alternative 4a would require the most electricity (about 2,717 gigawatt hours [GWh]), and Alternative 4b would require the least electricity (1,103 GWh). Fuel consumption for on-road and off-road construction equipment is expected to be highest for Alternative 4a (about 50 million gallons of gasoline and diesel), and Alternative 2b would require the least amount of fuel (32 million gallons of gasoline and diesel). No discussion regarding years and GWh/Yr for power. Provide annual electricity usage for TBM, tunnel ventilation and lighting, and face-flushing water and RTM pumping and for the same within each shaft for lift to surface. Provide energy costs for production of construction materials – concrete and rebar – for each alternative. No discussion of Operations energy use 25-50 years for flow head-losses and pumping at inlets and discharge points to SWP. 22-3/1 This section describes the existing energy resources available within the study area and analyzes the potential effects to these energy resources from construction and operation of the project alternatives. Provide comparisons of all related electrical system, those	Compared to Existing Conditions; Summary of Estimated Annual Average CVP Energy Generation, Energy Use, and Net Energy Consumption in Gigawatt Hours for Operation of the Alternatives Compared to Existing Conditions; and Summary of Annual Average Gasoline and Diesel Estimates for Operations and Maintenance per Alternative under Existing Conditions. Additionally, the Final EIR includes the average annual pumping energy use estimates for each alternative for water diverted via the north Delta intakes at the main pumping plant located in the southern Delta. These estimates provide energy usage for conveying flow that is diverted at the north Delta intakes and would be included within the overall energy consumption by alternative. The addition of this information in the Final EIR does not result in a new impact that was not already disclosed in the Draft EIR and does not change the overall impact conclusions for Chapter 22. The information reported in these tables was considered to support the CEQA conclusion that although the project would increase the use of electrical energy during operation, this increase was not considered wasteful, inefficient, or an unnecessary use of energy and would not conflict with any state or local plan goal, objective, or policy for renewable energy or energy efficiency. The energy use data shown in the tables in Chapter 22 represents the consumption of energy based on operation of the alternatives but does not provide a breakdown of consumption by each element of the alternatives, as suggested by the commenter. The method of estimating the energy consumption by alternative is summarized in Chapter 22, in the section titled Evaluation of Operations. As discussed, the energy operations were analyzed for each alternative using the CalSim 3 model and the LTGen and SWP post-processing power models in sequence. LTGen uses the appropriate operations at each CVP reservoir, pumping plant, and

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	required during construction and those required for first ten years of operations for each alternative, e.g., for Tunnel Boring Machines (TBM), for Batch Plants and Segment Fabricators, for delivery and transport to shaft sites for Shaft Segments and floor, and Transport of Tunnel Segments - weight vs distances - rail or rubber wheels to face for lifting into place. 22-3/2 Hydropower energy generation is a major project purpose for the SWP and CVP. Hydropower energy has always been an important part of the benefits and financing of state, federal, and private water resources developments in California. Runoff from the Sierra Nevada and Cascade Mountains provided great potential for hydropower development, which has now been harnessed to pump water supplies into the SWP and CVP canals, the San Luis Reservoir, and water distribution systems. Provide revision for "a major project" to "a major system”" 22-16/6 2.3.1.2 Evaluation of Construction Activities Electrical energy needs for construction were evaluated based on the estimated annual energy required for each alternative. The construction energy requirements were estimated from the facilities that would require electrical energy during construction for each alternative. The construction-related energy demand is considered temporary (i.e., would cease once construction is complete). Construction of the project water conveyance facility would require use of electricity for…..22-17/1…..lighting, tunnel ventilation, tunnel boring, earth removal from the tunnels, and other construction machinery.	powerhouse from the CalSim 3 model to calculate energy use and generation at these facilities. The cost of production of construction materials is not a CEQA consideration; however, it was included as part of the development and consideration of project alternatives. Revising the text in the introductory paragraph for Chapter 22 that currently states “Hydropower energy generation is a major project purpose for the SWP and CVP” to “Hydropower energy generation is a major system purpose for the SWP and CVP” would be editorial in nature and would not result in a meaningful change to the adequacy, accuracy, or completeness of the EIR; therefore, the text will remain as it is in the Final EIR. Appendix 22B, Energy 2040 Analysis, provides a comparison of the No Project Alternative at 2040 to the project alternatives at 2040. Modeling for the No Project Alternative at 2040 and project alternatives at 2040 incorporates assumptions regarding changes to hydrology and sea level rise as a result of climate change. Information regarding how climate change was considered in the modeling is provided in Appendix 5A, Modeling Technical Appendix. Common Response 9, Hydrologic Modeling and Approach, provides an overview of how future hydrologic conditions attributable to climate change were modeled and reported in the Draft EIR. The table titled Impacts on Energy from the Plans, Policies, and Programs for the No Project Alternative in Chapter 22 provides a summary of impacts on energy from the plans, policies, and programs for the No Project Alternative. The project types were identified as part of the No Project Alternative, which includes predictable actions that are expected to occur if the project is not constructed and operated. As indicated in the table, these predictable actions would require an increase in energy use, both for construction and operation. These actions would be implemented by local

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	Provide same for each shaft in each alternative and lowering/raising of materials, equipment, and staff. 22-17/4 As explained in the air quality analysis, DWR has included Environmental Commitment EC-13: DWR Best Management Practices to Reduce GHG Emissions, which includes a commitment to using alternatives fuels such as solar power to power generators to the maximum extent feasible. Provide definition of "feasible" and "maximum extent feasible" for Solar vs Diesel and Daylight vs 24/7, 30/12, no holidays, and continuous operations 22-18 Table 22-6 Solar generation at this site would be pursued and developed if found to be feasible. Provide definition of feasible, practical, and/or viable and provide definition without any economic/fiscal parameters and remembering: 24/7 Loads - TBM, rail, elevators, ventilation muck pumping. 22-24/2 However, indirect impacts on energy within the Delta may occur under the No Project Alternative as the result of changes in upstream hydrologic conditions, sea level rise, and continued seismic risk to infrastructure. In addition, immediate, and potentially long-term, changes in energy resources could occur under the No Project Alternative because of seismic events and the inundation of infrastructure within the Delta. Provide identical indirect energy impacts upon the tunnel alternatives for climatic changes (e.g., total loss of California	or regional water agencies.

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	snow pack north of Stockton, including Shasta) in upstream hydrologic conditions, sea level rise, and continued seismic risk to infrastructure for each tunnel alternative and their supportive power infrastructure. Provide Project alternative for meaningful numeric/quantified comparisons for No Project and for Reinforced Levees, including thickening bases and raising heights and inserting permeable barriers and structural caps. 22-26/1 Construction of desalination projects, groundwater management projects, water recycling projects, and water use efficiency projects to meet water suppliers' needs would result in the short-term consumption of energy from construction of the facilities and would vary depending on the nature and duration of construction. Provide for a "Water Purification Alternative" (say Alt. #11) for continuing and repetitive reuse of local and existing SWP supplies for local service. Provide for completion of such within the same time period as tunneling and commissioning. Provide numerical/quantified comparisons of all alternatives for same elements. 22-40/-1 22.3.5.1 Cumulative Impacts of the No Project Alternative The No Project Alternative in combination with other cumulative projects is not expected to cumulatively affect energy resources or result in wasteful, inefficient, or unnecessary use of energy. Ongoing and reasonably foreseeable future projects may affect regional energy use; however, projects associated with the No Project Alternative	

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	(water recycling, desalination, and groundwater extraction) would not create substantial demand that would cumulatively affect net energy resources or energy use for SWP and CVP south-of-Delta pumping. Therefore, this energy impact would not be cumulatively considerable. Provide listing and energy uses/productions for "other cumulative projects”" Provide listing of foreseeable future projects for energy uses and generation as base case for comparisons. Provide definition and estimated values for "substantial demand" and projected 2050 generation and use of Power for the Delta region and for the SWP and CVP service areas. Provide an estimated value for "substantial" and "considerable”"	
364-34	23 Air Quality and Greenhouse Gases Not Applicable 24 Noise and Vibration Not Applicable	This information describes the structure or organization of the comment letter. DWR has reviewed all comments and will consider all comments in its decision-making process.
364-35	25-1 Hazards, Hazardous Materials, and Wildfire 25-1/2 Under all project alternatives, there is the potential to encounter hazardous materials through the handling of reusable tunnel material (RTM), excavation and tunneling near oil and natural gas production facilities, and while tunneling near gas fields and wells. Section 25 is totally inadequate and incomplete with regard to all tunnel and shaft construction activities and all aspects of oil and gas fields, wells, and surface facilities.	The analysis in the EIR does not support the assertion that Chapter 25, Hazards, Hazardous Materials, and Wildfire, does not adequately identify, analyze, and provide mitigation for potential impacts that could result from tunnel and shaft construction near oil and gas fields. Please see Chapter 25, the section titled Hazards from Oil and Gas Production and Processing, for a description of oil and gas extraction fields present throughout the study area. This section of Chapter 25 relies on the discussion in Chapter 27, Mineral Resources, in the section titled Natural Gas Resources, which is supported by information extracted from publications by the California Department of Conservation (DOC); California Geological Survey (CGS); the DOC CalGEM (California Geology Energy Management Division); U.S.

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	Provide thorough description, assessment, and mitigation for RTM hazards as they differ markedly from the more direct impacts of tunneling and shaft excavation for wells and pipelines or provide such in the Sec.27. Provide review of historic aerial photos (1920-date) and satellite images (e.g., Google Earth Pro) for each tunnel alignment in order to locate potential site of past gas production wells. Provide for preliminary route monitoring for magnetometer surveys for both well heads and abandoned pipelines which could endanger tunneling and shaft excavations. 25-6/4 5.1.2.4 Hazards from Oil and Gas Production and Processing Active oil and gas extraction fields are present throughout the study area. Petroleum production in the study area mainly consists of natural gas extraction, though minor quantities of crude oil and condensate are also produced. Provide proper technical term of gas production rather than "extraction”" Provide listing and production of all wells and fields within 10,000ft of Project/alternative routes and shafts. Provide review of historic aerial photos (1920-date) and satellite images (e.g., Google Earth Pro) for each tunnel alignment in order to locate potential site of past gas production wells. Provide for preliminary route monitoring for magnetometer surveys for both well heads and abandoned pipelines which could endanger tunneling and shaft excavations.	Geological Survey (USGS); and the general plans for counties that have land within the study area that could be affected by the project alternatives. This includes CalGEM WellSTAR database search results for location and categories of oil and natural gas wells in the study area. Please see Chapter 25, Impact HAZ-2, for an analysis of the potential impacts from excavating near oil and gas facilities, which determined that the impact would be less than significant with implementation of Mitigation Measure HAZ-2, which requires the preparation of a Phase I Environmental Site Assessment and development of a remediation plan prior to construction. RTM is discussed in the Reusable Tunnel Material section of Chapter 25 and in Chapter 3, Description of the Proposed Project and Alternatives, and Chapter 9, Water Quality. RTM removed from the tunnel would be placed in basins with impermeable linings where the RTM would be tested for hazardous materials and initially dried prior to storage or reuse. The water drained from the RTM would be collected and treated prior to reuse. If the RTM is determined to include hazardous or toxic constituents, the material will be hauled to licensed offsite disposal. An assessment of potential effects associated with the transport and use of RTM is provided in Impact HAZ-1, which found that the impact would be less than significant. Impact HAZ-2 analyzed whether the handling and storage of RTM would expose workers to potential human health hazards, which found that with implementation of Mitigation Measure HAZ-2 the impact would be less than significant with mitigation. Extraction is the correct term to describe the removal of oil and gas from the ground. The location of most abandoned and inactive wells is known, as shown in the figure titled Oil and Gas Processing Facilities in Chapter 25. However, the comment is correct that not all well locations are known. Therefore, the identification efforts described in Chapter 25 will be

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	25-7/1 The locations of active wells can be determined with relative ease; however, the locations of abandoned or plugged wells may be unknown due to inadequate or missing data or poor record keeping. Historic aerial photos of 1920s-30s exist and can be acquired and review for prospective sites of historic abandoned and buried wells. Provide for well re-abandonment (e.g., 100% recementing and perforation) at subsurface property owners' expenses for the safety of the tunneling operations. Provide review of historic aerial photos (1920-date) and satellite images (e.g., Google Earth Pro) for each tunnel alignment in order to locate potential site of past gas production wells. Provide for preliminary route monitoring for magnetometer surveys for both well heads and abandoned pipelines which could endanger tunneling and shaft excavations. 25-7/5 Other oil and gas exploration and production activities that can release hazardous materials into the environment, where they may be encountered during excavation or construction, include drilling, production,…..to refineries and processing facilities. Oil and natural gas pipelines are also present throughout the study area and several pipelines are aligned west to east across the study area's southern half (Figure 25-1). A discussion of oil and natural gas resources in the study area is found in Chapter 27, Mineral 27 Resources. Provide consistent usage of proper technical term of gas production. Provide listing and production of all wells and fields within 10,000ft of Project/alternative routes and shafts.	required to locate previously unidentified wells. The Thresholds of Significance section in Chapter 25 provides general guidelines to determine potential impacts of the project. The analysis in the EIR does not support the assertion that gas production facilities are not mentioned. Gas and oil facilities, including pipelines and wells are discussed in Chapter 25, in the section titled Hazards from Oil and Gas Production and Processing and the section titled Impacts of the Project Alternatives Related to Hazards and Hazardous Materials. The figure titled Oil and Gas Wells in this same chapter shows wells and their status (e.g., active, abandoned) within the study area. Because identification of all gas and oil facilities within the project footprint is a priority, additional identification efforts will be conducted during the design phase and before construction of the project, as described in Chapter 3. This will include efforts to locate all previously unknown wells, including use of airborne methods to conduct magnetic surveys followed by surface geophysical surveys. See the Impacts of the Project Alternatives Related to Hazards and Hazardous Materials section in Chapter 25 for a description of identification efforts which include research of historical mapping and utilizing geophysical methods to identify well casings. Examination of historical aerial photos of the project site is required as part of the Phase I environmental Site Assessment that will be conducted prior to construction as required by Mitigation Measure HAZ-2. Regardless of the type, all gas, including natural gas, is considered potentially toxic, combustible, and dangerous. There is no need to parse out specific types to assess potential impacts more than Chapter 25 already has in the Hazards from Oil and Gas Production and Processing section. The pre-construction identification efforts described in the Impacts of the

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	25-8/ Figure 25-2. Oil and Gas Wells Provide alternative alignments along with oil/gas fields and well maps from CalGEM Div. Dept. of Conservation. 25-24/3 Oil and Natural Gas Wells and Processing Facilities Mapped locations of oil and natural gas wells and processing facilities within the construction footprints (Figures 25-1 and 25-2) were overlaid to assess the relative risk of disturbing a well or encountering petroleum products or processing chemicals in soil or groundwater, respectively. The numbers of oil and natural gas wells within the study area were obtained from publicly available data on the California Energy Commission's California Natural Gas Pipeline and Station ARC/GIS website. Provide explanation for use of secondary compilations referred to compare with the primary data sources, Dpt. Conservation Geologic Energy Management (CalGEM), Well Finder) or historic (1922-1980) aerial photos (e.g., EDR.net). Provide primary sources rather those derived sources and provide historic aerial photos of alternative alignments and their review. 25-27/1 25.3.2 Thresholds of Significance The project would be considered to have a significant impact if it would result in any of the conditions listed below. No mention is made of gas wells or pipelines and related surface facilities. No mention of gas wells and depth of tunneling and chances of encountering known/unknown well casings, gases, and fluids. Provide consistent considerations.	Project Alternatives Related to Hazards and Hazardous Materials section would ensure tunnel shaft excavation does not intersect with pipelines, wells, or other oil and gas facilities. As described in Chapter 25 under the Hazards from Oil and Gas Production and Processing section, gas monitoring equipment is regulated by the Cal/OSHA Mining and Tunneling Unit and would be compliant for specific tunnel conditions. The analysis in the EIR does not support the assertion that a supplemental/subsequent EIR is required. Rather, CEQA allows for the evaluation of impacts at a level of conceptual design. Additionally, the CEQA standard for preparation of an EIR and its evaluation of environmental effects need not be exhaustive, rather the sufficiency of the EIR is to be reviewed in the light of what is reasonably feasible and that which demonstrates a good faith effort at disclosure. Regarding the scope of the EIR analysis, please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. See section titled Impacts of the Project Alternatives Related to Hazards and Hazardous Materials in Chapter 25 for a description of identification efforts undertaken to support the EIR which include research of historical mapping and utilizing geophysical methods to identify unrecorded wells and well casings. Mitigation measures are considered mandatory and are worded as such. The project is required to comply with all safety measures as mandated by Cal/OSHA. Safety features and designs will be determined by the contractor and will comply with all relevant safety regulations.

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	Provide details of any historic wells within 100ft of the tunnel alignments or tunnel shafts. Assume that all gas wells included gathering gas lines from well heads to field processing facilities and coordinate identification of prospective gas gather lines with wells and tunneling shafts. Provide similar discussions for gas fields and more than 10 wells within 5000ft of the proposed tunnel alignments. 25-38/4 Oil and Gas Facilities As previously discussed in Section 25.1.2.4,….., hazards associated with oil and natural gas production include emissions of BTEX compounds as well as n-hexane and other volatile organic compounds. Abandoned and plugged oil and natural gas wells may be present in areas where excavation is planned. Improperly sealed natural gas wells have the potential to act as natural gas conduits from deep reservoirs where flammable gases may pose hazards to excavation or tunneling activities…..Two active natural gas wells have been identified in the project footprint. The first is located near King Island just outside the footprint of the eastern tunnel alignment. The second active gas well is located within the footprint of the central tunnel alignment on Staten Island. Pre-excavation surveys would identify, confirm, and pinpoint exact locations of oil and gas wells to ensure tunnel excavation does not intersect with pipelines [wells]. As a result, tunnel activities are not expected to intersect with any natural gas wells [or pipelines]. Natural gas = odorless field methane/CH4 which is included in VOCs, but not amongst PAH/BTEX/n-hexane. Provide clarifications for methane vs other typical natural gas	

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	associated gases, including H2S and PAH and nm-VOCs. Provide a full range of toxic and combustible gases from the gas fields and production systems within the Delta. Tunnel boring machine would be at >100ft depth but could encounter known and unknown well casings and well casings at depth but not pipelines. Excavation of Project shafts would have higher likelihood of encountering pipelines and well heads (surface/production casings) Provide detailed review of all gas fields and wells within 5000ft of any Project facility and provide all appropriate information regarding potential encounters during the Project. Wells are not pipelines, and wells do have two-four casings near the surface, <50ft depth, which could be encountered from the surface to tunnel depths. Few if any pipelines would be expected at tunnel depths (>100ft bgl), therefore impacts would only pertain to shafts construction. Provide clarifications for pipelines/wells and shafts and tunnels. 25-38/5 All alignment tunnels (Alternatives 1, 2a, 2b, 2c, 3, 4a, 4b, 4c, and 5) would cross several natural gas pipelines. Some of the facilities under all project alternatives would be excavated within an area of natural gas fields [above]. The natural gas pipelines are generally located near the surface, with depths of less than 10 feet below the surface and pipe diameters less than 24 inches. The top of the tunnel excavation nearest the natural gas lines would be approximately 115 to	

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	120 feet below the surface. Pre-excavation surveys would identify pipeline locations to ensure tunnel excavation does not intersect with pipelines. In addition, tunnel shafts and tunnel facilities would be significantly deeper. Shafts start at the surface and statement is correct only for tunnels and upper 25% portions of shafts. Provide clarification regarding all surface facilities and their construction, compared to the lower half of the Shaft, e.g., upper 20ft vs lower 100+ft off shaft. Provide similar clarification for wells/casings and tunnels and shafts. Provide two types of gas monitors (one for buoyant methane and one for heavier gases (C4-C6+)) on every shield and during shaft construction and operations. 25-39/4 During the design phase of the project, additional desktop surveys of documented wells would be conducted and include research of historical topographic mapping that may document the presence of wells that were not previously identified in the California Geologic Energy Management Division (CalGEM) oil and natural gas database. The locations of identified wells within the tunnel alignment would be used to determine methods to abandon, relocate, or avoid the wells (Delta Conveyance Design and Construction Authority 2022a:104; 2022b:66). The Project is during the design phase elsewise the DEIR should be a Programmatic EIR with subsequent CEQA reviews once the alternative is selected.	

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	References to "Design Phase" and future design documentation/revisions clearly indicate that the Project DEIR is premature and thereby totally inadequate and incomplete. Provide for a future supplemental/subsequent DEIR and retrieve the current documents as premature and recirculate a complete and adequate, design based, Project DEIR at a later date. Such document "surveys" and reviews cannot identify unrecorded wells and must be augmented with reviews of historic aerial photographs for all tunnel alternative routes. Provide for detailed acquisition and review of historic aerial photos for Project alternative areas/corridors. 25-39/5 In addition, during the design phase, a comprehensive exploration program would be conducted using the suitable geophysical methods to identify and/or confirm the location of well casings along the alignment, including wells that have not been previously identified. These methods could include wide-area airborne (i.e., drone, helicopter, or fixed-wing aircraft) magnetic surveys followed by more site-specific walk- or tow-over ground-based magnetic surveys (Delta Conveyance Design and Construction Authority 2022a:104; 2022b:66). 21 Provide for acquisition and review of historic aerial photos of all alternative alignments in order the provide direct evidence of well location along all alternative alignments and at shaft sites. Such exploration with magnetometer "surveys" and reviews	

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	may not identify unrecorded wells especially if casings have been "pulled" usually upper 100ft of casings and must be augmented with reviews of historic aerial photographs for all tunnel alternative routes. Provide for an extension of all CEQA consideration, withdrawal of current Project "DEIR" and circulation of a Programmatic DEIR or a Supplemental/Subsequent DEIR. 25-39/6 These measures to identify and avoid oil and natural gas wells that would potentially pose risks to project personnel or facilities would reduce the potential impact of encountering hazardous constituents from abandoned or previously unidentified oil and gas wells. "These Measures" are not formally mitigation for clearly significant impacts if realized but relate to the Project's PRE-Design phase, which has been repeatedly referenced as being in a "Pre-Design" phase of project development. The "Design Phase" must include all relevant maps, drawing, and documents for all wells, locations established with historic aerial photos, and confirming field surveys and magnetometer locations of any well, pipeline, or even tank bottom/foundations. Provide additional TBM facilities for direct metallic and gas sensors/monitoring in all shafts, tunnel ventilation air, muck pipelines/discharges/containment, and TBM tunnel faces 25-39/9 Tunnel boring operations for the project in areas with a potential for flammable gases would be required to include	

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	redundant safety features and practices. For example, TBMs are required to be equipped with gas monitoring equipment that automatically shuts down the TBM if gas is detected. Uses of conditional must be replaced throughout regarding mitigation measures with mandatory (shall/must) when regarding safety of construction and operations. Provide replacement of all conditions throughout the DEIR and recirculate the SEIR. Based on southern California experiences, all TBMs must be equipped with dense gas (BTEX/PAH + H2S) monitors near their bottom and lighter than air gases (i.e., CH4 methane) near their top of the TBM. Provide realistic protective shelters at and near the face (e.g., shelter/escape pods) and at regular intervals along the tunnels for the several miles of lack of escape to surface. Provide for Shut-Downs/Shelter-In-Place and Evacuation – containment cells and increased ventilations. 25-42/4 Excavation and tunneling could expose…to soil and groundwater contamination associated with abandoned oil and gas wells. Previous mining activities, such as the use of petroleum drilling fluids, may have deposited hydrocarbons in the soil or groundwater. However, project design would include desktop surveys and research of historical topographic mapping to identify and avoid wells. Other methods used could include airborne surveys and site-specific ground-based magnetic surveys. These measures would reduce the potential	

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	impact of encountering hazardous constituents from abandoned or previously unidentified oil and gas wells to a less-than-significant level. Provide for reviews of all pertinent historic aerial photos (e.g., 1922 to date) for all routes and facilities information from DoC/CalGEM. Provide review of each alternative alignment, including "dead-straight" alternative and provide evidence-based information.	
364-36	27-1 /- Mineral Resources Remove repetition regarding Oil and Gas Resources Chapter 25 and re-issue and provide full, final design based Project DEIR[.] Provide a full survey and review of historic aerial photos [from] 1920-1960s to confirm/pinpoint Well locations -- Historic Resources -- and confirm locations with field-gas-magnetic surveys[.] Provide for Hazardous Wastes assessment for all such facilities within 500 [feet] of a specifically located Project facility.	The impact analysis of oil and gas production in Chapter 25, Hazards, Hazardous Materials, and Wildfire, focuses on human health, whereas the impact analysis of oil and gas production in Chapter 27, Mineral Resources, focuses on the loss of availability of this resource. Therefore, the discussion of oil and gas in each of these chapters is tailored to the needs of its impact analysis. There is no requirement under CEQA to revise these independent chapters. As described in Chapter 3 in the section titled Location of Buried Groundwater and Natural Gas Wells, a future field investigations program would be used to evaluate the suitability of various geophysical techniques to detect buried and abandoned wells. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of why it is appropriate to evaluate impacts at a conceptual design level. As described in Chapter 25, in the discussion of Impact HAZ-2, several measures are in place related to hazardous waste assessments. Mitigation Measure HAZ-2 would require that a Phase I environmental site assessment be conducted before construction. This assessment would identify and evaluate potential sites of concern within the construction footprint and require the development of a remediation plan before the

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		start of construction and operations.
364-37	28 Paleontological Resources 28-1/1 The impacts of tunneling and ground improvement, however, cannot be mitigated and would, therefore, cause a significant and unavoidable impact for all project alternatives. Alternatives 1, 2a, 2b, 2c, 3, 4a, 4b, 4c, and 5 vary in magnitude of excavation required, primarily for tunneling and ground improvement. Alternative 2b would require the least and Alternative 4a would require the greatest amount of excavation and ground improvement. Impacts can be mitigated even where they cannot be directly surveyed and monitored by compensatory measures related to the same conditions and activities, as for many different biological impacts. Provide compensatory measures for Shaft excavations and for tunnel debris in discharges before dumping in ponds. Provide for compensatory paleontological mitigation for 40+ miles of tunnels and shafts for potential impacts on fossil resources, e.g., 10-20 excavations of vertical shaft (e.g., 8 foot diameter casings of 160 feet length with foot-by-foot sampling and analyses for micro- (diatoms, ostracods, foraminifera, pollen, otoliths, etc.) and larger biota (e.g., fish, shells, etc.) along with detail mineralogical and sedimentologic sampling and analysis). While tunneling is largely impossible to mitigate as there is little direct observation earth/rock exposed, some compensation can also be achieved by careful monitoring of shaft excavations generally to or below the tunnel levels.	As described in Chapter 28, Paleontological Resources, in Impact PALEO-1, for the excavation of the tunnels, the boring process would generate reusable tunnel material (RTM), and any macrofossils encountered by the TBM would be destroyed by the boring process. Surface disturbance of geologic units identified as highly sensitive or undetermined for paleontological resources would be monitored. The impact analysis and mitigation measures presented in Chapter 28 follow the Society of Vertebrate Paleontology's Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, which provides standard guidelines that are widely followed (Society of Vertebrate Paleontology 2010:1-11). These guidelines reflect the accepted standard of care for paleontological resources. As part of the Monitoring and Mitigation Plan for Paleontological Resources described in Mitigation Measure PALEO-1a, sampling and data recovery procedures that are consistent with the SVP Standard Procedures (Society of Vertebrate Paleontology 2010) will be established. These procedures will include bulk matrix sampling, as deemed appropriate by the paleontological resource specialist. This sampling would screen for microvertebrates (e.g., small mammal, bird, reptile, amphibian, or fish remains) and invertebrate paleoenvironmental indicators (e.g., foraminifers, small gastropods, and plant seeds). The additional excavation recommended in the comment would not serve as compensatory mitigation for paleontological resources. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of significant and unavoidable impacts and the use and incorporation of mitigation measures.

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	Provide means for screening of tunnel muck before final discharge to ponds/drying beds. Provide additional monitoring and inspections of excavated shaft surfaces at and below the tunnel levels can compensate for total lack of monitoring for the tunnel boring impacts. Such monitoring of the deeper levels of excavation also mitigate for impacts to archaeological resources. Provide compensatory trial shaft excavations may also compensate for some of the expected significant impacts to all paleontological resources. Provide for such compensatory mitigation as done for other biotic resources. 28-2/Table 28-0. Comparison of Impacts on Paleontological Resources by Alternative Generally, the surface disturbance includes both excavation and filling/covering of near-recent deposits which contain fossils, including diatoms, ostracods, fish bones, and many other marine/estuarine animal remains. Although not as unique and important as lower Pleistocene fossils, provide for recovery/screening for any fossil remains, which must be considered important and recovered and documented to lessen impacts overall. 28-32/1 Implementation of Mitigation Measures PALEO-1a: Prepare and Implement a Monitoring and Mitigation Plan for Paleontological Resources, and [f]or excavation at the tunnel shafts where in situ monitoring cannot occur, the shaft	

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	spoils would be monitored. The level of impact for all alignment alternatives would be similar but would vary in magnitude based on the amount [# of shafts] of excavation that would occur (Table 28-4). Provide monitoring of all tunnel and shaft debris before discharge to holding/drying basins/facilities.	
364-38	ENVIRONMENTAL JUSTICE NA 30 Climate Change NA No other than GHGs	This information describes the structure or organization 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.
364-39	33: Other CEQA-Required Analyses 33-2/3. Each of the project alternatives involves different sets of environmental tradeoffs affecting vast portions of California (not only the study areas, but also the export areas). Unlike many other environmental laws, CEQA does not treat any category of environmental effect as being more important than any other category. Thus, the process for reaching an overall determination under CEQA as to the environmental superiority of a particular alternative action requires the balancing of different sets of environmental benefits and impacts against each other. There is no clear direction under CEQA for how to engage in such balancing to identify an environmentally superior project alternative in an EIR. Provide CEQA required quantitative/numerical alternatives comparisons of all alternatives. As a stated goal of the Project is to improve reliability of supply to the export areas, the DEIR must provide a method of numerical evaluations, at least ranking by each area of review	Please see response to comment 364-6 for CEQA requirements and alternatives and need for quantitative or numerical analysis. Please refer to Common Response 1 regarding the project purpose and project objectives. Please refer to Common Response 1 regarding the methodology used for impact analyses, including quantitative and qualitative assessments; models and analytical methods used to evaluate project impacts; and mitigation measures used to minimize, eliminate, or reduce the impacts discussed in each resource chapter (Chapters 7 through 32). In these chapters, impact statements are ranked as no impact, less than significant, less than significant with mitigation, or significant and unavoidable. Short- and long-term impacts also are discussed as required in the resource chapters. Service areas and the Delta also are discussed in context of the project as needed within each chapter. Please also refer to Common Response 1 regarding co-equal level of evaluation using NEPA terminology to satisfy U.S. Army Corps of Engineers (USACE).

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	and assessment with and without mitigation along with summation of numerical rankings. 33-4/3. Each project alternative involves a different set of environmental benefits and impacts. For example, the number of north Delta intakes associated with particular alternatives and the alignment of project features typically reflects a balance between localized construction-related, visual, and footprint-related impacts in the Delta against the system-wide environmental benefits associated with improved reliability of SWP deliveries and meeting the project purpose and objectives. Alternatives with two intakes would involve fewer localized in-Delta impacts than alternatives with three intakes (Alternatives 2a and 4a). Other alternatives with two intakes (Alternatives 1, 2c, 3, 4c, and 5) or with one intake (Alternatives 2b and 4b) would similarly reduce localized, in-Delta impacts compared to alternatives with three intakes. However, alternatives with one intake (Alternatives 2b and 4b) would not have the water supply reliability benefits expected of alternatives with two or three intakes (Alternatives 1, 2a, 2c, 3, 4a, 4c, and 5). Provide numerical ranked assessments with mitigation for each resources category and provide and compare numerical summaries for at least In-Delta and In-Service Area. Provide summarizing numerical rankings for short-term In-Delta and longer term Service Areas Environmental Impacts. 33-3/3. As described in Chapter 2, Purpose and Project Objectives, the project alternatives evaluated in this Draft EIR have the following objectives:	Please refer to Common Response 8, Relationship to other Plans, Projects, Policies, and Programs, regarding state level planning and policy documents and the reliability of water supply. A dual conveyance system is proposed to improve flexibility, meet water needs, and improve reliability. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, for a discussion of the proposed diversions for each alternative. Please refer to Common Response 1 regarding the purpose and project objectives, which focus on operational flexibility in consideration of potential future state and federal regulatory and environmental constraints. Please refer to Common Response 8 for a discussion of the Sustainable Groundwater Management Act (SGMA) and groundwater sustainability agencies (GSAs), including existing overdraft conditions, reduced recharge, drought, climate change, and establishment of local groundwater sustainability plans (GSPs) implemented by GSAs authorized by the SGMA. Please refer to Chapter 21, Public Services and Utilities, and Chapter 22, Energy, for a discussion of potential impacts related to electric power use and infrastructure. Please refer to Appendix 3G, Community Benefits Program Framework, for a discussion of levee maintenance and improvements. It is unclear what specific NEPA language the commenter is requesting be switched with equivalent CEQA terminology. State CEQA Guidelines Section 15002 General Concepts discusses the basic purposes and intent of CEQA, which can be summarized as informing decision makers about the effects of a project, identification of ways to reduce effects through changes to a project or inclusion of mitigation, and disclosing the reasons a project is approved even if significant effects would remain. The EIR is clear in fulfilling conveying information to the public and decision makers and

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	To help address anticipated rising sea levels and other reasonably foreseeable consequences of climate change and extreme weather events. To minimize the potential for public health and safety impacts from reduced quantity and quality of SWP water deliveries, and potentially Central Valley Project (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. To protect the ability of the SWP, and potentially the CVP, to deliver water when hydrologic conditions result in the availability of sufficient amounts of water, 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. To provide operational flexibility to improve aquatic conditions in the Delta and better manage risks of further regulatory constraints on project operations. Provide thorough revision of current Draft EIR with appropriate CEQA terminology and avoid mixing CEQA/NEPA equivalent terms. As properly required by CEQA, this paragraph recognizes the relation of objectives for each goal for the Project (NEPA equivalents are Purposes and Needs). However, no explicit	meets these requirements.

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	Goals are stated or related to these objectives. Provide explicit goals and related objectives along with Project policies and programs. Provide flowcharts relating goals, objectives, policies, programs, and related Project elements: intakes, tunnels, and system connectors to the SWP and CVP. 33-4/4. The project alternatives would reduce reliance on diversion from the existing south Delta pumps. Diversions at the project's north Delta facilities would pass through state-of-the-art fish screens. Dual conveyance would provide operational flexibility that could reduce impacts on aquatic species by, among other things, allowing operators to divert water at times and places--in either the north or the south--that protect those species at sensitive life stages. Dual conveyance allows for increased diversion of river flows which is not physically nor defined regulatorily or administratively limited. Provide maximum physical capacity of SWP Delta diversion with and without the Project during a typical/modal rain year for SWP water rights and maximum flood flows on the Sacramento River. 33-4/5. Even in the absence of an event that catastrophically alters the hydrology of the Delta, climate change and anticipated sea level rise could be expected to gradually limit the operation of the SWP water pumps in the south Delta. Consequently, additional releases from upstream reservoirs are expected to be necessary to provide the fresh water needed to meet current salinity standards. In addition, it is expected that the ecological health of the Delta will continue	

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	to decline. While water users have previously relied on groundwater to supplement surface water supplies, groundwater pumping is now limited by the Sustainable Groundwater Management Act requirements, further reducing the available options for meeting water supply demands. As described in in the No Project Alternative discussions in Chapters 7 through 32, water managers in urban export areas could respond to diminished deliveries by taking other actions, such as the construction of desalination plants, that would create… Provide page number reference for limitations in SGMA. 33-5/4. All of the project alternatives would create temporary and permanent changes to the Delta environment from construction that in many cases would be mitigated to less-than-significant levels, although several impacts are considered significant and unavoidable. All of the project alternatives would also improve Delta roadways and bridges, and improve water supply infrastructure that is of statewide importance. Provide improved Power/Energy systems and reduce the value of levee improvement for SWP/CVP reliability. 33-5/5. As described above, there are different sets of environmental tradeoffs among the project alternatives. Among the project alternatives evaluated in this Draft EIR, Alternative 5, on the Bethany Reservoir alignment, lessens impacts in relation to temporary and permanent effects on the Delta environment, including minimizing impacts on wetlands and other waters of the United States, agriculture, and cultural and historical resources. Therefore, of the project alternatives,	

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	Alternative 5 appears to be the environmentally superior alternative. Provide CEQA-required quantitative comparison of alternatives and their relative degree of impact with and without mitigation. Provide numerical/quantified comparison of all alternative impacts and whether they are short-term or long term (e.g., lasting less or more than two years.	
364-40	34 Community Benefits Program Analysis 34-2/3 The Community Benefits Program for the Delta Conveyance Project is one of three distinct but complementary processes intended to address effects within the local communities, as described in Appendix 3G. The other two processes are regulatory mitigation, which is used to address Delta Conveyance Project environmental impacts related to specific regulatory requirements (e.g., CEQA), and an Ombudsman Program (Chapter 3, Description of the Proposed Project and Alternatives, Section 3.20, Ombudsman), which provides a clearinghouse and single point of contact to streamline information, support, and applicable construction-impact-related claims and to ensure just compensation as a result of direct construction-related effects. Provide specific mitigation/compensation measures of the three processes as applied to all Project alternatives along with the unmitigated and fully mitigated numerical evaluations for each Project Alternative. Provide appropriate compensatory mitigation for community	The analysis of potential impacts associated with the implementation of the Community Benefits Program is provided in Chapter 34, Community Benefits Program Analysis. As described in Chapter 34, this analysis discloses potential impacts and types of mitigation that could be implemented but does not include CEQA significance impact determinations or specific mitigation measures because, at this stage, it is unknown which specific activities would be approved, and their design, location, or scale are unknown. Specific mitigation measures are included in the resource impact discussions provided in Chapters 7–32 of the EIR. As described in Appendix 3G, Community Benefits Program Framework, the Community Benefits Program is part of the proposed project and alternatives and approval of the program would be included in CEQA approval. Specifics regarding implementation of the program would continue to be developed and finalized, with community input, after that approval.

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	benefits.	
364-41	35 NA 36 NA 37 NA 38 NA	This information describes the structure or organization 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.
364-42	Chapter 39: Text Descriptions of Figures 119 PAGES 39-10-4 Active Faults and Historical Seismicity of the Bay and Delta Region, 1800-2021 Figure 10-4 depicts all active faults and seismicity in the Bay and Delta Region between 1800 and 2021. Several earthquakes with magnitude 5.0 or greater have occurred in the immediate San Francisco Bay Area since 1800. Provide all seismicity (0.1-10 Richter Magnitudes) records for the Delta Region. Provide dates, locations, and magnitudes for earthquakes >5 Magnitudes separately for Delta and Bay areas.	This comment does not raise any concerns about the environmental impact analysis. The EIR contains an adequate description of the environmental setting for purposes of seismic risk, and the additional data requested in the comment is not necessary to the evaluation of project impacts for CEQA purposes. Please see response to comment 364-24 for a discussion of seismic hazards presented in Chapter 10, Geology and Seismicity. The data used to create the figure titled Active Faults and Historical Seismicity of the Bay and Delta Region, 1800–2021 (see source box on figure) are available in the project's administrative record and are not required to be included in the EIR. The word "all" has been removed from the description of the figure titled Active Faults and Historical Seismicity of the Bay and Delta Region, 1800–2021, in Chapter 39, Text Descriptions of Figures.
389-1	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 1. The range of project alternatives is narrow.	This letter summarizes comments made by the Delta Independent Science Board which are found in letter 534. Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate DWR responses to the letter 534, and contained in Volume 2, Chapter 4, Response to Comments Tables.
389-2	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 2. The presentation of analytic results obscures relevant effects, including project benefits and risks.	Please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-3	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are:	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the planning scope of the EIR and DWR's commitment to effective mitigation.

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	3. The optimistic assumptions about mitigation and lack of representation of short-term impacts is misleading.	Please also refer to Chapter 4, Framework for the Environmental Analysis, for a description of the analysis of project effects which includes potential temporary and permanent impacts that could be associated with construction, operation, and maintenance of the project as well as how impacts were considered to ensure that the whole impact is disclosed. In addition, please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-4	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 4. Future conditions are evaluated inadequately and inconsistently.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the appropriate use of the baseline for the purposes of the CEQA analysis. 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 by the year 2040, when the project would be operational. Please also refer to Chapter 4 for a list of additional analyses of potential future conditions that consider conditions at the year 2070 and 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 might operate in the future. In addition, please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.

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389-5	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 5. The adaptive management planning is inadequate.	As described in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, the Delta Conveyance Project has been developed and analyzed to minimize uncertainty using best available science, including incorporation of adaptive management. The purpose of adaptive management is to further account for uncertainties associated with major Project actions, such as the north Delta diversions and CMP habitat restoration. Please see section in Chapter 3, Description of the Proposed Project and Alternatives, titled Adaptive Management and Monitoring Program for further description of the Delta Conveyance Project's adaptive management process and for a discussion of the project's consistency with the Delta Plan, including use of science-based, transparent, and formal adaptive management strategies. Note that CEQA does not mandate that the monitoring program incorporate adaptive management. It is also important to note that applicable impacts identified in the EIR are reduced to less than significant without incorporation of adaptive management. 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 adaptive management included in the CMP, which addresses uncertainty related to habitat restoration. In addition, please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-6	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are:	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding use of the baseline for the CEQA analysis and cumulative impact assessments.

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	6. Systemic (across the ecosystem), additive (across impact types and space) and cumulative (across years) analyses of impacts, benefits and trade-offs are missing.	In addition, please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-7	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 7. Uncertainty and risk need to be explicitly evaluated to understand the reliability of findings.	Please see Chapter 4, Framework for the Environmental Analysis, regarding the analysis of project effects. Each of the resource chapters (Chapters 5 through 32) discusses risks and reliability of the analysis in the methods for analysis section. In addition, please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-8	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 8. Other important issues exist.	Please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-9	I would like to highlight the Major Review Comments of the Delta Independent Science Board, and independent peer review, which are: 9. The presentation of alternative performances and trade-offs needs improvement.	Please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-10	Because I believe a panel of independent scientific experts is the most qualified to objectively review the Proposed Delta Conveyance Project / Delta tunnel DEIR, as a scientist myself, I will adopt and submit their recommendations as my comments on the proposed project.	Please see response to comment 389-1 regarding the location of responses to comments from the Delta Independent Science Board in Volume 2, Chapter 4 of the EIR.
389-11	Also, to their comments I would the add the enormous cost of the project - perhaps up to $40 Billion or more - and effects on residents of the Delta area and possible environmental justice issues as significant project impacts that demand careful	Chapters 7-32 of the EIR contain analysis of environmental impacts and proposed mitigation measures on multiple environmental resources. Where the resource chapters identify significant impacts before mitigation or significant and unavoidable impacts with or without mitigation, the

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	analysis in the DEIR.	potential effect on environmental justice is analyzed in Chapter 29, Environmental Justice, in the section titled Analysis of Disproportionately High and Adverse Effects. Mitigation measures or environmental commitments implemented to reduce significant impacts identified in the resource chapters would not result in disproportionately adverse effects on environmental justice. Please see Common Response 7, Implementation Considerations, regarding comments related to project costs. Please also see Appendix 3G, Community Benefits Program Framework, for a description of how the Community Benefits Program would include the Delta Community Fund and Economic Development and Integrated Benefits to address local effects that may occur, beyond the mitigation requirements of CEQA.
389-12	I would like to request that the California Department of Water Resources keep me up-to date as the DEIR/EIR analysis progresses.	The contact information provided by the commenter has been added to the project email list as requested.
394-1	The League of Women Voters of California appreciates the opportunity to comment on the current plan for Delta water conveyance. The League [The League of Women Voters] has long-standing policies supporting reduced reliance on water exported through and around the Sacramento-San Joaquin Delta in favor of local reuse, wastewater recycling, and stormwater capture. In the Delta Reform Act of 2009, the California Legislature declared its intent to achieve two coequal goals for the Delta: providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem, which goals include reducing reliance on the Delta in meeting California's future water requirements. [Footnote 1: Cal. Water Code §§ 85054, 85021.]	This information describes the structure or organization of the comment letter and the background of the organization. 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.

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394-2	However, it is clear from the DEIR that protection of—and even increase in— water project deliveries is the overriding objective of this plan. [Footnote 2: Delta Conveyance Project Draft EIR, Table 6-0, p. 6-3; Table ES-4, p. ES-51.]	Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose of the project. As stated in this chapter, one of the project objectives is identified as: "To protect the ability of the SWP, and potentially the CVP, to deliver water when hydrologic conditions result in the availability of sufficient amounts of water, 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." The comment's suggestion that the project is not consistent with the Delta Reform Act is not a comment on the EIR, and DWR disagrees with the suggestion.
394-3	Furthermore, the plan pursues consistency with the state's Water Resilience Portfolio, an administrative document not subject to legislative input or review and hence not responsive to decisive public input, which the League strongly supports.	Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the relationship between the Delta Conveyance Project and the California Water Resilience Portfolio.
394-4	The State Water Project and federal Central Valley Project were developed and hold water rights based on precipitation conditions in the 20th century, which we now know were atypical in terms of 21st century surface water availability. [Footnote 3: https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=13274] In Sustainable Water and Environmental Management in the California Bay-Delta, the National Research Council of the National Academies has said that "The assumption that past climate is a reasonable approximation of the future is no longer valid…." [Footnote 4: https://nap.nationalacademies.org/read/13394/chapter/4#38] This document makes it clear that the objective now should be to manage water scarcity. Development of water infrastructure should follow, not precede, review of longstanding water project rights by the	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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. As described in Chapter 1, Introduction, in the section titled Change in Point of Diversion, prior to constructing the project, DWR must file a petition with the State Water Board and receive State Water Board approval to add to the points of diversion in the relevant water right (California Water Code § 85088.). Please refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the State Water Resources Control Board's authorities and planning efforts,

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	State Water Resources Control Board, making this project's consideration premature. The Water Board itself concluded in 2009, that "[t]he best available science suggests that current flows are insufficient to protect public trust resources." [Footnote 5: https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf] That conclusion represented flows under pre-drought conditions. We now face a warmer, drier climate, with an associated demand for more sustainable uses of our limited water supply.	particularly with respect to the change in the point of diversion process and how it is separate from the CEQA process and DWR's decision to approve the project and certify the EIR. As described in Chapter 5, Surface Water, dry and drought-year conditions are incorporated into the hydrologic modeling used in the EIR analysis. Please refer to Common Response 9, Hydrological Modeling and Approach, regarding the appropriate use of modeling tools for the CEQA analysis.
394-5	The League [The League of Women Voters] has supported Water Board efforts to complete the Bay-Delta Plan to establish water quality control measures and flow requirements needed to provide reasonable protection of beneficial uses in the Delta and the Estuary. Given the National Research Council's finding that in some basins, including those of the Bay-Delta, available supply is overallocated by more than 800 percent (measuring supply as average annual runoff) [Footnote 6: https://nap.nationalacademies.org/read/13394/chapter/4#40 (p. 40)], it is alarming that all of the alternatives in the DEIR increase water exports from the Delta.	Please see response to comment 394-4 regarding information on water supply and on the project's purpose and objectives. Please also refer to Common Response 3, Alternatives Development and Description, regarding alternatives suggesting demand management and reducing or eliminating exports.
394-6	The League of Women Voters of California looks forward to the day when the Department of Water Resources commits to protecting the Delta and the Bay-Delta Estuary by developing sustainable, regional projects that recognize the actual amount and timing of water available for all public uses.	This information is a general conclusion. See responses to comments 394-1 through 394-5. DWR has reviewed all comments and will consider all comments in its decision-making process.
401-1	On behalf of Barbara Barrigan-Parrilla, executive director of Restore the Delta, we submit our comments on the Delta Conveyance Project Draft Environmental Impact Report. They are attached to this email in two PDF files, one containing our general and specific comments, the other containing	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. All comments are included in the

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	supporting attachments. Together, the two files represent the full corpus of our organization's comments to the California Department of Water Resources on this matter. Our comments also incorporate by reference the comments of the Shingle Springs Band of Miwok Indians, the group letter led by the Natural Resources Defense Council, the group letter led by Central Valley Air Quality, and the group letter led by Sierra Club California, once these are all submitted. We would appreciate a prompt reply to this email indicating formally that the Department has received our email and attached comments for the record.	administrative record. 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. Confirmation emails were sent automatically to all senders on receipt of emailed comments during the public review period for the Delta Conveyance Project Draft EIR.
401-2	This letter originates from lands of the Lisjan Ohlones in the East Bay, of Yokut lands in the Stockton area, and Miwok lands of the Delta further north. These lands represent the great connections of the San Francisco Bay with the Delta estuary. Restore the Delta (RTD) is a grassroots campaign of residents and organizations committed to restoring the Sacramento-San Joaquin Delta so that fisheries, communities, and family farming can thrive there together again; so that water quality is protected for all communities, particularly environmental justice communities; and so that Delta environmental justice communities are protected from flood and drought impacts resulting from climate change while gaining improved public access to clean waterways. Ultimately our goal is to connect communities to our area rivers and to empower communities to become the guardians of the estuary through participation in government planning and waterway monitoring. RTD advocates for local Delta stakeholders to ensure that they have a direct impact on water management decisions affecting the	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 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.

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	well-being of their communities, and water sustainability policies for all Californians. We summarize our general comments in this cover letter. Our detailed specific comments on this Tunnel DEIR chapters and related appendices in Attachment 1 of our letter. We include other attachments as needed to support Attachment 1, and these additional attachments are listed after our signatures to this cover letter. Our letter also incorporates by reference the comments of the Shingle Springs Band of Miwok Indians, the group letter led by Natural Resources Defense Council, the group letter led by Central Valley Air Quality, and the group letter led by Sierra Club California.	
401-3	RTD [Restore the Delta] has reviewed many sections of the Tunnel DEIR on the Delta Conveyance Project (Tunnel Project). We conclude that its hydrologic and operational modeling efforts proceed from premises that are far less certain in reality than DWR appears to believe.	Please see Common Response 9, Hydrologic Modeling and Approach, regarding the model used to represent operations of the alternatives, development of the hydrologic model, and consideration of uncertainty.
401-4	The Tunnel DEIR also minimizes and marginalizes Delta environmental justice communities, and uses unbalanced methods to obscure and erase the likelihood of Tunnel Project effects on these communities.	DWR has been proactive in identifying and disclosing potential effects on environmental justice communities. Although an environmental justice analysis is not a requirement of CEQA, the EIR uses NEPA methodology to consider impacts of the proposed project and its alternatives on environmental justice (minority and low-income) communities, which addresses State directives on environmental justice. Per this methodology, the study area for the environmental justice analysis consists of the census tracts and block groups intersected by the footprint of the project and assesses impacts associated with resource topics that were analyzed on a broader or regional scale (e.g., air quality) that may extend beyond the environmental justice study area. Please refer to the Chapter 29, Environmental Justice, section titled Methods for Analysis, for a description

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		of the methods used to conduct the environmental justice analysis. DWR has worked diligently to address Delta residents' concerns about environmental and community effects of the project and acknowledges that even extraordinary levels of outreach and engagement will not necessarily result in agreement about the project or in all concerns being assuaged. People working in good faith will nonetheless continue to disagree. The effort to hear and understand and engage with environmental justice communities and community members was attentive to and conscientious of best practices as recommended by numerous recognized state experts.
401-5	The fact there is yet another Delta conveyance project (the previous one being "California WaterFix") for the public to evaluate (and likely reject) is evidence of a continuing failure of state and federal water policy to address expected and unfolding effects of climate change on the San Francisco Bay-Delta Estuary and its greater watershed. The existence of this Tunnel DEIR is itself a marker of continuing, if more subtle, climate denialism by the California Department of Water Resources. The Tunnel Project will not save the Delta, and it probably will not save the State Water Project's and Central Valley Project's reliance on Delta exports either.	Please refer to Common Response 6, Climate Resilience and Adaptation, regarding how the project would improve water supply reliability in the face of changing precipitation and runoff conditions. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, and Chapter 2, Purpose and Project Objectives, regarding the project purpose and objectives. Please also see Common Response 1 regarding comments that state opinions of general opposition to the project.
401-6	The very definition of the Delta's role as an estuary is being disrupted by climate change now. Climate change undermines the engineered role the Delta plays in redistributing California's water from north to south. Tides threaten to gain the upper hand on both the estuary and the Delta common pool from which millions of people draw fresh water for drinking and irrigating. The proposed Tunnel Project is seen by the State of California as THE engineering solution to this problem. But the problem of salinity management is not so susceptible of simplistic engineering solutions like the Tunnel Project.	As described in the EIR, climate change is expected to change precipitation and runoff patterns in the future. Please refer to Common Response 6, Climate Resilience and Adaptation, regarding how the proposed project would improve water supply reliability in the face of changing precipitation and runoff conditions. 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

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		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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please also refer to Chapter 2, Purpose and Project Objectives, and Common Response 1 regarding the project purpose and objectives. As described in Chapter 1, the Delta Conveyance Project is one of many solutions in the Water Resiliency Portfolio aimed and addressing California's water management challenges.
401-7	A stated purpose of the Tunnel Project is to invest billions of dollars to maintain a status quo ante of water deliveries from the State Water Project. It does little to address climate adaptation in the Delta and fails to preserve through-Delta conveyance which both systems will continue needing if they are to operate as they do at present. It has never been less certain that a tunnel project is a good idea any longer. The rest of our comments will make a case for why this is so. The other Delta Tunnel objectives are contrived selling points to augment this fundamental purpose.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project, as well as a description of the project objectives. Please see Common Response 6, Climate Resilience and Adaptation, regarding adaptation to climate change and climate analyses within the EIR. 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.
401-8	Along with the present threat of losing salinity control, many other climate extremes, emergencies, and tipping points are increasingly coming into focus. And while RTD [Restore the Delta] would never accuse DWR and the Bureau of ignoring or denying climate change, these two major governmental water agencies are nonetheless derelict in responding to it. DWR in particular is hide-bound in its loyalty to a Delta conveyance approach eclipsed by the emerging and growing effects of extreme heat and extreme storms.	DWR engages in the climate change space in numerous ways, including the implementation of the Department's Climate Change Program as well as the Climate Action Plan. Please see Common Response 6, Climate Resilience and Adaptation, regarding adaptation to climate change and climate analyses within the EIR. As described in Chapter 4, Framework for the Environmental Analysis, the Bureau of Reclamation is not part of the project. 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.

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401-9	A huge failure of imagination by DWR is on display in this DEIR. Each of its alternatives is vulnerable to the slings and arrows of expected climate change effects, which we will go into further below when commenting on project modeling methods and results. But what we see displayed in the Tunnel DEIR is a complete failure of state water officials to imagine alternative approaches these last few years since the demise of California WaterFix in early 2019. Instead, DWR has focused narrowly on preserving a system whose mode of obtaining and distributing water supplies may already be beyond preservation and protection by the time it is completed.	The analysis presented In the EIR does not support the assertion that the chosen project alternatives fail to address the effects of climate change. The proposed new diversion and conveyance facilities would improve SWP water supply resilience by providing upstream intake facilities less affected and influenced by downstream Delta salinity and tidal conditions. Chapter 2, Purpose and Project Objectives, identifies the objectives of the Delta Conveyance Project, one of which is to help address the "reasonably foreseeable consequences of climate change and extreme weather events." Please refer to Chapter 3, Description of the Proposed Project and Alternatives, regarding design assumptions for climate change and sea level rise. Chapter 30, Climate Change, is devoted entirely to the topic of climate change. Please also see Common Response 6, Climate Resilience and Adaptation, regarding protecting the State Water Project from sea level rise. Furthermore, Appendix 4A, Consideration of 2070 Conditions, discusses operation of the project under climate change in 2070. Please see Common Response 3, Alternatives Development and Description, regarding the adequacy of the range of project alternatives chosen for the CEQA analysis. The alternatives screening analysis discussed in Appendix 3A, Identification of Water Conveyance Alternatives, identifies the alternatives that were evaluated in the EIR, including the ability of alternatives to meet project objectives including resilience to climate change. This alternatives screening analysis considers a wide variety of alternatives to the proposed project and describes why certain alternatives were not analyzed further in the EIR. The first-level screening of this evaluation removed alternatives that did not address the reasonably foreseeable consequences of climate change and other project objectives.
401-10	In general, DWR's approach to climate change is to take the likelihood of extreme storms and the supplies that could be skimmed from their runoff, while discounting other major climate change effects. It is unrealistic and unwise, however, to pick and choose which climate change effects to analyze when	While an analysis of climate change impacts on the project and environmental resources is not required by CEQA, DWR has exceeded CEQA requirements by evaluating climate change impacts in multiple locations in the EIR using different climate change scenarios.

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	striving to comply with full disclosure laws like CEQA. Reality will bring them all at varying times and intensities.	Please refer to Common Response 6, Climate Resilience and Adaptation, and Chapter 30, Climate Change, regarding observed trends and projected impacts of climate change on the study area. Chapter 30 presents the latest climate change science and discusses the impacts of the project alternatives and climate change. Appendix 5A, Modeling Technical Appendix, describes how climate change was modeled for the project. Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections, summarizes results under additional 2040 climate scenarios to understand anticipated changes in variables relevant to project operations under a broader range of climate scenarios. The project alternatives are evaluated using a projection of future climate that includes changes in temperature, precipitation and hydrology, and sea level rise. For example, Appendix 12C, Fish and Aquatic Resources 2040 Analysis, and Appendix 13F, Terrestrial Biological Resources 2040 Analysis, evaluate whether any of the impact conclusions documented in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources, respectively, would change under future conditions when considering changes to hydrology and sea level rise as a result of climate change.
401-11	DWR's climate change rationales and modeling of the future for the Delta Tunnel Project is wholly inadequate because they ignore the panoply of extreme heat, expanding hot seasons, and assume current sea level rise projections remain reasonable in light of new scientific information about tipping point elements that we summarize in this comment letter.	Please see Common Response 6, Climate Resilience and Adaptation, regarding acknowledgment of the need to adapt to future changes in temperature and precipitation, as suggested by the comment, which references more extreme, sustained drought conditions and fewer but more extreme precipitation events, extreme heat, and sea level rise. As noted in Common Response 6, the climate change scenarios used in the EIR do account for the issues raised by the comment (e.g., temperature, sea-level rise). Chapter 30, Climate Change, includes multiple references and discussions about expected outcomes under climate change (e.g., see the table titled Climate Change Projections for the Study Area).

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		Sea level rise projections referenced in Chapter 30 are those developed for the State of California Sea-Level Rise Guidance: 2018 Update (California Natural Resources Agency and Ocean Protection Council 2018). Projections provided are for the H++ scenario, a single scenario for extreme sea level rise, not a probabilistic projection; it does not have an associated likelihood of occurrence but is recommended for consideration in significant, long-term decisions. Please see Chapter 3, Description of the Proposed Project and Alternatives, for discussion of the conservative sea level rise assumptions used in modeling for project design. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the hydrological model, best available tools, and uncertainty.
401-12	This Tunnel DEIR was out of date for climate change science when it was released this July. The Tunnel Project is out of step with looming realities of climate change and should be discontinued immediately so that other climate mitigation, adaptation, and resilience investments may be planned and implemented sooner than later.	The analysis and information contained within the EIR regarding the use of best available science and evaluating reasonable expected climate change scenarios do not support the assertions made in the comment. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available science in the EIR at the time of preparation of the EIR. Please see Appendix 5A, Modeling Technical Appendix, Section F, Sea Level Rise and Delta Water Quality Modeling, which describes the assumptions and methods used to model climate change. The project's adaptation and resilience to climate change are discussed in both Chapter 30, Climate Change, and Common Response 6, Climate Resilience and Adaptation. Please see response to comment 401-10 regarding how DWR has exceeded CEQA requirements for analysis of climate change and how Chapter 30 presents the latest climate change science and discusses the impacts of the project alternatives and climate change.

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401-13	We are deeply disappointed that DWR ignored its Your Delta, Your Voice Survey as a basis for informing how and what kind of environmental, environmental justice, and community impacts the Delta Tunnel Project would impose on the Delta EJ community both of the direct Legal Delta and of the Delta Region as a whole.	The Your Delta, Your Voice survey conducted by DWR gathered insights of the priorities, preferences, activities, and concerns of the environmental justice communities who live or work in the Delta region. The Delta region was defined in the survey as slightly larger than the legal Delta, and people across the socioeconomic spectrum and from areas throughout the state responded. Findings from the survey illuminated a sample of the priorities and concerns of a subset of the Delta environmental justice community that helped inform the environmental justice analysis in the EIR (Chapter 29, Environmental Justice). Please refer to response to comment 401-4, which describes the study area for the environmental justice analysis. The environmental justice analysis also identifies and provides discussion of minority populations and low-income populations in the SWP export service areas.
401-14	It is plainly obvious that 1) the Legal Delta as well as the Delta Region are bona fide environmental justice communities, with relatively small proportions of white and wealthy populations;	Please refer to response to comment 401-4, which describes the study area for the environmental justice analysis. The environmental justice analysis of the EIR (Chapter 29, Environmental Justice) identifies minority communities and low-income communities from census tracts and block groups intersected by the footprint of the project. The environmental justice analysis also identifies minority populations and low-income populations in the SWP export service areas. Overall, the analysis identified that the population in the study area was 61% minority and that 31.8% of households were considered low income.
401-15	2) Delta residents AND Delta region community members rely substantially on the Delta directly, and the north Delta in particular, for subsistence fishing, and it is thus an environmental impact to have both fishing spots taken away from anglers and fish removed from the vicinity for North Delta Intakes construction activities;	Impacts associated with loss of fishing access are identified in Chapter 29, Environmental Justice, specifically under the section titled Fish and Aquatic Resources, and in Chapter 17, Socioeconomics, specifically under ECON-5. These sections explain that although construction of one or more intakes on the Sacramento River would obstruct access to fishing spots along the east riverbank at intake locations, there is ample access to the river for bank fishing from numerous other locations. Further, as stated in Chapter 16, Recreation, under Impact REC-1, no documentation was found that indicated these areas receive much use, if any. These areas represent a very small amount of shoreline compared to the many miles of shoreline

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		accessible by adjoining roads; and anglers would still have abundant choices for accessing desired locations for shoreline fishing in and around the intake locations without these areas.
401-16	3) in the operational phase, lost flows in the Delta will increase salinity in the Delta as it reduces flows in north and central Delta channels, and thereby contributing to the spread of harmful algal blooms which will disproportionately injure Delta people who rely on fishing and broad outdoor activities to enjoy the Delta. In sum, the Delta Tunnel Project will harm such beneficial users of water as fish, outdoor water-contact recreation, and environmental justice communities.	Delta water quality is complex and potential changes depend on multiple factors, not only flow. This complexity is why DWR uses models to estimate and understand the potential changes to water quality in the Delta. As described in Chapter 9, Water Quality, specifically under Impact WQ-14, operation of the project under the project alternatives would not affect Delta water temperatures, nutrients, or water clarity at levels that would substantially affect, or affect at all, cyanobacteria harmful algal blooms (CHABs) frequency or magnitude in the Delta. Given that the analysis on CHABs results in a less-than-significant impact conclusion, the analysis in Chapter 12, Fish and Aquatic Resources, concluded that CHABs would not significantly affect fish species in the Delta or Sacramento River. For the same reason, an analysis of project impacts associated with CHABs was not carried forward for detailed analysis in the environmental justice impact assessment because a less-than-significant impact would not affect minority or low-income populations more than the general population and therefore is not considered an adverse effect on environmental justice populations. Additionally, Chapter 9, Impact WQ-5, evaluates effects of electrical conductivity (which is a measure of salinity) resulting from facility operations and maintenance, which were determined to be less than significant. As described in Chapter 3, Description of the Proposed Project and Alternatives, the project would be operated to meet water quality regulations.
401-17	Thank you for considering our comments on this Tunnel DEIR.	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.

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401-18	Attachments: 1. RTD's Specific Comments on the Delta Conveyance Project Tunnel DEIR 2. Table of North Delta Intakes Usage Frequency 3. Commenting on a State Water Resources Control Board staff report about Climate Change and Water Rights in March 2021 4. RTD Protest Letter of June 4, 2021 to State Water Resources Control Board concerning DWR and Bureau Temporary Urgency Change Petition 5. RTD Protest Letter of April 6, 2022 to State Water Resources Control Board concerning DWR and Bureau Temporary Urgency Change Petition 6. RTD Comment Letter of July 18, 2022 to U.S. Army Corps of Engineers concerning North Delta Barriers notice of DWR barriers proposed for Steamboat and Miner Sloughs 7. RTD Comment Letter of August 22, 2022 to DWR concerning West False River Drought Salinity Barrier Draft Environmental Impact Report 8. Extreme Heat Index Days for Sacramento Valley, Delta, and San Joaquin Valley Counties during 21st Century 9. Delta Flows Upstream and Downstream of North Delta Intakes 10. Early September 2022 Sacramento River Flow and Salinity Conditions at Isleton with West False River Barrier in Place 11. Comparison of Monthly Average Sacramento River near Freeport Flows in Appendix 4B and Appendix 5A 12. Visual Land Use Projections by United States Geological Survey, 2010-2100 by Western Geographical Science Center 13. List of Restore the Delta Commenters cc: E. Joaquin Esquivel, Chair, State Water Resources Control Board Dorene D'Adamo, Vice-Chair, State Water Resources Control	This information describes the structure or organization 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.

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	Board Nichole Morgan, Member, State Water Resources Control Board Sean Maguire, Member, State Water Resources Control Board Laurel Firestone, Member, State Water Resources Control Board Michael George, Delta Watermaster Dillon Delvo, Little Manila Rising Matt Holmes, Little Manila Rising Irene Calimlim, Greenlining the Hood Jasmine Leek, Third City Coalition Tama Brisbane, With Our Words, Inc. Regina Chichizola, Save Our Salmon Kasil Willie, Save Our Salmon Chief Caleen Sisk, Winnemem Wintu Tribe Gary Mulcahy, Government Liaison, Winnemem Wintu Tribe Malissa Tayaba, Shingle Springs Band of Miwok Indians Krystal Moreno, Shingle Springs Band of Miwok Indians James Sarmento, Shingle Springs Band of Miwok Indians Doug Obegi, Natural Resources Defense Council Kate Poole, Natural Resources Defense Council Brandon Dawson, Sierra Club California Jonathan Rosenfield, San Francisco BayKeeper Harry Black, City Manager, City of Stockton Melinda Terry, North Delta Water Agency Dante Nomellini, Central Delta Water Agency John Herrick, South Delta Water Agency Thomas Keeling, Freeman Firm Stephen J. Welch, General Manager, Contra Costa Water District Kelley Taber, Somach Simmons & Dunn Osha Meserve, Soluri Meserve	

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	Stephanie Safdi, Stanford Mills Environmental Law Clinic Deborah Sivas, Stanford Mills Environmental Law Clinic	
401-19	Attachment 1 RTD's Specific Comments on the Delta Conveyance Tunnel DEIR	The commenter provided this attachment for reference purposes in support of their comments. These comments are addressed in responses to comments 401-20 through 401-136.
401-20	[Att 1:] Executive Summary Reviewing the Executive Summary, we count 17 significant and unavoidable impacts of the proposed Tunnel project on the environment. [Footnote 1: In all, there are 71 potentially significant impacts identified in the Executive Summary of the Delta Conveyance Project Draft EIR applies mitigations to render them less-than-significant. The SU (significant and unavoidable) impacts we count in the Executive Summary include: AG-1 and -2; AES-1 through -3; CUL-1 through -5; TRANS-1, AQ-5 and -6; NOI-1; Paleo-2; and TCR-1 and -2.] Among these impacts will be loss of prime agricultural farmland, loss of local non-tribal cultural resources, transportation and air quality impacts, and painful loss of tribal cultural resources. There are other impacts omitted, belittled, or greenwashed by the Tunnel DEIR. The California Department of Water Resources (DWR) [Footnote 2: We write "DWR" here, but as it concerns construction and buildout matters, we really mean DWR, the Delta Conveyance Design and Construction Authority (DCDCA), the State Water Contractors, the general construction contractor and all subcontractors hired by each of these agencies to construct Tunnel project facilities and systems. On these matters, "DWR" is shorthand for these entities as well in this letter.]) appears to us to claim reliance	The Delta Conveyance Project EIR has been prepared in compliance with CEQA requirements related to the disclosure of impacts on the environmental resources raised by the comment, which are summarized in the Executive Summary table titled Summary of Delta Conveyance Project Impacts and Mitigation Measures. The EIR includes mitigation measures, environmental commitments, best management practices, and a compensatory management plan to reduce potentially significant impacts and result in fewer significant and unavoidable impacts. Please refer to Common Response 1, CEQA Progress, General Approach to Analysis, and Other Environmental Review Issues, regarding the assessment of significant impacts, including cumulative impacts and significant and unavoidable impacts, and the approval of projects with significant unavoidable impacts. Please refer to Appendix 3B, Environmental Commitments and Best Management Practices, which describes environmental commitments and best management practices and the use of management plans based on best scientific data to minimize and reduce impacts. DWR is not relying on habitat restoration by others to meet the mitigation needs of the Delta Conveyance Project. DWR has committed to fully meet the mitigation needs for aquatic resources and sensitive species habitat in accordance with permits received through the actions outlined in Appendix 3F,Compensatory Mitigation Plan for Special-Status Species and Aquatic Resources, including restoration at initial mitigation sites, restoration of tidal and channel margin habitat, credits from approved mitigation banks, and other land protection instruments.

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	on mitigations that are provided by other entities doing restoration or other work in the Delta region that will essentially be public subsidies to the project and its beneficiaries, state and federal water contractors. The tally of significant and unavoidable environmental impacts of the proposed project would be even greater were it not for inclusion by DWR of environmental commitments, actual CEQA-compliant mitigation measures, a compensatory mitigation plan, and a community benefits program for the project.	Additionally, as described in Appendix 3G, Community Benefits Program Framework, the Community Benefits Program is not mitigation for project impacts under CEQA but seeks to address community concerns and impacts beyond what CEQA requires.
401-21	[Att 1:] 1) "Environmental Commitments and Best Management Practices" - DWR uses a large number of these "ECs" and "BMPs" to build into the project description actions that will mitigate project construction period effects. These are used especially to address construction-related impacts of trucks, engine and equipment emissions, dust, alteration of channel beds and other habitat, among many others. These are listed in Appendix 3B, which supports Chapter 3 about the project description, pages 3B-1 and -2 and Table 3B-1. Generally, ECs/BMPs are actions that do not exceed what normal local permit conditions would require of private sector developers altering the environment on the scale DWR proposes doing. These are stated as "commitments" because DWR is an agency of the State of California, and the state of California is legally exempt (i.e., immune) from local regulations (much like the University of California is exempt from local ordinances, but may choose to abide by them for the sake of community harmony between town and gown). By proposing ECs and BMPs DWR seeks recognition as a good	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, and reporting requirements. Consistent with State contracting requirements, DWR would make a concerted effort to hire certified Small Business/Disadvantaged Business Enterprises contractors as part of the implementation of the project.

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	corporate citizen by claiming these ECs and BMPs will be part and parcel of the Tunnel's project description. The challenge lies in how to enforce the ECs and BMPs DWR says it is committing to, to avoid having them become window-dressing and greenwashing. We insist that ECs and BMPs be incorporated into the Mitigation Monitoring Program Plan required as part of the process of certifying the Final EIR on the project and final project approval by DWR. We are concerned with how and whether they will be monitored and enforced and by whom. By insisting they be folded into the Mitigation Monitoring Program Plan, they would be visible to someone with authority and expertise to implement and enforce them and should be transferred into contract terms with contractors doing the work. Enforcement of the Ecs and BMPs must also be built into the contracting structure used to carry out project construction so that from the general contractor all the way to various on-the-ground electrical, mechanical, construction, and structural contractors these commitments and practices are adhered to, while originating from the Mitigation Monitoring Program. Among other best practices followed should be commitments by DWR to adhere to DWR minority- and women-owned business enterprise contracting policies.	
401-22	[Att 1:] 2) Mitigation Measures--These are actions required under CEQA that could reduce potentially significant environmental effects to the point where they are no longer significant or are avoided altogether. As mentioned, part of formal mitigation under CEQA and final project approval, DWR will be required to prepare a mitigation monitoring plan (MMP) prior to project approval that specifies what is to be done, how, by whom, and when it is to be completed. The project cannot be approved without an MMP.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the requirements of mitigation measures which DWR will satisfy and will be ensured through the preparation of the Mitigation Monitoring and Reporting Program (MMRP) that will specify the implementation requirements.

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401-23	[Att 1:] 3) Compensatory Mitigation Plan - This "CMP" is proposed primarily for the Tunnel's otherwise significant and unavoidable impacts on aquatic and terrestrial species and ecosystems in the Delta, which will be legion. This plan focuses on habitat restoration work to create wetland and other freshwater habitat in the Delta to make up (that is "compensate") for losses of habitat due to tunnel construction elements - roads, shafts, new levees, damage internal to channels during the construction period from coffer dams, noise, and other environmental disturbances that will destroy and otherwise reduce habitat for or cause take of special status and listed species. Among the questions about the CMP will be whether DWR is providing enough mitigating habitat on its own, or whether it is justifiable that DWR can point to other restoration projects under way, required by other habitat conservation plans or other initiatives from other entities. [Footnote 3: That is, will DWR fully compensate with restorative mitigations in lieu of the impacts to ecosystem values the Delta Tunnel Project will cause? Or will DWR prefer to claim benefits of restorative actions for which other entities are responsible?] RTD's [Restore the Delta's] view is that to rely on others' good works defeats the point of project proponents' accepting responsibility and being accountable for mitigating impacts they cause with their projects.	DWR has committed to fully meet the mitigation needs for aquatic resources and sensitive species habitat in accordance with permits received through the actions outlined in the Compensatory Mitigation Plan (CMP), including restoration at initial mitigation sites, restoration of tidal and channel margin habitat, credits from approved mitigation banks, and other land protection instruments. DWR is not relying on habitat restoration by others to meet the mitigation needs of the Delta Conveyance Project. Regarding the comment about whether DWR will provide enough mitigating habitat, Chapter 1, Introduction, describes the relevant federal and state laws and regulations protecting biological resources, as well as the review, approval, and consultation requirements that DWR will be required to comply with and may be necessary to implement the project. The project does not alter these protections for any species or habitat. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding Endangered Species Act permitting and consultation requirements.
401-24	[Att 1:] Given this overall framework of mitigation approaches in the DEIR, RTD [Restore the Delta] went through the Executive Summary and identified impacts that were considered significant before mitigation and then less than significant after DWR applied "MM CMP: Compensatory Mitigation Plan" to them, as though CMP was a wild card in rummy or a "get out of jail free" card.	The commenter notes the number of impacts that are mitigated by the CMP and expresses an opinion about the CMP but provides no detail on the nature and basis of this opinion and refers to comments submitted by another group (Natural Resources Defense Council). Please refer to Volume 2, Chapter 2, Indices of Commenters and Index of Primary Forms, to locate DWR responses to the letter referenced by the comment, and contained in Volume 2, Chapter 4, Response to Comments Tables. Please refer to

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	There are 55 such impacts (which do not overlap with significant and unavoidable [SU] impacts) identified in the Executive Summary that are considered significant and then have "MM CMP: Compensatory Mitigation Plan" listed among the mitigations (or as the sole mitigation) and comes out the other side with the impact after mitigation being LTS or "less than significant." [Footnote 4: Less-than-significant impacts in the Tunnel DEIR that are claimed as mitigated by the Compensatory Mitigation Plan (CMP) include: AQUA-1 and -2; AQUA-5 through -7; Bio-1 through -5; Bio 7 through 14; Bio-16; Bio-18; Bio-20 through -48; Bio-51; Bio-53 through -56; and AQ-10 - a total of 55 CMP impacts.] There are eight impacts where the CMP is the sole mitigation. Seven (7) are for biological resources; only one is for an impact of some other kind: AQ-10, which applies to non-Alternative 5 alternatives. Given that the CMP applies primarily to Bouldin Island and adjacent sites along State Route 12 toward Interstate 5, we regard the CMP with skepticism, but acknowledge that further analysis of this is beyond the scope of our capacity to comment. Please refer to the group letter led by Natural Resources Defense Council for more detailed analysis.	Common Response 11, Terrestrial Biological Resources and Compensatory Mitigation Plan, in the section titled Adequacy of Analysis and Mitigation Measures, regarding the EIR's use of all five of the CEQA Guidelines mitigation approaches (including compensatory mitigation) to reduce impacts to less-than-significant levels.
401-25	[Att 1:] 4) Community Benefits Program-This portion of the Tunnel DEIR is arguably the most slippery part of this project description. It would have two principal features: 1) a Delta Community Fund; and 2) "Economic Development and Integrated Benefits." DWR describes the CBP in two places—Chapter 34 and Appendix 3G, but RTD views the CBP as an	The comment assertions that the Delta Conveyance Project would reduce Sacramento River flows such that salinity in the Delta would increase is not supported by the analysis provided in the EIR, specifically Chapter 5, Surface Water, Chapter 6, Water Supply, and Chapter 9, Water Quality. Impact WQ-5 in Chapter 9 specifically evaluates effects of electrical conductivity (which is a measure of salinity) resulting from facility operations and maintenance, which were determined to be less than significant. Additionally, as described in Chapter 3, Description of the

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	essential part of the project description, not an afterthought. The CBP "is a set of commitments made by project proponents and created in coordination with the local community to address local effects that may occur from large infrastructure projects. These commitments are usually made separate from, and in addition to, permit conditions or environmental mitigation required through CEQA or other environmental regulatory compliance processes" whose scope does not reach to the level of the local economy's status with respect to project impacts. The Tunnel Project has region-scale impacts on the Delta, should it be built. The Tunnel DEIR acknowledges that a major operational impact will be reducing Sacramento River flows (and hence flows to its distributaries in north and central Delta channels) and reducing the estuary's ability to repel tidal salt waters which are ever-present (see Attachment 9 to this letter). Such operational impacts will have economic and ecological impact on the Delta region, and a Community Benefits Program must be developed to mitigate the economic and ecological effects of Tunnel operations on Delta communities, especially environmental justice communities. One challenge for the Delta community with this type of mitigation approach will be whether the diverse class, race, and gender segments of the community can come together to craft what it wants to see and then organize politically and legally to extract it from DWR and the State of California. As with all of these "mitigation approaches," as DWR calls them, the real test of their effectiveness will be whether they can be enforced on DWR, and whether DWR proves itself a good and diligent developer and neighbor after over 70 years	Proposed Project and Alternatives, the project would be operated to meet water quality regulations. Mitigation measures are proposed to reduce impacts, where applicable, associated with the project construction, operation, and maintenance in Chapter 17, Socioeconomics, Chapter 29, Environmental Justice, Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources. As described in Appendix 3G, Community Benefits Program Framework, the Delta Community Fund could be used to fund actions to enhance water and air quality as well as actions to enhance the economic vitality of the Delta communities. As described in Appendix 3G, the Community Benefits Program is not mitigation for project impacts under CEQA but seeks to address community concerns and impacts beyond what CEQA requires. The Community Benefits Program is part of the proposed project and alternatives, and would be implemented separately from, and in addition to, the mitigation required under CEQA and other environmental regulations. Specifics regarding implementation of the program would continue to be developed and finalized, with community input, after CEQA approval.

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	of treating the Delta like a social, economic, ecological, and cultural afterthought.	
401-26	[Att 1:] Project Purpose, Objectives, Description, and Alternatives The "fundamental purpose" of the proposed Tunnel project is to restore and protect the reliability of State Water Project (SWP) deliveries and, potentially, Central Valley Project deliveries south of the Delta, "consistent with the Water Resilience Portfolio" in a "cost-effective manner." Additionally, the Tunnel DEIR offers some related objectives to further justify the project: - To "help address" sea level rise and other reasonably foreseeable climate change consequences and extreme weather events. - To minimize public health and safety effects of catastrophic levee failures from a major seismic event that would salinize the Delta. - To protect the ability of the SWP "and potentially the CVP" to meet contractual obligations for water supply deliveries consistent with state and federal Endangered Species Act and Delta Reform Act requirements and mandates. - To provide "operational flexibility to improve aquatic conditions in the Delta and better-manage risks of further regulatory constraints on project operations." [Footnote 5: Delta Conveyance Project DEIR, Chapter 2, Project Purpose and Objectives, pp. 2-2, lines 23-38, to p. 2-3, lines 1-4. Hereafter	The comment primarily summarizes or quotes specific information from the Draft EIR. It also provides background information regarding conditions in the Delta, water management in California, the water rights system in California, and temporary urgency change petitions (TUCPs). As described in the Executive Summary, section titled, Chapter 6, Water Supply, the project alternatives do not include any actions that would modify water deliveries to non-SWP and non-CVP water rights holders, including in-Delta water rights holders. 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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please see Chapter 6, Water Supply, and Chapter 9, Water Quality, for details on the water supply and water quality changes that could potentially result from the project alternatives. Appendix 3H, Non-Project Water Transfer Analysis for Delta Conveyance, analyzes water transfers, which are not a part of the project (as described in Chapter 3, Description of the Proposed Project and Alternatives). This EIR considers whether the proposed project or alternatives could have the potential to change environmental effects by increasing transfers (by potentially removing a capacity constraint) or shifting transfer pumping from the south Delta facilities to the proposed north Delta facilities. Potential changes to the system during a water transfer are described in Appendix 3H. As disclosed in the appendix, even though the Delta Conveyance Project may add additional export capacity, it is not reasonably foreseeable that it would increase the amount of water transfers, since the

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	cited as Tunnel DEIR, accessible at https://www.deltaconveyanceproject.com/read-the-document.] The proposed project, then, is essentially seen by DWR as a climate-adaptation action that would invest at least $16 billion in capital to construct a set of diversions to a tunnel from a watershed whose future hydrology will be quite different from its past and present. RTD [Restore the Delta] agrees that the central questions surrounding the proposed Tunnel project include the future of the Delta [Footnote 6: By the "future of the Delta" we are concerned about its future as a cultural and historical place; as a source of outdoor recreation and drinking water to adjacent cities and towns of the region; as an estuary; as a productive agricultural community; and as an array of tribal homelands and environmental justice communities seeking reconnection with the estuary.] and the future utility of existing SWP and CVP pumping and conveyance facilities should neither water system be able to export fresh water from Delta channels in the not-too-distant future. The Delta has been the key fulcrum—the topographic low point—from which both the SWP and CVP have transferred water from northern to southern regions of California. The future of this system of north-to-south water redistribution is threatened with extinction in the era of climate change and sea level rise. Since the 1930s it has been established knowledge and practice that a fresh-water hydraulic barrier to incoming tidal salt water	current available capacity is not fully utilized. The project would not exacerbate or worsen potential effects of water transfers because, in general, water transfers under operating conditions of the project would not change from those that occur under existing conditions. With the Delta Conveyance Project, some transfer water that is currently conveyed through the south Delta may be conveyed through the proposed north Delta facilities. This shift in diversion location, however, would not affect the need to manage water quality conditions in the Delta. With either diversion location, the SWP would still release "carriage water" to manage water quality in the Delta. Carriage water is the amount of Sacramento River inflow required to maintain water quality conditions in the Delta in the absence of a water transfer, and it is typically a portion of the water made available by the seller. Carriage water would maintain similar water quality conditions in the Delta regardless of transfer diversion location. More information is included in Appendix 3H. Please also refer to Common Response 3, Alternatives Development and Description, for additional explanation regarding carriage water savings/efficiency, including use of stored water resulting from such gains in efficiency, and regarding TUCPs.

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	is necessary to divert water and facilitate exports of surplus supplies from the Delta. [Footnote 7: California Department of Public Works, Bulletin 27, Variability and Control of Salinity in the Sacramento-San Joaquin Delta, 1931, pp. 44-45, accessible at https://archive.org/download/variationcontrol27calirich/variationcontrol27calirich.pdf. See also Tim Stroshane. 2015. "A Century of Delta Salt Water Barriers in the Delta." Prepared for Restore the Delta, June, accessible at http://restorethedelta.org/wp-content/uploads/2015/06/A-Century-of-Delta-Salt-Water-Barriers-2015-06-05.pdf.] This barrier volume is factored into how much water is released to meet Delta export contractor water demands with acceptable salinity levels during normal operations of both CVP and SWP. It is sometimes referred to as "carriage water" since it "carries" water for export from the Delta Cross Channel (when it is open) to the central Delta to the San Joaquin River. [Footnote 8: In dry years, when water transfer markets form, a factor for carriage water must be incorporated into each transfer to ensure each water deal is consummated to the satisfaction of the receiving party (in terms of quantity of acceptable-quality water). This is important because operation of a Tunnel Project would eliminate need for carriage water from transfers and regular export operations more generally.] In April 2022 (just eight short months ago), the upstream storage situation became so dire DWR and the Bureau of Reclamation feared there may not be enough water in the coordinated CVP/SWP system to maintain this hydraulic barrier, according to their petition for urgent changes to their water rights in the Delta. Continuing to meet existing Delta water quality objectives, claimed DWR and the Bureau, would	

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	deplete much needed storage last spring that would otherwise serve fish and wildlife habitat, Delta water quality, and Delta exports at low health and safety minimum levels. The two agencies stated clearly that drought impacts also threatened the Delta itself with massive salinization: Further impacts could even result in a "loss of control" over salinity encroachment in the Delta in 2022 and into 2023 in a continued drought scenario. "Loss of control" describes a condition in which very low storages in the major Project reservoirs will not allow sufficient release capability to control intrusion of ocean water into the Delta, which would make the Delta water quality incompatible with in-Delta beneficial uses. This condition would persist until Northern California receives rainfall that produces sufficient runoff to flush the Delta of ocean water, which would once again allow for these in-Delta beneficial uses. Failure to sufficiently control Delta salinity would jeopardize the ability to provide for minimum health and safety supplies for communities both within the Delta and those who rely upon the Delta for water supply. [Footnote 9: California Department of Water Resources and US Bureau of Reclamation, Temporary Urgency Change Petition Regarding Delta Water Quality, March 18, 2022, pages 1-17 to 1-18. Emphasis added. Accessible at https://www.waterboards.ca.gov/waterrights/water_issues/programs//applications/transfers_tu_notices/2022/20220318_tucp.pdf.] Deliveries to senior water right contractors at quantities at all close to those in 2020 and 2021 had already depleted reservoir storage, though such facts are omitted from this frightening discussion of loss of salinity control in Delta waters. This	

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	scenario must be avoided as long as possible given the threats of climate change and sea level rise. Senior water rights contractors should share in a significant portion of these water expenditures, since, after all, they received beneficial deliveries while many other contractors and the rivers' ecosystems received little or no supplies during this drought. They were dealt winning hands from the CVP and SWP in 2020, 2021, and in 2022 (except for the Sacramento River Settlement Contractors who accepted an 82 percent reduction in 2022 in their senior supplies from Shasta Lake). In so doing, deliveries to senior contractors in both projects contributed greatly to the predicament where SWP and CVP operating staff could lose salinity control in the Delta. Senior water rights were privileged over the following year's protection of the Shasta Lake cold water pool for Sacramento River salmon and any cold water Lake Oroville could deliver to the Lower Feather River. [Footnote 10: Marc Dadigan and Annelise Pierce, "'We Had No Choice': ACID Agreed to Water Cuts During Negotiations with Federal Officials," Shasta Scout 13 October 2022, accessible at https://shastascout.org/we-had-no-choice-acid-reluctantly-agreed-to-severe-federal-water-cuts-duringnegotiations%ef%bf%bc/.] Continuing application of the legal doctrine of prior appropriation applied to CVP and SWP allocations and operations under such dire storage and weather conditions would be madness, and therefore an unreasonable use and diversion (from storage) of water precisely because it undermines present operations that entail through-Delta conveyance of stored supplies for export to CVP and SWP contractors. If there was ever a time when supplies of the two projects should be equitably shared so that all farming regions	

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	of California could receive some level of climate change mitigation, this is that time.	
401-27	[ATT 1:] The above quote [From the Temporary Urgency Change Petition in March 2022 regarding salinity impacts from the drought] so much as agrees and presages that loss of salinity control in the Delta would "jeopardize the ability to provide for minimum health and safety supplies for communities both within the Delta and those who rely upon the Delta for water supply." Environmental justice communities with small community water systems and wealthier communities reliant on Delta supplies for drinking water would be harmed if insufficient water is devoted to protecting the hydraulic barrier in the Delta.	The effects of water supply reliability on environmental justice communities from elements such as the frequency and severity of droughts and salinity intrusion were considered in Chapter 29, Environmental Justice. Overall, increases in reliability of the total existing water portfolio is expected with implementation of the proposed project and its alternatives by sustaining and improving water supply reliability and supplementing or reducing groundwater use, which would increase water supply reliability in the export service areas that ultimately serve environmental justice communities. Further, DWR will continue to operate the State Water Project with the proposed north Delta intakes in accordance with operational criteria set by federal and state permits, state water rights decisions, and other applicable regulatory requirements. Please see Chapter 6, Water Supply, and Chapter 9, Water Quality, for details on the water supply and water quality changes that could potentially result from the project alternatives. Also, please see Common Response 3, Alternatives Development and Description, regarding Temporary Urgency Change Petitions (TUCPs) and project operations.
401-28	[Att 1:]Three municipal water agencies diverting water directly from Delta channels: Contra Costa Water District, the City of Antioch, and the City of Stockton's Municipal Utilities Department would also be harmed. DWR and the Bureau of Reclamation have ignored the rights and water quality needs of these water agencies—who serve about 750,000 people—to have safe and good quality drinking water to divert for their municipal and domestic customers. These agencies will likely face higher water treatment costs to protect their customers from high salt concentrations and harmful cyanobacteria, as well as other water quality risks of Delta inflows and outflows—and which would ensue from construction and operation of the Delta Tunnel project.	As described in Chapter 4, Framework for the Environmental Analysis, at the time of this Final EIR, Reclamation has not expressed interest in participating in the Delta Conveyance Project as a project proponent. DWR has operated the SWP within the parameters of its water rights, contracts, and regulatory obligations, and would continue to do so with or without the approval of the Delta Conveyance Project. Impacts to the salinity constituents bromide and chloride are specifically addressed in Chapter 9, Water Quality, at the City of Stockton, Contra Costa Water District, and City of Antioch drinking water intake locations. As demonstrated in Chapter 9, with the alternatives there could be some increases in bromide (Impact WQ-3), chloride (Impact WQ-4), and EC (Impact WQ-5) at some Delta locations in some months, but impacts on these constituents would be less than significant. The incremental increases in annual average bromide

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		concentrations and the increased frequency of bromide concentrations above 300 ug/L that may occur are not expected to be of sufficient magnitude to cause Delta diverters to exceed drinking water disinfection byproduct Maximum Contaminant Levels (MCLs). Furthermore, the project would continue to be operated to meet Bay-Delta Water Quality Control Plan objectives for chloride, which are for protection of municipal and industrial supply uses. Chapter 9 also evaluates the impact of the alternatives on cyanobacteria harmful algal blooms (CHABs) in Impact WQ-14, which would be less than significant.
401-29	[Att 1:] In addition, nearly 80 Delta-based small community water systems could be harmed, if not immediately, not long after loss of salinity control occurs. [Footnote 11: California Department of Water Resources, Small Water Suppliers and Rural Communities at Risk of Drought and Water Shortage Vulnerability and Recommendations and Guidance to Address the Planning Needs of These Communities, Report pursuant to Section 10609.42 of the California Water Code, Draft, March 2020, prepared by Water Use Efficiency Branch, supplemental Excel database file containing SWS Risk Scores. Accessed 21 September 2022 at https://data.cnra.ca.gov/dataset/drought-risk-smallsuppliers-and-communities.] There are numerous CVP and SWP municipal and industrial contractors that rely on imported water in the San Joaquin Valley, San Luis Obispo and Santa Barbara counties, and the service area of the Metropolitan Water District of Southern California. [Footnote 12: Metropolitan's service area comprises urbanized portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties.] Cities like Tracy, Fresno, Bakersfield and others would be affected. National wildlife refuges rely on imported supplies from the Delta in the San Joaquin River and Tulare Lake basins. Loss of salinity control would worsen drought conditions for native and introduced fish and wildlife	The comment's reference to loss of salinity control is first mentioned in comment 401-26, relative to very low storage in upstream CVP and SWP reservoirs being insufficient to control intrusion of ocean water into the Delta. Chapter 5, Surface Water, presents an analysis of changes in upstream reservoir storage. Modeling results show that storage changes would be minimal and would primarily be increases due to lower releases for exports and carriage water. Regarding SWP and CVP contractors that rely on imported Delta water supplies, water quality at the south Delta pumps would be similar or better than under existing conditions, as demonstrated by analyses presented in Chapter 9, Water Quality (e.g., Impacts WQ-3 [bromide] WQ-4 [chloride], WQ-5 [electrical conductivity]). As such, loss of salinity control in the Delta, as asserted by the comment, would not occur as a result of operation of the Delta Conveyance Project and is not supported by the analyses contained in Chapters 5 and 9. Finally, water quality-related effects of project operations would have less-than-significant impacts on fish and wildlife species, or effect would be mitigated to less than significant, as described in Chapter 12, Fish and Aquatic Resources, and Chapter 13, Terrestrial Biological Resources.

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	species dependent on these water ways, as well as migratory waterbird populations. [Footnote 13: San Joaquin River Exchange Contractors normally import Delta flows that originate in Shasta Lake. On April 1, the Bureau announced that these senior water rights contractors would start receiving deliveries from releases at Friant Dam (Millerton Lake), already "calling" on their basic, original water rights transmuted under drought conditions to what storage is available at Millerton Lake behind Friant Dam. Such early deliveries to senior water rights contractors are exactly the kind of action the Bureau took with releases in 2021 from Shasta Lake. The strategy is to send along deliveries while there are still supplies in the lakes; pay little heed to what is left for meeting other water supply or environmental compliance requirements. The April 1 announcement by the Bureau will affect municipal and domestic supplies for the cities of Fresno, Bakersfield, Lindsay, Orange Cove, and Strathmore, all of whom contract for water service from the Friant-Kern Canal. These communities and the agricultural districts throughout the Friant-Kern Canal service area will likely be forced to pump more groundwater to maintain water service to their customers.]	
401-30	[Att 1:] Other effects to consider with climate change include salt intrusion and how that will negatively impact the water quality of this supply system. During droughts, salinity penetrates the Delta, which could not only expose Delta agriculture to more saline irrigation supplies, but also compromise the quality of water exported south of the Delta, where current climatic conditions (desert ecosystem) require crops to need more water in Kern county. This is mainly due to a combination of historical geology of the region as prior to being a landmass, it was under the ocean and modern salt intrusion increases. The Delta is a transition zone between	The analysis presented In the EIR does not support the assertion that the chosen project alternatives fail to address the effects of climate change, including Delta salinity and its effects on water supply. One of the basic objectives of the project is to help address the "reasonably foreseeable consequences of climate change and extreme weather events," which includes the effects of salt intrusion, sea level rise, and drought identified by the commenter, and as discussed in Chapter 2, Purpose and Project Objectives. The EIR addresses the effects of the project and alternatives on Delta salinity in Chapter 9, Water Quality, concluding that changes in electrical conductivity would be less than significant. Analyses of salinity effects under future 2040 conditions, including climate change, are

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	freshwater and saltwater, therefore salinity in the Delta is a water quality issue that may affect water use for industrial, municipal, agricultural, fish and wildlife purposes and services. Forces that can increase salinity levels in the Delta include: tidal forces, agricultural run-off, exports and freshwater inflow from the Sacramento and San Joaquin rivers. [Footnote 14: Delta Stewardship Council. 2022. Delta Plan Performance Measures, Salinity, accessible at: https://viewperformance.deltacouncil.ca.gov/pm/salinity.] Even though naturally, with current conditions most water contains salt and irrigation adds salt to soil overtime especially in arid and semi arid areas that also experience less rainfall and poor drainage (due to clay in the layers of the soil). [Footnote 15: Food and Farm Discussion Lab. 2017. Soil Salinity Threatens California Farms, accessible at: http://fafdl.org/?p=3919.] Although DWR and the U.S. Bureau of Reclamation (USBR) manage salinity in compliance with the State Water Board decision 1641 to protect water quality with flow and salinity objectives, during drought conditions, Delta water quality will be compromised due to lack of flow and salt intrusion. [Footnote 16: Delta Adapts, p. 5-31.] Delta Adapts modeling shows that droughts will become more frequent due to climate change and this will cause significant and more severe water shortages. [Footnote 17: Delta Adapts, p. 5-34.] If sea level rise is projected to increase, the combined outcome of that on water supply will cause Delta exports to decrease 10 percent a year on average and 20 percent in drier years. Increase in temperatures will also cause snowpack to reduce, alter runoff patterns and increase water demand (especially south of the delta, in order to irrigate commodity crops like almonds). Current salty soil conditions and increased temperatures pose	presented in Appendix 9L, Water Quality 2040 Analysis, which indicates that the small increases in salinity would not adversely affect Delta beneficial uses. Appendix 4A, Consideration of 2070 Conditions, also provides information about a possible future scenario with climate change and sea level rise, including possible salinity conditions with and without the Delta Conveyance Project. The alternatives screening analysis provided in Appendix 3A, Identification of Water Conveyance Alternatives, further supports this point. The first-level screening removed alternatives that did not address the reasonably foreseeable consequences of climate change. Please see the section titled Criterion 1 – Climate Resiliency, for an analysis of how alternatives were chosen to ensure the ability to continue reliable State Water Project (SWP) operations in the face of climate change. The State Water Resources Control Board is responsible for managing water quality in the Delta; SWP operations must comply with those criteria. The purpose of the EIR is to analyze the environmental impacts of the project; the circumstances referenced by the commentor are not impacts of the project but are already transpiring and would continue under the No Project Alternative. Furthermore, by addressing the effects of climate change, the project also mitigates the potential future effect climate change would have on Delta exports and water quality for Delta agriculture, Delta communities, and farming communities in Southern California that are dependent on the quality of this water supply. Please see Common Response 3, Alternatives Development and Description, regarding the adequacy of the range of project alternatives chosen for the CEQA analysis. Common Response 6, Climate Resilience and Adaption, provides further detail on how the effects of climate change were considered and incorporated into the analysis presented in the EIR. Please also refer to Common Response 6 regarding the project's ability to

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	a threat to current Delta conditions due to lack of flow and salinity intrusion. With increased temperatures in the future, Delta exports will fall 4 million acre feet in 25 percent of years. Variability in precipitation will give rise to extreme wet and extreme dry years where the North Delta storage reservoirs are expected to decrease more than 1 million acre feet annually. [Footnote 18: Delta Adapts, p. 5-56.] This will not only affect California farmers down south but also Delta communities and farmers who rely on Delta water uses as episodic water quality declines will pose a threat to residents (among them are Environmental Justice communities) and their livelihood. [Footnote 19: Delta Adapts, p. xiii.] Climate change will also reduce reservoir storage in all year types, meaning less water can be carried over from one year to the next, increasing the water supply system's vulnerability to droughts and impacts when they occur. Though current conditions pose a threat to Delta water quality and ecosystem conditions, it is clear that the discussed future climatic conditions will pose an even larger threat on the reliability of meeting water demand and water quality for export south of the Delta. Therefore, it may be worthwhile to consider a project that not only addresses but mitigates these issues in a sustainable manner to ensure the reliability of north to south Delta exports and water quality for Delta agriculture, Delta communities, and farming communities in Southern California that are dependent on the quality of this water supply.	improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change.
401-31	[Att 1:] The implications we outline here are of course partial, but the point is there are drastic stakes should salinity control fail in the Delta. The curtailments occurring in the CVP enabled more water to be kept in storage to protect young salmon, staving	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. Also see Chapter 1 regarding how the Delta Conveyance Project is consistent with the California Water Resilience Portfolio (California Natural Resources Agency et al. 2020). In recognition that there is no one-size-fits all approach, the California Water

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	off cultural genocide against Northern California Indian Tribes, and protecting not only Delta environmental justice communities but also the "27 million Californians" that DWR so proudly boasts of serving with clean water at two of its web pages. The Tunnel Project points to a future where the supplies of both the CVP and SWP would be restored and protected, yet the Tunnel Project would still require continuing through-Delta conveyance as did California WaterFix. (See Attachment 2 to this letter.) Unfortunate events at least partially attributable to climate intervened in the accustomed operations of the CVP and SWP. Already in 2021 and 2022, RTD [Restore the Delta] staff have participated in seven sets of discussions and public meetings with state agencies about the threat to the state's water supply and losing control of salinity in the Delta under the current technological regime of through-Delta conveyance to export pumps in the south Delta. These included: - Commenting on a State Water Resources Control Board staff report about Climate Change and Water Rights in March 2021. (See Attachment 3 to this letter). - Dramatic and unexpected loss of runoff in April 2021 led to DWR and the Bureau suddenly filing a temporary urgency change petition (TUCP) with the State Water Board to relax Delta water quality objectives to store more water in reservoirs. (See Attachment 4 to this letter). - Dramatic loss of snowpack between December 2021 and	Resilience Portfolio includes more than 100 separate detailed actions needed to ensure California's water systems work in the coming decades. The Delta Conveyance Project is one of many projects that will help meet California's water management needs but is not intended to be the only project that could meet water management needs. 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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please also refer to Common Response 1 regarding the lead agency's discretion in identifying the purpose and objectives statements for the purposes of CEQA, as well as a discussion regarding the scope of the objectives related to sea level rise and seismic events. Please also 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. As described in Appendix 5B, Surface Water 2040 Analysis; Appendix 6A, Water Supply 2040 Analysis; and Appendix 4A, Considerations of 2070 Conditions, climate change is expected to result in hydrologic changes. Nonetheless, the project is expected to result in greater water supply reliability compared to the No Project Alternative. Finally, the processes and comment opportunities identified in the comment are separate and independent of the Delta Conveyance Project and are beyond the scope of the EIR for the Delta Conveyance Project. Please refer to response to comment 401-29 regarding the analyses contained in Chapter 5, Surface Water, and Chapter 9, Water Quality.

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	March 2022 that led again to DWR and the Bureau suddenly filing another TUCP with the State Water Board to relax Delta water quality objectives to store more water in reservoirs. (See Attachment 5 to this letter.) - Participating in the Delta Stewardship Council two-day science symposium about salinity management in the Delta, on April 26-27, 2022. - Participating in the Delta Watermaster's meeting with Delta and upstream water right holders' representatives about "Water Management in the Delta" about climate change and water rights on July 14, 2022. - Commenting July 18, 2022, on the U.S. Army Corps of Engineers' notice of undertaking NEPA environmental review on DWR's proposal to install rock barriers in Steamboat and Miner Sloughs in the North Delta. (See Attachment 6 to this letter.) - Commenting on DWR's Tunnel DEIR for the West False River Barrier on August 22, 2022. (See Attachment 7 to this letter.) We list all of these processes and comment opportunities not just to show how busy RTD [Restore the Delta] has been. We list them because common to each they illustrate the salinity emergency for which the State has so far failed to prepare adequately. Salinity management in the Delta is out of balance. The very definition of the Delta's role as an estuary is being disrupted by climate change now. Climate change undermines the engineered role the Delta plays in redistributing California's water from north to south. Tides threaten to gain the upper	

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	hand on both the estuary and the Delta common pool from which millions of people draw fresh water for drinking and irrigating at some point each year. The proposed Tunnel Project is seen by the State of California as THE engineering solution to this problem. But the problem of salinity management is not so susceptible of ready, if also complex, engineering solutions like the Tunnel Project. A stated purpose of the Tunnel Project is to invest billions of dollars to maintain a status quo ante of water deliveries by the State Water Project. It does little to address climate adaptation in the Delta and fails to preserve at the same time as it continues to rely on through-Delta conveyance into the future. It has never been less certain that a tunnel project is a good idea any longer. The rest of our comments will make a case for why this is so.	
401-32	[Att 1:] Chapter 3 Project Description and Alternatives While the Tunnel Project clearly needs all components described in Chapter 3 of the Tunnel DEIR, the North Delta Intakes (or Diversions) will drive the majority of operational impacts as they affect the Delta in the future. These effects are most important to evaluate in the vicinity of 2040, a few short years after the project's construction would theoretically be completed. [Footnote 20: Tunnel DEIR, Chapter 4, p. 4-8, lines 2-3, states that the project's construction period would last between twelve and fourteen years. Chapter 1, Section 1.5.2.4, lists all 28 needed reviews and approvals for the Delta Tunnel Project. Assuming the project somehow obtains all necessary approvals by 2024 or 2025, and that the project experiences no delays relative to this projected timeline, the project would be operational no earlier than about 2038. So project impacts at 2040 should be thought of as being in operation for just two to	The assertions that the EIR does not contain a range of reasonable alternatives Is not consistent with the contents of the EIR. Additionally, the assertion that DWR believes the Delta must be altered to maintain SWP contracts and did not consider alternative approaches is unfounded. The EIR presents project designs, including an underground tunnel and operational criteria, to minimize impacts of project facilities on land use and aquatic resources. The EIR also presents numerous mitigation measures and environmental commitments to reduce or avoid impacts on the Delta environment. Refer also to EIR Appendix 3A, Identification of Water Conveyance Alternatives, for the contextual background of the Delta that was considered in developing the alternatives and the description of the approaches taken for alternative selection. Please also refer to response to comment 401-9 regarding the alternatives selection process as well as climate change and the project objectives. Please refer to response to comment 401-30 for reference to EIR 2040 and 2070 analyses. Future condition analyses were included for informational purposes to compare

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	four years for purposes of this comment letter.] We focus our comments on the project description for Alternative 5, the Bethany Alignment. Its components would include a somewhat eastern alignment, but would branch off more directly south toward Bethany Reservoir, rather than veer toward Clifton Court Forebay (the existing SWP regulating reservoir that serves water directly to the Banks Pumping Plant). Banks at present serves water to Bethany Reservoir; for North Delta Diversions (NDDs) to the Tunnel, the Bethany Alignment would bypass Banks to deliver water directly to Bethany Reservoir via a new pumping plant at the foot of the hills below the lake. For CEQA purposes, alternatives are to be evaluated in terms of how and whether alternatives reasonably meet the project purposes defined by the project proponent, DWR in this case. The fundamental purpose stated by DWR is to ensure somehow that SWP and potentially CVP deliveries can be maintained into the future in the face of climate change impacts that are expected in and to the Delta. The nine alternatives are mere variations on one theme of subterranean Delta conveyance, all of which are single-tunnel configurations of differing capacities and alignments. No other meaningful reasonable alternatives are put forward that seek to devise other non-Delta export means of somehow preserving and protecting water supplies to these same contractors served south of the Delta by the SWP and CVP. Each alternative assumes that the Delta must be altered and amended to preserve existing contractual arrangements. A huge failure of imagination by DWR is on display in this DEIR. Each of these alternatives is vulnerable to the slings and arrows of expected climate change effects, which we will go into further below when commenting on project modeling methods and results. But what we see in the Tunnel DEIR is a complete	potential future Delta conditions with the EIR's CEQA analyses. Generally, the 2040 analyses indicated that impacts would be similar to those presented for CEQA analysis purposes in the EIR. See also Common Response 3, Alternatives Development and Description, regarding the alternatives screening process and the adequacy of the range of project alternatives chosen for the CEQA analysis. Common Response 6, Climate Resilience and Adaption, provides further detail on how the effects of climate change were considered and incorporated into the analysis presented in the EIR.

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	failure of state water officials to imagine alternative approaches these last few years since the demise of California WaterFix in early 2019. Instead, DWR has focused narrowly on preserving a system whose mode of obtaining and distributing water supplies may already be beyond preservation and protection by the time it is completed.	
401-33	[ATT 1:] In 2009, at the behest of Governor Arnold Schwarzenegger, the California Legislature passed the Sacramento-San Joaquin Delta Reform Act. This act contains a provision that DWR refuses to engage with, the "reduced Delta reliance" mandate of Water Code section 85021. This section states in full: 85021. 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 efforts. There are no exceptions in this mandate. The proposed Tunnel Project does not comply in the slightest with it. In fact, though its "fundamental purpose" is to preserve and maintain SWP deliveries through time into a highly uncertain future shaped by extreme heat, extreme storms, and eventual sea level rise in the Delta, it would accomplish this by increasing, not reducing, its reliance on the Delta for reliable water supplies to SWP customers. And many local and regional water agencies are	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for information on the relationship between the Delta Conveyance Project and the Delta Reform Act policy to reduce reliance on the Delta in meeting California's future water supply needs.

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	initiating their own steps to reduce their reliance on the Delta. They are increasing their local and regional self-sufficiency and improving regional coordination to preserve and protect water supplies for the local and regional agencies that serve thousands of irrigating farmers, water-consuming industrial businesses, and millions of California residents who perpetually need safe, clean drinking water.	
401-34	[ATT 1:] Reasonable alternative approaches should include reimagining the Tunnel Project revenue bonds as instead a fund for a state water infrastructure plan identifying potential south-of-Delta locations for recycled and reclaimed water production plants large enough and cost-effective enough to re-use existing San Joaquin Valley sources of surface and groundwater. These sources could make up for lost supplies from north of the Delta as climate change takes its anticipated toll. In other words: a Valley-wide regional water self-sufficiency program that would be backed by property tax and revenue base that could support bonds for local and regional self-sufficiency investments. It is often assumed that agriculture may not be able to support such technologies the way that wealthier cities can. (If agriculture is to continue, farmers may not be able to afford NOT to.) Alternatives like this have not been seriously investigated. Existing SWP and CVP water supplies are already heavily subsidized by California and United States taxpayers, while some agricultural producers have gotten individually wealthy off water and other governmental support such as crop subsidies (including payments not to grow crops). [Footnote 21: Within State Water Project contractor home jurisdictions many contractors are required by their SWP contracts to levy property tax charges on all residents. This holds true in the largest jurisdictions, Santa Clara Valley Water District and	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; alternatives should meet most of the basic project objectives, be potentially feasible, and 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 basic purpose and project objectives are presented in Chapter 2, Purpose and Project Objectives, of the EIR. 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 does not preclude other measures, such as construction of recycled/reclaimed water projects, that may be taken by DWR or other water agencies. Because no single solution can fully address the state's water challenges, California's Water Resilience Portfolio builds on state and local initiatives already underway and months of public input. The Portfolio helps empower local and regional entities to meet their unique challenges, while delivering on the state's responsibility to provide tools and leadership, advance projects of statewide scale and importance, and help address challenges that are beyond the scope of any region.

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	Metropolitan Water District of Southern California, to ensure that even in times when direct water rate revenues are insufficient due to drought, the overall property tax base of each contractor's jurisdiction provides additional support to the system to avoid financial default.]	
401-35	[Att 1:] State water officials, elected leaders, and all other interested parties—which means at least those Californians who engage with water policy debates and struggles—should be addressing how to overcome effects of the Delta's vulnerabilities on their own regions from climate change from now on. The kinds of projects recently announced as receiving funds from federal infrastructure bill appropriations serve as examples for such a future. [Footnote 22: U.S. Department of the Interior Press Release, 18 August 2022, "President Biden's Bipartisan Infrastructure Law to Help Communities Reduce Vulnerability to Drought," accessed 15 September 2022 at https://www.doi.gov/pressreleases/president-bidens-bipartisan-infrastructure-law-help-communitiesreduce-vulnerability.] These projects already match up with the Delta Reform Act mandate as substantial investments in "water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts," that reduce Delta reliance for California's future water needs.	Please see Common Response 3, Alternatives Development and Description, regarding screening of alternatives and the adequacy of the range of project alternatives chosen for the CEQA analysis. The EIR No Project Alternative addresses the likely water supply infrastructure and other outcomes that could occur if the Delta Conveyance Project is not approved. Please refer to response to comment 401-34 regarding the California Water Resilience Portfolio and local and regional efforts to meet water supply challenges. 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 users to ensure California's water resources are being used efficiently and sustainably.
401-36	[Att 1:] The State of California has itself pushed for a number of new approaches to state water policy, conservation, and regional coordination of supplies, but needs to do more. It can start by ending its distraction and infatuation with Delta Tunnel conveyance. Redirecting expenditure of scarce public capital on the Tunnel Project to climate-resistant projects would truly make California a more resilient state in 2040 than it would be having spent untold billions on the Tunnel Project.	Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding comments that state opinions of general opposition to the project. Please refer to response to comment 401-34 regarding the California Water Resilience Portfolio and local and regional efforts to meet water supply challenges. Please see Common Response 3, Alternatives Development and Description, regarding the adequacy of the range of project alternatives chosen for the CEQA analysis.

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401-37	[Att 1:] Chapters 4, 5, 6, and 30: Appendices, Framework, and Methods of the Tunnel DEIR These chapters and appendices of the Tunnel DEIR are best read as extensions of Chapter 2 and 3. They continue to describe and elaborate the project description's operational activities through use of hydrologic and systems operation modeling methods. One cannot make sense of the full scope of project impacts by just examining each alternative's facilities and the bypass operational flow criteria presented at the conclusion of Chapter 3. Chapter 4 describes how the rest of the Tunnel DEIR is organized to take advantage of the modeling methods and results on display in Chapters 5 and 6 and the associated appendices of each of these three chapters. Moreover, readers cannot make sufficient sense of any Tunnel Project alternatives without understanding how the Tunnel DEIR handles climate change matters, which are presented in Chapter 30 and Appendix 30A. As a result, we offer comments on these various sections of the Tunnel DEIR together here.	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the complexity of the EIR. This comment provides an introductory overview of the comment letter provided. Responses to detailed comments are provided herein.
401-38	[Att 1:] Hydrologic and System Operation Modeling and Climate Change "Since all models are wrong the scientist must be alert to what is importantly wrong. It is inappropriate to be concerned about mice when there are tigers abroad." [Footnote 23: G. Box. 1976 "Science and Statistics," Journal of the American Statistical Association 71(356): 792. December. Accessible at http://jupiter.chem.uoa.gr/thanost/papers/papers8/JAmStatAssoc_71(1976)791.pdf.] The premise of Tunnel DEIR methods is to rely on assumptions	Please see Common Response 9, Hydrologic Modeling and Approach, regarding best available tools (e.g., model assumptions, uncertainties, and limitations) and modeled representation of future conditions and climate change predictions (e.g., stationarity). Common Response 9 provides information as to why CalSim 3 was selected as the best available tool to model project operations. Common Response 9 also discusses modeled representation of future conditions and stationarity.

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	that facilitate marketing of proposed project to water contractors, agencies, and officials who entertain doubts about it. Hydrologic and system operations modeling were used to represent how California WaterFix would deliver supplies restored and protected from climate change back in 2013. Similarly, the CalFED Bay-Delta Program EIR/EIS in 1998-2000 relied on modeling to show "no net loss" to Delta exports along with all of the other investments that program would make in the Delta. These were narratives DWR wanted its water contractors to hear. DWR describes its modeling approach as entailing use of general circulation models (GCMs) that produce globally averaged results for temperature and precipitation changes, based on inputs that include greenhouse gas emissions and geophysical relationships between and within the Earth's atmosphere, oceans, and continents. These models are then "downscaled" to smaller geographic subsets of Earth, including down to the scale of a region and topography the size of California. Outputs from these downscaled models then become inputs for a number of other models. The main model for this DEIR is CalSim 3, which simulates operational interactions and produces a variety of reservoir storage, stream flow, Delta flows and exports, and water contractor delivery estimates for SWP and CVP operations. Reliance on hydrologic and system operations modeling (e.g., CalSim 3) continues acceptance that the past is a guide to the future of California weather and climate, embodying the concept of "stationarity." But stationarity is dead and human-caused climate change has killed it. [Footnote 24: P.C.D. Milly, J. Betancourt, M. Falkenmark, R.M. Hirsch, Z.W. Kundzewicz,	

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	D.P. Lettenmaier, and R.J. Stouffer. 2008. "Stationary is Dead: Whither Water Management?" Science 319: 573-574, 1 February. They write: "Stationarity is dead because substantial anthropogenic change of Earth's climate is altering the means and extremes of precipitation, evapotranspiration, and rates of discharge of rivers. Warming augments atmospheric humidity and water transport. This increases precipitation, and possibly flood risk, where prevailing atmospheric water-vapor fluxes converge. Rising sea level induces gradually heightened risk of contamination of coastal freshwater supplies. Glacial meltwater temporarily enhances water availability, but glacier and snow-pack losses diminish natural seasonal and interannual storage…..Stationarity cannot be revived. Even with aggressive mitigation, continued warming is very likely given the residence time of atmospheric CO2 and the thermal inertia of the Earth system." In other words, stationarity cannot return because heat increases yet to come are irreversibly baked in.]	
401-39	[ATT 1:] Assuming stationarity of hydrological futures is probably the main way to preserve illusions that the Tunnel Project can meet its fundamental purpose of preserving and protecting SWP water supply. It is a softer form of climate change denial, but is denial nonetheless. "The inflow hydrology for the existing conditions model is based on assumptions of stationarity," states the Tunnel DEIR. "CalSim 3 represents the hydrology of the rim watersheds as preprocessed time series of unimpaired flows to the stream system derived from observed streamflow records," the Tunnel DEIR states elsewhere, adding, "In contrast, the hydrology of the valley watersheds is simulated using a rainfall-runoff model, soil moisture accounting in the root zone, and a distributed fine element mode of the underlying groundwater aquifer." Each hydrologic	Please see response to comment 401-38 regarding the use of best available tools, as well as modeled representation of future conditions and climate change predictions (e.g., stationarity).

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	model component to CalSim 3 relies on the past as a guide to the present, as it does for the No Project Conditions for 2040. [Footnote 25: Tunnel DEIR, Appendix 5A, Section B, Subsection B.10.1, "Climate Change Under Existing Conditions," p. B-65, lines 24-29; and Appendix 5A, Section B, Subsection B.5.1, "Hydrology," p. B-18, lines 22-25; on No Project conditions in 2040, see ibid., p. B-65, lines 14-22.] But we no longer live in that world; to proceed on its remnant bread crumbs is importantly wrong; DWR's modeling directs their readers' attention to the Tunnel Project's production of "mice" while the "tigers" lie in wait.	
401-40	[ATT 1:] Heat Events and Hot Seasons RTD [Restore the Delta] believes that DWR has sincerely attempted to adjust its 1922 through 2013 unimpaired flow time series—what DWR believes is a usable past—so that effects of climate change are present, reflected in, and expressed through CalSim 3's computations. We are equally as sincere in expressing our concern that CalSim 3 fails to take account of the potential for extended drought, extreme heat events and lengthened hot seasons, recurring extreme storms, and eventual sea level rise. We cannot assume that droughts are exclusively hot periods—they may be extended periods where precipitation is low or non-existent relative to society's needs. They may or may not involve extreme heat. Climate scientists warn that such is here already and more lies ahead. Extreme heat events are extended heat waves where daily high temperatures break local records, generate intense regionally expressed demand for air conditioning and drinking water, and pose health risks	Please see response to comment 401-38 regarding the use of best available tools, as well as modeled representation of future conditions and climate change predictions (e.g., stationarity).

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	overnight when people, wildlife, and plants have difficulty cooling down before another hot day comes. Lengthened hot seasons means that dry seasons have on average more days of extreme heat in the future than at present. Extreme storms occurring more frequently does not mean that their occurrence would end or meaningfully reduce the duration of droughts; it may merely mean that such storms could bring intense precipitation and flooding with property damage and loss of life even in the midst of a drought. Sea level rise can reflect two processes of climate warming simultaneously: 1) thermal expansion of oceans occurs when the seas store more heat; warmer water is less dense than cooler; and 2) aggregate melting of continental glaciers in Antarctica and Greenland, whose fresh glacial melt adds water volume to a warming ocean and circulates to all other oceans on Earth, thereby raising sea levels eventually everywhere, including the Sacramento-San Joaquin River Delta, which is connected at sea level to San Francisco Bay. SWP and CVP facility failures also could occur as a consequence of a more extreme climate future in California should water facility maintenance lag, as occurred in February 2017 at Oroville Dam and its spillways. Timing and sequencing of such occurrences are all but impossible to predict or forecast. Despite this, climate scientists demonstrate that due to mounting heat from greenhouse gas emissions and atmospheric circulation changes such events (i.e., droughts, extreme heat, extreme storms) are statistically speaking ever more likely in the future. Rhoades et	

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	al examined Sierra Nevada snowpack and climate change's effect on ten major reservoirs (representing nearly half of California's surface storage) and found that "end-of-century peak snowpack timing occurs four weeks earlier than at present and that peak water volume in these reservoirs would be 79 percent lower." [Footnote 26: A.M. Rhoades, A.D. Jones, and P.A. Ullrich, 2018. "The Changing Character of the California Sierra Nevada as a Natural Reservoir," Geophysical Research Letters 45 https://doi.org/10.1029/2018GL080308.] Swain et al found changes in atmospheric circulation altered the probability of extreme climate events in the Northern Hemisphere, and that patterns in the northeastern Pacific show a statistically significant change in seasonal precipitation and temperature extremes resulting from thermal expansion of the atmosphere and sea level pressure and causing in turn "increasing anomalous northeastern Pacific 'ridging patterns' similar to that observed during the 2012-2015 California drought." [Footnote 27: D.L. Swain, D.E. Horton, D. Singh, and N.S. Diffenbaugh. 2016. "Trends in atmospheric patterns conducive to seasonal precipitation and temperature extremes in California," Science Advances 2; e1501344. 1 April. Https://doi.org/10.1126/sciadv.1501344.] Swain et al found in 2018 that human-caused climate change contributed to large increases in the frequency of wet extremes. They also found smaller "but statistically robust" increases in dry extremes as well, from which they project "a 25% to 100% increase in extreme dry-to-wet precipitation events…despite only modest changes in mean precipitation. Such hydrological cycle intensification would seriously challenge California's existing water storage, conveyance and flood control infrastructure." [Footnote 28: D.L. Swain, B. Langenbrunner, J.D. Neelin, and A. Hall. 2018. "Increasing precipitation volatility in twenty-first-	

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	century California," Nature Climate Change 8, pages 427–433 https://www.nature.com/articles/s41558-018-0140-y.] And Persad, et al, using ten statistically downscaled global climate models and two emissions scenarios, found large agreement across models that "collectively point toward an increasingly volatile, temporally concentrated, and extreme precipitation future for the state" further reducing "projected reliability and sustainability of current water management practices to a greater degree than would be inferred from changes in total annual precipitation alone." [Footnote 29: G.G. Persad, D.L. Swain, C. Kouba, and J. P. Ortiz-Partida. 2020. "Inter-model agreement on projected shifts in California hydro climate characteristics critical to water management," Climatic Change 162, pages 1493–1513https://doi.org/10.1007/s10584-020-02882-4.] Extreme heat events of longer duration are also (statistically speaking) expected and to break records, as occurred in early September 2022 throughout California, Nevada, and parts of the American West, and in the Pacific Northwest in June 2021. The Tunnel DEIR acknowledges a place for elevated temperatures grasping project impacts: Higher temperatures when combined with moderate or low precipitation, would result in extreme aridity and drought. Higher temperatures may also increase evapotranspiration rates, which could increase water demand in some locations. Reduced soil moisture would also exacerbate the risk of catastrophic wildfire, bring longer fire seasons with more frequent wildfires, expand fire-prone areas, and heighten post-fire impacts and may also affect the amount of runoff available to place in storage. Healthy watersheds provide much of the	

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	state's water supply, protect water quality, and help reduce flood severity downstream but wildfire can catastrophically damage watersheds along with human infrastructure [citation] and aquatic resources. [Footnote 30: Tunnel DEIR, Appendix 4A, Consideration of 2070 Conditions, p. 4A-4, lines 21-27, p. 4A-5, lines 1-2.] None of these acknowledgements find their way into actual DWR modeling methods, that we could discern.	
401-41	[ATT 1:] The sun's rays striking surface water reservoirs evaporate a daily fraction. Reservoir managers must account in their management methods for evaporation from each reservoir for managing operations each day. Accordingly, CalSim 3 also includes a reservoir evaporation rate into its computations. But it appears to us that this evaporation factor, while unique to each reservoir included in the model, represents evaporation as a static input, rather than a dynamic one that would in reality respond over time to changes in atmospheric evaporative demand as extreme heat plays out in California. [Footnote 31: Tunnel DEIR, Appendix 5A, Section B.3, Table 5A-1, p. B-3. This table discloses input data to the CalSim 3 time series, without describing whether input data like evaporation rate is an input variable responsive to changes in atmospheric evaporative demand. On the dynamics and spatial extent of evaporative demand in the United States, see C.M. Albano, J.T. Abatzoglou, D.J. McEvoy, J.L. Huntington, C.G. Morton, M.D. Dettinger, and T.J. Ott. 2022. "A Multidataset Assessment of Climatic Drivers and Uncertainties of Recent Trends in Evaporative Demand across the Continental United States." Journal of Hydrometeorology 23: 505-519, April, accessible at https://doi.org/10.1175/JHM-D-21-0163.1.] Continuing emission of methane and carbon dioxide from state	Please see Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of future conditions and climate change. Reservoir evaporation rates for modeling of existing conditions are based on historically observed Class A pan evaporation. An empirical equation was used to relate this observed evaporation to mean monthly historical temperatures to develop synthetic evaporation data for the entire period of simulation. Thus, modeled reservoir evaporation rates vary month to month. Evaporation rates for future conditions account for the effects of a warming climate and changes in evaporative demand. As described in the Hydrology for Future 2040 Conditions section of Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, open water evaporation output from the variable infiltration capacity (VIC) model simulations were used to perturb historical rates. As explained in the Input Data section of Appendix 5A, Section B, evaporation rates (as a depth) are a major input to CalSim 3 for each reservoir.

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	reservoirs will add to greenhouse gas emissions as they do from reservoirs globally as well. [Footnote 32: C. Soued, J.A. Harrison, S. Mercier-Blais, and Y.T. Prairie. 2022. "Reservoir CO2 and CH4 emissions and their climate impact over the period 1900-2060." Nature Geoscience 15: 700-705, September; and C. Soued. 2022; accessible at https://www.nature.com/articles/s41561-022-01004-2. "Long-term effect of reservoir emissions on the climate is increasingly dominated by methane." Nature Geoscience 15: 694-695, September, accessible at https://www.nature.com/articles/s41561-022-01023-z.]	
401-42	[ATT 1:] DWR is familiar with supply surprises from anomalous weather (see Attachment 4)7. By the beginning of Water Year 2021 "with relatively high carryover storage after the dry year of 2020," DWR and the Bureau "helped to meet D-1641 requirements through the winter and early spring." But suddenly conditions worsened. DWR and the Bureau found that precipitation was below 50 percent of average, resulting in many reservoirs being "below average" in storage. "This was uncharacteristic," they state in a 2021 TUCP, "and likely due to unpredictable dry soils soaking up snowmelt and substantially reducing runoff into CVP and SWP reservoirs." [Footnote 33: California Department of Water Resources and United States Bureau of Reclamation. 2021. Temporary Urgency Change Petition Regarding Delta Water Quality, 17 May, p. 4, (PDF page 13), accessible at https://www.waterboards.ca.gov/drought/tucp/docs/2021/20210517_dwr_usbr_tucp.pdf. See also Attachment 4 to this letter.] They blamed Nature to avoid taking any responsibility for their suddenly diminished ability to control flows and water quality throughout the Bay-Delta estuary watershed in April and May 2021.	Please see Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of future conditions and climate change, and modeled representation of CEQA baseline existing conditions. The Hydrology section of Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, describes how climate data was used in the development of the CalSim 3 model.

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	Nature was not strictly unpredictable in this matter, had DWR been alert to the significance of dry atmosphere and soils. While in the wake of Sierra wildfires in recent years thirsty soils absorbed large portions of snowmelt that spring but it was also possible that the atmosphere may well have evaporated water directly from snow. A warmer atmosphere is well-known by climate scientists to hold more moisture as water vapor, what is known to scientists as "evaporative demand." In late April and early May, the Sierra Nevada experienced an early heat wave. [Footnote 34: For example, the Feather River Basin city of Quincy at approximately 3,400 feet elevation experienced a high temperature of 85 degrees F on Thursday, April 29. See Attachment 5 to this letter.] It is well known that snow can evaporate directly to air, bypassing water's liquid phase through a physical process known as "ablation." [Footnote 35: "Ablation" defined at https://nsidc.org/cryosphere/glossary/term/ablation.] Climate scientist Michael Dettinger alluded to this and related evaporative processes in a December 2020 interview with the Public Policy Institute of California in which he spoke of a "thirsty atmosphere": The atmosphere has the capacity to draw water up from the land through evaporation. Five factors affect how much water the atmosphere can take up: how warm it is, how humid, the amount of sunshine, the amount of wind, and the available water in soils, plants, lakes, etc. Scientists often refer to the first four as the atmosphere's "thirstiness," or evaporative demand. It varies hour to hour, season to season, and year to year based on these factors.	

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	A thirstier atmosphere means the same amount of precipitation leaves less water for plants, streams, reservoirs, and aquifers. We get less benefit from precipitation because a larger proportion goes back into the thirsty atmosphere. Smaller storms in particular may bring little to no water benefit at all if the atmosphere is thirsty. The bottom line is this—as the atmosphere becomes thirstier, the land becomes drier, even if the amount of precipitation stays the same. Increased persistence and frequency of dry conditions means increased frequency and intensity of drought. [Footnote 36: Dettinger interviewed by L. Pottinger, "Droughts Aren't Just About Water Anymore," blog post December 15, 2020, for Public Policy Institute of California accessible at https://www.ppic.org/blog/droughts-arent-just-about-water-anymore/.] This was an extreme heat event for the month of April and early May 2021, not some gradual, linear, routine occurrence predictable in time series modeling results. In addition to this spring heat wave in California, recent extreme heat projections from general circulation models used by the International Panel on Climate Change (IPCC) show increased frequency of and population exposure to extreme heat index days (defined as including temperature plus humidity factored in) in the United States throughout the rest of this century. [Footnote 37: A "heat index day" occurs when combined temperature and relative humidity produce a "feels like" temperature. "The HI [heat index] serves as a primary basis for the issuance of heat advisories by the US National Weather Service and has been correlated to heat-related mortality, according to climate scientists at the Union of Concerned Scientists and elsewhere."	

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	See K. Dahl, R. Licker, J.T. Abatzoglou, and J.D. Declet-Barreto, 2019. "Increased frequency of and population exposure to extreme heat index days in the United States during the 21st century," Environmental Research Communications 1(7), accessible 16 September 2022 at https://iopscience.iop.org/article/10.1088/2515-7620/ab27cf.] The Union of Concerned Scientists published a scientific report and produced a web site that makes heat index day results available nationwide. [Footnote 38: See the Union of Concerned Scientists' publicly available report, Dahl, K., E. Spanger-Siegfried, R. Licker, A. Caldas, J. Abatzoglou, N. Mailloux, R. Cleetus, S. Udvardy, J. Declet-Barreto, and P. Worth. 2019. Killer Heat in the United States: Climate Choices and the Future of Dangerously Hot Days. Cambridge, MA: Union of Concerned Scientists. https://www.ucsusa.org/resources/killer-heat-unitedstates-0. See also Mera, R., N. Massey, D.E. Rupp, P. Mote, M. Allen, and P.C. Frumhoff. 2015. "Climate change, climate justice, and the application of probabilistic event attribution to summer heat extremes in the California Central Valley," Climatic Change 133: 427-438. DOI: https://doi.org/10.1007/s10584-015-1474-3.] Their heat index projections are dramatic for Central Valley counties during the rest of this century. (See Attachment 8 to this letter.) For Sacramento Valley counties, the historical (1971-2000) average number of days with the heat index exceeding 90 degrees F will increase on average at mid-century by 82 percent (from about 58 to 103 days per year) and by the end of the century, about 138 percent (from about 58 to 132 days per year). In other words, the hot season in the Sacramento Valley is projected to nearly double by mid-century and could triple by the end of the century.	

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	For Delta counties, the same measures for the 90 degree F heat index are 103 percent (from about 40.4 days historically to 82 days at mid-century, more than doubling) and 186 percent (from 40.4 days to 115.4 days, nearly tripling by 2100). In San Joaquin Valley counties, the 1971-2000 period saw about 51 days on average with the heat index at or above 90 degrees F—less than two months typically in the summer. By midcentury, UCS results indicate that these counties will see about 86 such days per year on average by mid-century and about 109 by the end of the century where the heat index exceeds 90 degrees F. The experiential change would be from just shy of two months to about three months by mid-century, to over three and a half months by 2100. Similar percent-change extensions of extreme heat seasons are reported by UCS for the Bay Area and southern California (Attachment 8). Projected heat indices in California (and the United States) will place millions of people at greater risk of illness and death from heat levels exceeding their abilities to sweat and naturally cool themselves if they lack access to cool drinking water, indoor air conditioning, and cool nights for restorative sleep. [Footnote 39: Dahl, K., et al. 2019. Increased frequency of and population exposure to extreme heat index days in the United States during the 21st century. Environmental Research Communications. 1: 075002. Accessible at https://iopscience.iop.org/article/10.1088/2515-7620/ab27cf; and Dahl, K., et al. 2019. Killer Heat in the United States: Climate Choices and the Future of Dangerously Hot Days. Prepared for Union of Concerned Scientists, July. Accessible at https://www.ucsusa.org/sites/default/files/attach/2019/07/kill	

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	erheat-analysis-full-report.pdf.] California agriculture will experience these extreme heat events and expansion of hot seasons. Persistence of heat in the Central Valley is likely a significant threat to agriculture and water supply. [Footnote 40: T.B. Pathak, M.L. Maskey, J.A. Dahlberg, F. Kearns, K.M. Bali, and D. Zaccaria. 2018. "Climate Change Trends and Impacts on California Agriculture: A Detailed Review." Agronomy 8(3): 25, accessible at https://www.mdpi.com/2073-4395/8/3/25/pdf?version=1520492505.] To our knowledge none of the analyses available from the Union of Concerned Scientists' heat index projections have been applied to models used to project climate change impacts to the state's water supply and agriculture. But results such as these appear to us as a flaw in DWR's hydrologic and systems operation modeling. We found statements in Appendix 5A describing the modeling methods and results. "Under future (2040) conditions, further adjustments were made to the [CalSim 3] model logic and tables defining CVP allocations and reservoir operating rules to adapt that project operations to the effects of climate change." [Footnote 41: Tunnel DEIR, Appendix 5A, Section B Modeling Technical Appendix, p. B-64, lines 34-36.] Section B.10 of this appendix states in part: CalSim 3 is a monthly model developed for planning level analyses. For existing conditions the model is run using historical observed or reconstructed unimpaired runoff, but with 2020 level water demands, facilities, regulations, and operations criteria. Output from the 94-year simulation does not provide information about historical conditions, but does provide information about storage, flow, and water deliveries that could occur under the historical weather sequence.	

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	Similarly, the No Project Alternative (2040) model provides information about storage, flow, and water deliveries that would occur under a repeat of the historical weather sequence transformed for (a) climate change and (b) operations of water management facilities to account for sea level rise, changes in land use and population, and associated water demands and water use. [Footnote 42: Tunnel DEIR, Appendix 5A, Section B Modeling Technical Appendix, p. B-65, lines 14-22. Emphasis added.] Under Section B.10.5, Extreme Conditions, this appendix acknowledges that, "The model cannot represent the unique real-time policy decisions that SWP and CVP operators make in consultation with regulatory agencies under extreme circumstances and that deviate from standard operating policies." But such "extreme circumstances" for DWR extend primarily to "severely low reservoir storage or inability to meet flow requirements or senior water rights, and should not necessarily be understood to reflect literally what would occur" in any given alternative: These simulated conditions (e.g., low storage), in real-time operations would be avoided by making policy decisions on other requirements in prior months. In actual operations, as has always been the case in the past, the project operators would work in real-time to satisfy legal and contractual obligations given the extreme conditions. Frequency of extreme conditions is expected to increase in the future under the combined effects of climate change and sea level rise. [Footnote 43: Tunnel DEIR, Appendix 5A, Section B Modeling Technical Appendix, p. B-66, lines 25-28. Emphasis	

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	added.] This acknowledgement, and other [Footnote 44: Tunnel DEIR, Chapter 30, Climate Change, pp. 30-12, lines 34-41, to p. 30-13, lines 1-30, recount climate change trends in the study area, and summarize them in some detail in Table 30-2 (p 30-14 to 30-15) but appear not to be built into Tunnel Project modeling.], means that the Tunnel DEIR's hydrologic and system operations modeling actually does not account or incorporate extreme conditions into CalSIM 3 modeling computations and results for the Tunnel DEIR. We are left to believe that DWR treats such expected events and trends as doubling or tripling of the duration of extreme heat index (hot) seasons as exogenous to, and disconnected from, for example, reservoir evaporation rates. [Footnote 45: The expansion of extreme heat index seasons will of course increase demand for fresh water by all plants, whether forest species and other wild land vegetation communities, or crops in human agriculture. Plants need water for growth and cooling. Increased heat requires plants to devote more water taken up through roots to cooling plant tissues, limiting water available for growth. Crops will become thirstier as a result, driving up demand for irrigation water, of which there will be less in the future because of heat driven changes to California's climate and precipitation patterns.]	
401-43	[ATT 1:] There also is no examination of reservoir evaporation rates in Chapter 30, Climate Change. This chapter acknowledges the lengthening of a "dry season" relevant to agriculture's future: Broadly, California is expected to experience a long dry season and increased numbers of dry days and dry years and more	Please see Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of future conditions and climate change. Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, section titled CalSim 3 Model Components provides an overview of how reservoir evaporation was incorporated into the CalSim modeling for the project. Effects of warming temperature on hydrology, including specific processes mentioned in this comment are

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	frequent heavy precipitation and flood events, although future total precipitation projections remain uncertain. [citation to the Fourth California Climate Assessment 2018] The modeling for this study relies on an ensemble of climate projection scenarios to account for a range of climate change outcomes; however, it does not explicitly resolve or investigate precipitation extremes. ... Warmer air temperatures may increase soil moisture loss and lead to drier soils, affecting both drought events and seasonal dryness; seasonal impacts will vary (e.g., earlier soil drying in the spring may lead to prolonged summer dryness). [Footnote 46: Tunnel DEIR, Chapter 30, Section 30.2.2.2, Twenty-First Century Climate Change Projections for California, p. 30-11, lines 30-35, and p. 30-12, lines 8-10. Emphasis added.] Again, while DWR does acknowledge the likelihood of lengthening dry seasons, their choice of terms excludes from the notion of "dry" the increasingly likely prospect of extreme heat in that same future, which strikes us as a kind of climate denial by DWR. But extreme heat conditions are definitely inconvenient for modeling of hydrologic and system operations describing a tunnel project that assumes at least that "future total precipitation projections remain uncertain" for California.	accounted for in the methodology used to incorporate climate change effects in CalSim 3 (Appendix 5A, Section B, Attachment 4, Climate Change Development for Delta Conveyance Process).
401-44	[ATT 1:] One way to handle uncertainty is to express modeling results as a range from low to high figures, the way the Ocean Protection Council brackets its estimates of future sea level rise along California's coast. But DWR's operational results are not bracketed within a potential range, but are instead presented as one set of results for reservoir storage, stream flows, Delta	Please see Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of future conditions and climate change, including climate change assumptions as input into the hydrologic model. The Common Response 9 section that discusses use of modeling results for comparative purposes emphasizes that one of the primary purposes of the CalSim 3 modeling effort was to provide information to allow a

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	exports, and water deliveries to SWP and CVP customers across the range of water year types for each alternative at 2040, as shown in Appendices 5B and 6A as though modeled hydrologic and water supply outcomes are pretty certain. DWR's modeling results overpromise reliability of water supplies for and from the Delta Tunnel Project, while declining to acknowledge supply volatility to come.	comparative impact assessment between alternatives. The EIR includes the modeling results presented based on probability of exceedance in addition to water year type summaries, but the use of bracketed values would not be appropriate.
401-45	[ATT 1:] Chapter 6 reveals water supply modeling results without the Tunnel Project in place. End of September reservoir storage will decrease on average between four and 15 percent in the transition from existing conditions (2020) to No Project future conditions (2040). South-of-Delta storage at San Luis Reservoir is projected to fall ten percent for both the CVP and SWP portions of San Luis capacity. Meanwhile, long-term average deliveries for the SWP are expected to decrease by seven percent and for the CVP by 13 percent. Dry and drought year deliveries for the SWP are projected to fall ten percent (but just four percent for the Feather River Service Area senior water users), and 13 percent for the CVP (while both CVP Exchange and Settlement Contractors see small increases of three and five percent, respectively). (Senior water rights have their privileges.) Surplus water supplies (e.g., Article 21 water) within the SWP are projected to decrease from 65 percent at present (2020) to 53 percent. These are all results without the Tunnel Project in place. [Footnote 47: Tunnel DEIR, Chapter 6, pages 6-38 and 6-39, Table 6-2 and Table 6-3.] Chapter 6 goes on to compare existing condition storage and deliveries for the two water systems from all nine proposed Tunnel Project alternatives, and nearly all SWP customers come out smelling like roses. Total Table A deliveries (those to contractors not otherwise part of the Feather River Service	The comment paraphrases text from various sections of Chapter 6, Water Supply, and provides narrative related to the approach used in developing the modeling framework and establishing the guidelines, assumptions, and requirements described in Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling. Specifically, the prioritization of requirements and rights of water users. The comment is correct that the analysis presented in Chapter 6 focuses on the environmental baseline that exists at the time the notice to prepare an EIR was issued in 2020 consistent with CEQA requirements. As described in the introduction to Appendix 6A, Water Supply 2040 Analysis, this analysis was provided for informational purposes to help decision-makers and the public better understand whether any of the modeling results documented in Chapter 6 would change when considered under future conditions when construction is complete and the project is fully operational; in conjunction with supporting the EIS prepared by the U.S. Army Corps of Engineers.

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	Area and its senior water users) across the alternatives see long term average increases of between 12 and 15 percent, and average supplies rise from 3.5 million acre-feet (MAF) in 2020 to just over 4 MAF for nearly all the alternatives (topped by Alternative 5, the preferred alternative). The Feather River senior water users will see essentially no change from existing conditions to the fully operational Tunnel Project, because they are, as always, assumed to be first in line for SWP deliveries anyway. Dry and drought year supply performances for SWP contractors will be on the order of 15 to 23 percent greater for Table A contractors and slight decreases of zero to one percent for the Feather River seniors -- priority has its privileges, even in modeling. Total CVP deliveries are expected to rise by just one percent for most alternatives as compared with 2020 conditions, and no change for the senior Exchange and Settlement contractors over the present. During dry and drought years, most alternatives will see small changes of one to nine percent over existing conditions, and again no change expected for the Exchange and Settlement contractors over present dry and drought years. [Footnote 48: Tunnel DEIR, Chapter 6, pages 6-41 and 6-42, Table 6-5.] The Tunnel Project's performance in these model results confirms DWR's stated objective back in Chapter 2 of the Tunnel DEIR that the fundamental purpose of the proposed project is protection and maintenance of SWP, and potentially CVP, contractual deliveries. But DWR has had to assume away a lot of important aspects of climate effects that await us.	

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	This performance is compared in Chapter 6 only to existing conditions, however, and not to the future No Project conditions which show painful decreases in supplies and deliveries for both SWP and CVP. [Footnote 49: This separation of supply results reflects the CEQA mode of analysis of Chapter 6 while the NEPA mode of analysis is provided in Appendix 6A.] To find the comparison of the Tunnel Project's performance by alternative against future conditions, one must go to Appendix 6A, the Water Supply 2040 Analysis. There, the Tunnel Project performs lavishly for the SWP as compared with the CVP. Table A contractors will see between 11 and 16 percent increases over 2040 No Project conditions, with the preferred Alternative 5 seeing the biggest gains -- exceeding even existing conditions in 2020, and in dry and drought years, Table A contractors will enjoy 25 to 35 percent greater supplies in 2040 from the Tunnel Project. Feather River senior water users will see virtually no change neither from existing condition projections nor 2040 future conditions; their privileges will remain intact.	
401-46	[ATT 1:] CVP contractors are projected to see little change in their delivery fortunes from the Tunnel Project in 2040 as compared with the No Project condition. We think there is quite likely an error in the modeling results portrayed in Appendix 6A, however. Table 6-5 in Chapter 6 indicates alternative results for South of Delta agricultural contractors of little change from existing deliveries of around 571,000 acre-feet (571 TAF), to a range of between 588 to 621 TAF among the nine alternatives. However, Table 6-2 in Chapter 6 shows a dramatic 88 percent decrease from existing conditions (2020) to no project conditions (2040) for an absolute delivery level to these agricultural contractors of just 71 TAF in dry and drought years and a 51 percent decrease over the long-term average of	The modeling results have been reviewed, and no errors were identified. As discussed in Chapter 4, Framework for the Environmental Analysis, 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 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. Existing conditions reflect hydrologic conditions as of 2020, whereas the No Project Alternative reflects hydrologic conditions at 2040, including climate change. The modeled changes in CVP deliveries between the existing

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	all years in the modeling time series. Table 6-5 shows a dramatic increase in South-of-Delta agricultural contractors of from three to nine percent from existing conditions to delivery performance across the nine alternatives. To what are these discrepancies attributed? We presume it is attributable to the storing of former carriage water supplies later to be delivered south of the Delta, but would carriage water savings really be that dramatic? If they are dramatic, is it DWR's intent to deprive the Delta of needed fresh water flows?	condition and the No Project Alternative 2040 scenario are attributable to climate change. Shasta Lake storage during dry and critically dry years is very low; as a result, the CVP south-of-Delta agricultural deliveries are the first delivery type reduced. The table in Chapter 6, Water Supply, titled Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology) (Table 6-5), as cited by the comment, shows the modeled increase in CVP South-of-Delta agricultural deliveries for the proposed project would be 4%, which would not be characterized as a dramatic increase. This minor change is attributable to a number of factors, including carriage water savings. The range of increase for all alternatives is 2–8%. The 8% increase is associated with Alternatives 2a and 4a, which assumes a small amount of CVP participation.
401-47	[ATT 1:] There is more. Table 6A-1 in Appendix 6A detracts from these results in Chapter 6. In this appendix, CVP dry and drought year deliveries decrease from 571 to 58 TAF for CVP South-of Delta agricultural contractors, and across the nine Tunnel Project alternatives only increases between 5 and 47 percent (with preferred Alternative 5 increasing south-of Delta agricultural deliveries by just 17 percent) over the 58 TAF delivery figure without the project in 2040. How are Table 6-5 (Chapter 6) results to be resolved with Table 6A-1 results, in addition to Table 6-2 results? To say the least one of these tables has something wrong, and DWR needs to clarify them. These are central to the sales and promotion message of the Tunnel Project, particularly to wary south of Delta agricultural contractors, but they each tell a very different story. We are left wondering what DWR's true intent is regarding water winners and losers. [Footnote 50: Tunnel DEIR, Appendix 6A,	The apparent discrepancy that the commenter is noting is because of the different water year type designations used in computing the dry and critical year averages shown in Chapter 6, Water Supply, in the table titled Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology) and in Appendix 6A, Water Supply 2040 Analysis, in the table titled Water Supply Summary, Changes in Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2040 Hydrology). The Chapter 6 table titled Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology) compares the water deliveries to various SWP

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	Water Supply 2040 Analysis, p. 6A-3 and 6A-4, Table 6A-1.]	and CVP water contractors modeled under the project alternatives and compared to the existing conditions. The table presents the annual deliveries as a long-term average and "Dry and Critical" averages. The water year type designations used to compute the dry and critical year averages in this table were based on the forecasted water year types in the 2020 Existing Conditions CalSim 3 simulation. Similarly, the table titled Water Supply Summary, Changes to Water Supply by the Project Alternatives, Geographic Area, and User, Shown in Thousand Acre-Feet and Resulting Percentages, as Compared to Existing Conditions (2020 Hydrology) compares the deliveries to various SWP and CVP contractors modeled under project alternatives to the No Project Alternative at 2040. The water year type designations used to compute the dry and critical year averages in the table for the No Project Alternatives and the project alternatives were based on the forecasted water year types in the 2040 No Project Alternative CalSim 3 simulation. Appropriate water year type designation was used in both tables given the purpose of the comparison stated in the respective table titles. The modeling results have been reviewed, and no errors were identified as suggested by the commenter.
401-48	[ATT 1:] While DWR investigates this modeling problem, the department's modelers should also reconsider their expectations that California winter precipitation will increase and that SWP and CVP supplies can be maintained by the proposed project. Pacific Northwest National Laboratory (PNNL) scientists Lu Dong and Ruby Leung and NASA Jet Propulsion Laboratory scientists Baijun Tian and Xinyu Dong studying the Coupled Model Intercomparison Project (CMIP5 model ensemble used	Please see Common Response 9, Hydrologic Modeling and Approach, regarding best available tools, modeled representation of future conditions and climate change, and climate change assumptions as input into the hydrologic model. Please also refer to Common Response 6, Climate Resilience and Adaptation, for more information on CEQA requirements related to climate change, and further discussion of climate change assumptions, scenarios, and timeframes used to model future conditions. Note that the substantial range of climate change analyses provided in the EIR recognizes the uncertainty inherent to the prediction of future climate change and includes Appendix 30A, CalSim 3 Results Sensitivity to 2040

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	by the IPCC), have found greater uncertainty about the future of United States West Coast precipitation in the future than has been supposed by conventional California water wisdom. Specifically, they found a persistent bias in many of the CMIP5 models that misrepresents (one might say, double-counts) storm activity from the intertropical convergence zone, or ITCZ. This region of the Pacific just north and south of the equator is an important locus for the origins of western United States weather and our "Mediterranean" climate. Northeast and southeast trade winds collide in this region and, driven by sunlight and warm water, tremendous convective (upward moving) clouds form all the way to the upper atmosphere before being captured and moved by other wind patterns, such as the jet stream, to other parts of the globe, including western North America. According to a PNNL science journalist, "Many climate models mistakenly depict a double ITCZ: two bands appearing in both hemispheres instead of one, which imbues uncertainty in model projections. Scientists refer to this as the double-ITCZ bias." [Footnote 51: See B. Tian and X. Dong, 2020. "The Double-ITCZ Bias in CMIP3, CMIP5, and CMIP6 Models Based on Annual Mean Precipitation." Geophysical Research Letters 47, accessible at https://doi.org/10.1029/2020GL087232.] Dong and Leung in a separate study examined the existing CMIP5 models and found "statistical and mechanistic links between the double-ITCZ bias and the models' outputs." Most of the models predict that California seasonal precipitation will concentrate into the winter months making them wetter, while springs and falls will be drier. Correcting for the double-ITCZ bias in the models reduces California's winter precipitation to	Climate Change and Sea Level Projections, which helps understand the sensitivity of SWP and CVP reservoir storage, river flows, Delta exports, salinity, and X2 position to different temperature, precipitation, hydrology, and sea level rise assumptions. That sensitivity analysis includes a drier 2040 Median climate scenario. Under all scenarios considered, only minor differences in the changes in streamflow, reservoir storage, total Delta exports and salinity were found between Alternative 5 at 2040 and the No Project Alternative at 2040.

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	"no change" in the winter, and in further drying of spring and fall seasons here, according to analysis of the double-ITCZ bias in these models. [Footnote 52: See B. Bane, "Error Correction Means California's Future Wetter Winters May Never Come," accessible at https://phys.org/news/2020-12-error-california-future-wetter-winters.html. The scientific article on which Bane's piece is based is L. Dong, L.R. Leung, J. Lu, and F. Song. 2021. "Double-ITCZ as an Emergent Constraint for Future Precipitation Over Mediterranean Climate Regions in the North Hemisphere." Geophysical Research Letters 48, accessible at https://doi.org/10.1029/2020GL091569.] According to Tian and Dong, there remains some double-ITCZ bias in the newest CMIP6 models now in development. [Footnote 53: Tian and Dong, op. cit., note 51 above.] We apprise DWR of the double-ITCZ bias in the general circulation models included in the CMIP series to make DWR and its water contractors aware of scientific research into this area of modeling, research, and which does not appear to be evident in the Tunnel DEIR. GCMs and the CMIP5 models provide crucial inputs to CalSim 3, which in turn supplies input results for use in other models used to analyze impacts of the Tunnel Project. The importance of being correct about winter season precipitation is critical to the Tunnel Project's purpose, objectives, and the premises on which the Tunnel DEIR's modeling is constructed. Assuming the PNNL and JPL scientists are correct and future winter precipitation is overstated in the models on which CalSim 3 relies, then long-term average reservoir storage and future stream flows, Delta exports, and water contractor deliveries may be overstated. Such overstatement could affect CalSim 3-modeled SWP supply categories like Articles 21 (surplus water) and 56 (SWP supplies	

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	available for use, storage, and sale outside of SWP service area). If DWR's modeling premises turn out to be incorrect and in fact future winter precipitation would be no greater than at present, then DWR, water contractors, and joint powers authorities could find themselves wasting a great deal of their ratepayers' capital pushing the Tunnel Project forward, and finding it drier than expected in the operational period of the project's life. We request DWR address this as new information in a supplemental DEIR and delay issuing an FEIR until then.	
401-49	[ATT 1:] In addition to increased chances of flood occurring at the North Delta Intake sites, future climate change conditions have the potential to encroach on the reliability of water exports. The fundamental goal of the Tunnel Project is to "modernize aging SWP infrastructure in the Delta to restore and protect the reliability of SWP water deliveries in a cost-effective manner," but as the climate changes the reliability of Delta water exports will decrease. [Footnote 54: California Department of Water Resources. 2022. Delta Conveyance, accessible at: https://water.ca.gov/deltaconveyance.] The Delta Stewardship Council notes that, "extreme drought conditions (those similar to conditions in 2012 to 2016) are expected to be seven times more likely by the year 2050. These drought conditions will contribute to making Delta water exports less reliable in the future. Outside of these conditions, Climate change impacts across all water year types will reduce the amount and quality of water but effects will be greater in dry years. Additionally, climate change will also reduce reservoir storage in all year types (dry, wet, etc.) which will cause less water to be carried over from one year to the next. Therefore, the water supply system's vulnerability will increase.	Please see Common Response 6, Climate Resilience and Adaptation, regarding the climate analyses within the EIR and regarding the project's ability to improve water supply reliability and adapt to changing hydrologic conditions as a result of climate change. The project's impact on flood protection as well as the project's resiliency to flooding is addressed in Chapter 7, Flood Protection. Common Response 7, Implementation Considerations, includes a discussion addressing the preparation of a benefit-cost analysis of the project. The results of this analysis will be considered by DWR as part of its decision-making process for the project.

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	This could be a potential issue that DWR should reevaluate for the future success and maintenance of the project as a whole. Would a project that accommodates for these changes and projected export needs be more beneficial to invest in? After all, exploiting the further demand of water to meet increased export needs will not sustain the project since climate change poses a threat to the water supply system as a whole. Even though current water quality can be regulated with a two-foot sea level rise through 2050, it is negligent to ignore that higher temperatures, increased precipitation, sea level rise and run off patterns will make managing Delta water quality a challenge. During extreme drought conditions which are expected to increase in frequency and intensity and will force DWR to address water shortages with tradeoffs. [Footnote 55: Delta Stewardship Council. 2021. Delta Adapts: Creating a Climate Resilient Future Executive Summary, p. xii-xiii, accessible at https://deltacouncil.ca.gov/pdf/delta-plan/2021-06-25-delta-adaptsvulnerability-assessment.pdf. See also pp. 5-52 on water supply sensitivity. Hereafter, Delta Adapts.]	
401-50	[ATT 1:] Relevant Tipping Points The Tunnel DEIR further assumes that its projections even to 2040 are relatively sure, by virtue of ignoring uncertainties of looming climate change tipping points when Earth's cumulative warming reaches 1.5ºC over pre-industrial activity. A recent literature survey in Science considered nine distinct "global core" tipping elements and seven "regional impact" tipping elements. Tipping points are defined as critical thresholds "at which a tiny perturbation can qualitatively alter the state or development of a system." The survey found the nearest-term global core and regional impact tipping elements with high near-term likelihood of failing at 1.5ºC warming include the	The EIR relies on the IPCC CMIP5 General Circulation Model results to encapsulate the likely projected changes in the hydrologic conditions in the future. This dataset is the best available information at the time of preparation of the EIR that characterizes the likely change in the hydrologic conditions due to the future climate change. Please see Common Response 9, Hydrologic Modeling and Approach, which describes the hydrologic model and uncertainty, as well as the use of best available tools. In addition to discussions acknowledging uncertainty throughout Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, the Regulatory Uncertainty section provides information on uncertainty of regulatory requirements in the future. Please also see response to comment 401-48 regarding climate change

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	"global core" elements of Greenland ice sheet, the West Antarctic ice sheet, a Labrador sub-polar gyre in the Atlantic Ocean; and includes among regional impact elements low latitude coral reefs, abrupt thaw of boreal permafrost (which could release large quantities of methane and CO2 into the atmosphere, accelerating global heating), and potential loss of non-polar alpine glaciers. [Footnote 56: D.I. Armstrong McKay, A. Staal, J.F. Abrams, R. Winkelmann, B. Sakschewski, S. Loriani, I. Fetzer, S.E. Cornell, J. Roskstrom, and T.M. Lenton. 2022. "Exceeding 1.5ºC global warming could trigger multiple climate tipping points." Science 377, 9 September, Table 1, p. 3, and Figure 2, p. 8, accessible at https://doi.org/10.1126/science.abn7950.] Ice sheet losses and permafrost thawing will have grave implications for California's water systems depending upon how quickly developed nations' greenhouse gas emissions drive the temperature 1.5ºC above pre-industrial levels. We are now estimated to be at about 1.2ºC of warming. The implications include effects on frequency and duration of droughts, frequency of extreme atmospheric river storms, and the rate at which sea level rise in San Francisco Bay and Delta proceeds relative to the speed with which aridification unfolds in the Central Valley. These potential tipping points could upend assumptions on which Tunnel Project modeling are built. For instance, what are the potential interactions between different such climate tipping points? Will they result in dramatically hotter and longer droughts in California than even the Union of Concerned Scientists projected? Will extreme storms, bracketed for now as ARkStorm 2.0 [Footnote 57: Huang, X. and D.L. Swain. 2022. "Climate change is increasing the risk of a California megaflood." Science Advances 8:	assumptions used to model future conditions, uncertainties in those assumptions, and sensitivity analyses presented in the EIR. Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, provides an overview of the decision-making process DWR will follow for the project. The information provided in the EIR will be considered as part of that overall decision-making process.

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	accessible at https://doi.org/10.1126/sciadv.abq0995.], be more extreme than imagined even in present-day scenarios because of such interactions among tipping point effects? We don't know; more to the point, the Tunnel DEIR as a decision document fails utterly to recognize such tipping points and whether this project represents a good investment given compounding climate risks. [Footnote 58: K. Mackenzie. 2021. "What Smart People Get Wrong about Climate Change Extremes." Bloomberg News, 10 September, accessible at https://www.bloomberg.com/news/articles/2021-09-10/what-smartpeople-get-wrong-about-climate-change-extremes.] It is instead an elaborate sales pitch.	
401-51	[ATT 1:] Sea Level Rise and the North Delta Intakes' "Invulnerability" The sales pitch extends further to the North Delta Intakes beyond CalSim 3 modeling results. "The project intake locations are not vulnerable to sea level rise from a water quality perspective," the Tunnel DEIR states firmly deep in Appendix 5A, Section F. "SCHISM modeling [Footnote 59: "SCHISM is a 3-dimensional hydrodynamic model of the San Francisco Bay and Delta". Applied to the Delta, SCHISM requires a mesh and other spatial inputs, bathymetry boundary inflows, outflows and exports, estimates of Delta channel depletions, and atmospheric forcing." Tunnel DEIR, Appendix 5A, Section F, Subsection F.4, p. F-3, lines 13, and 25-26.] presented here indicates that the salinity intrusion from the sea level rise will not affect the intake locations. The effects of sea level rise on salinity intrusion do not appear to progress far above the confluence of Sacramento River, Cache Slough, and Steamboat Slough.	Please refer to Common Response 9, Hydrologic Modeling and Approach, regarding the use of CalSim 3 as the best available tool for hydrological analysis as well as the assumptions, uncertainties, and limitations. Please also refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the scope and performance of the project objectives.

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	While it is not a conclusion based on the SCHISM modeling described in here, it is important to note that the intake facilities are designed to accommodate water level elevations corresponding to 10.2 ft of sea level rise and 200-year flood flows under climate change conditions projected for the end of the century." [Footnote 60: Tunnel DEIR, Appendix 5A, Section F, Modeling Technical Appendix—Sea Level Rise and Delta Water Quality Modeling, p. F-2, lines 10-17.] This is a sales pitch on the scale of the unsinkable Titanic in light of the array of extreme heat and storms, tipping point effects, and other non-linear and non-routine prospects we face with climate change in the Central Valley and Delta. It epitomizes DWR's exuberantly loyal faith in the assumed truth of CalSim 3, Delta hydrodynamics, and SCHISM modeling to arrive at this assertion.	
401-52	[ATT 1:] When we examined the analyses in Subsection F.7 of Appendix 5A, we found we had a number of questions. Model results are based on two studies: one in which "Delta inflows, exports, and channel depletions were held at historical levels and salinity changes modeled as a consequence of sea level rise (the "water quality impact" approach) [Footnote 61: "This approach does not reflect how the SWP and CVP managers may adapt reservoir operations and Delta exports to reduce Delta salinity, assuming current D1641 salinity requirements would continue. Additionally, the water uses in the Delta and Delta exports remained unchanged from the historical values even though sea level rise may result in high salinity in the Delta…which is unsuitable for agricultural or municipal water purposes….This approach was also used to assess the vulnerability of the project intakes to the increased salinity intrusion resulting from the sea level rise…"." Tunnel DEIR,	Please see Common Response 9, Hydrologic Modeling and Approach, regarding modeled representation of future conditions and climate change. This Common Response is intended to address comment concerns related to analysis of Delta salinity. The Introduction section of Appendix 5A, Modeling Technical Appendix, Section F, Sea Level Rise and Delta Water Quality Modeling, describes how the SCHISM Sea Level Rise Study investigates how Delta water quality changes under seven sea level rise assumptions. The range of sea level rise increments considered span from 1.8 feet (ft) to 10.2 ft. The SCHISM assessment acknowledges the vulnerability of the central and western Delta to salinity intrusion caused by sea level rise, and additional water may be required to meet current salinity requirements. In addition, the assessment bracketing approach of 1.8 to 10.2 feet of sea level rise confirmed that the proposed north Delta diversion intakes would not be vulnerable to salinity intrusions.

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	Appendix 5A, Section F, Subsection F.3.1, "Water Quality Approach," p. F-2, lines 26-35.]; and a second "water cost" approach addressing how much water would be needed (that is, "expended") to maintain salinity at specific levels in the western Delta to avoid having salinity intrusion at the north Delta intakes. [Footnote 62: "The salinity that results…is far more similar to historical conditions than results obtained from the impact approach. However, the quantity of water required to maintain compliance is simply assumed to be available even if it is several millions of acre-feet s may not be a plausible representation of extreme cases." Tunnel DEIR, Appendix 5A, p. F-3, Lines 7-11.] The impact approach found, unsurprisingly, that as sea level rise proceeded, "salinity intrusion progresses upstream towards Rio Vista." This intrusion is due to increased tidal flow and "accentuated vertical exchange flow." As salinity increases in the river channel there, "the longitudinal gradient of salinity (from Collinsville to Rio Vista) also increases and excites further…(density driven) mixing that arise when salinity becomes stratified." Yet in none of the modeled scenarios did salinity intrusion advance more than about 15 kilometers (about 9.4 miles) upstream from the junction of Sacramento River, Cache Slough, and Steamboat Slough, well downstream of the North Delta Intakes. "This topic is revisited in Section F.7.4," states the appendix at this point, but no such section exists; Appendix 5A text organization only goes to Section F.7.3, "Intake Location Vulnerability," which does appear to provide some explanation, so perhaps this a typographical error. [Footnote 63: Tunnel DEIR, Appendix 5A, p. F-12, lines 9-19.] This section	The comment points out an editorial error in Appendix 5A, Section F, in the section titled Salinity Changes using the Impact Approach, in which reference is made to Section F.7.4. In the Final EIR, Section F.7.4 has been revised to Section F.7.3. DWR staff have conducted repeated bathymetric measurements over the years and have not found a discernible change in the vicinity of this Sacramento River reach. It is speculative to assume that the gradient in bathymetry will change with climate change in the future as it depends on many factors including changes in sediment load into the Delta. The conclusion in Appendix 5A, Section F is robust because the salinity intrusion can also depend on the channel width in addition to depth and salinity gradient, and the width of Sacramento River channel upstream of junction of Sacramento River, Cache Slough, and Steamboat Slough narrows significantly. Furthermore, the proposed north Delta diversions will only occur after bypassing sufficient Sacramento River flow per the regulatory requirements.

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	purports to examine how far upstream salinity in the Sacramento River travels when sea level rise reaches 10.2 feet above present conditions. Under these conditions, the SCHISM model results indicate that intrusion occurred but went only as far as Isleton, and similarly for Steamboat Slough. "It appears that the abrupt transition to a narrower, shallower more riverine environment above the Sacramento-Cache-Steamboat junction imposes an important step down in up-estuary salinity transport along the mains Sacramento River upstream of Rio Vista." This appendix surmises that salinity intruding upstream encounters "a steep gradient…at the junction that does not progress significantly beyond one tidal excursion upstream." This is explained, states the appendix, by the bathymetry of the Sacramento-Cache-Steamboat junction. The steep gradient represents a "sudden transition to shallower water" which "acts as a check on sea level rise response….Upstream from the junction…, the water is much shallower and incursions by salinity are quickly pushed back on the ebb tide. To the extent that freshwater flows over salt water, this would occur at the shelf-like entrance to the downstream reach." [Footnote 64: Tunnel DEIR, Appendix 5A, p. F-21, lines 22-29, p. F-22, lines 4-5, F-23, lines 3-10 and 14-22.] Bathymetry is neither geology nor structure; it merely describes water depth at a given location. RTD [Restore the Delta] calls this "gradient" a "shoal" for purposes of our comments. Reasoning from bathymetry, while intriguing, fails utterly to account for what this shoal consists of. Is it some type of bedrock like sandstone (or something harder)? Or does this shoal represent a lingering bathymetric remnant of Gold Rush legacy sediments washed from the northern Sierra mines via hydraulic mining techniques? If this shoal is not bedrock,	

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	then it must be characterized by its sedimentary composition and assessed for its potential erodibility and structural tenacity. If this shoal erodes away in five more years (as much of the rest of Gold Rush era sediments have, even to the point where Delta and San Francisco Bay waters are considered much clearer now) then how steep will the shoal's gradient remain at the junction? If the shoal is eroding, then what does that do to DWR's static analysis of the invulnerability of the North Delta Intakes to sea level rise?	
401-53	[ATT 1:] In early September 2022, RTD [Restore the Delta] was contacted by a long-time interior Delta resident reporting that the Sacramento River was flowing upstream at present, and that this alarmed him. We believe he was seeing the combined effects of tidal flow at that particular moment, so we checked California Data Exchange Center sensors from Freeport down to Rio Vista, and found that tidal influence was in fact intruding up the Sacramento River all the way to the Delta Cross Channel just measured in California Data Exchange Center sensors upstream of Walnut Grove. However, salinity (measured as electrical conductivity) was reaching only as far as Isleton, where the sensor reached a peak EC of 912.61. (See Attachment 10 to this letter for flow and EC records for late August through September 7 at these two sensors.) At Georgiana Slough just upstream, EC reached just 139.0 at noon the day before and 122 EC around the same time the Isleton readings were taken at 12:45 AM on September 7, though upstream flow reached negative 6,580 cfs (-6,580 cfs). This intrusion is happening currently with existing sea level and bathymetric conditions. Is it realistic for DWR to be certain that tidal intrusion will not reach the North Delta Intakes by century's end, or even sooner especially when Greenland and	Please see Common Response 9, Hydrologic Modeling and Approach, regarding best available tools, modeled representation of future conditions and climate change conditions. Common Response 6, Climate Resilience and Adaptation, provides a broader overview of how climate change was considered throughout the EIR. The climate change assumptions used in the environmental impact analysis are based on the best available information at the time the EIR was prepared.

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	West Antarctic ice sheets collapse and the world reaches 1.5ºC of warming (with attendant continued heat expansion of oceans contributing to sea level rise? We are skeptical not just because of the recent high salinity readings at Isleton but also because of looming global tipping points mentioned earlier. The water cost approach helps illustrate why the loss of salinity control in the present would be disastrous for SWP and CVP customers and all other Delta water users.	
401-54	[Att 1:] North Delta Intakes Priority Sensitivity Analysis The Tunnel DEIR acknowledges that operational criteria for the North Delta Intakes prioritize continued use of existing south Delta diversions. [Footnote 65: "The proposed Delta Conveyance Project and project alternatives operations prioritize State Water Project...exports from the existing south Delta diversion over exports from the proposed new north Delta intakes." Tunnel DEIR, Appendix 4B, p. 4B-1, lines 3-5.] Attachment 2 to this letter quantifies this by visually interpreting graphs provided in Appendix 5A of how frequent north Delta intake operations would be on average by month. Weighting each month's frequency of operation, we estimate the North Delta Intakes would operate just 42 percent of the time, while operations of the south Delta pumping plants and Clifton Court Forebay would occur the remaining 58 percent of the time. North Delta Intake operations are quite similar for all nine alternatives, so they are each tightly bunched on the modeling result graphs around these percentages making visual interpretation relatively straightforward (Attachment 2). By comparison, we estimated in 2014 that California WaterFix's two tunnels would have operated, according to its	Part of this comment references the Bay Delta Conservation Plan/California WaterFix project and does not directly address the Delta Conveyance Project Draft EIR. DWR is not required to respond to comments on projects that are no longer being pursued. The Delta Conveyance Project is different from California WaterFix, including the capacity of the water conveyance facility and operational criteria. However, DWR has reviewed the comment's content to determine whether the comment may be applicable to the proposed Delta Conveyance Project. DWR is responding to the comments on the current Delta Conveyance Project. The commenter incorrectly interprets the information presented in two figures in Appendix 5A, Modeling Technical Appendix: the figure titled North Delta Diversion Exports—Total Monthly Volumes (D_SAC041_ISF001), Probability of Exceedance for Existing Conditions, October to March and the figure titled North Delta Diversion Exports—Total Monthly Volumes (D_SAC041_ISF001), Probability of Exceedance for Existing Conditions, April to September. The plots indicate the frequency of years in which the north Delta diversion is operational for each month. Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, was conducted to evaluate the robustness of the impact analysis findings, if the diversion for the SWP exports were prioritized at the north Delta intakes during December–June, instead of the south Delta priority export

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	environmental documentation, about 48 percent of the time. Climate change adjustments to DWR's modeling may have something to do with this decrease. With the project expected to cost about the same as California WaterFix, and with less capacity, the cost-effectiveness of the Tunnel Project is reduced relative even to WaterFix, partly because it fails to achieve WaterFix's redundant design and economies of scale. Appendix 4B, however, is a "sensitivity" analysis that "considers whether operational flexibility could change the types of effects disclosed in the main body of the Draft EIR. While this operational scenario is not part of the project and is not reasonably foreseeable, and therefore not required to be analyzed under [CEQA], some shifting from existing southern diversions to proposed northern diversions could occur to help achieve project objectives." DWR proposes for this sensitivity analysis to augment the ability to divert excess flows or improve operational efficiency to meet Delta water quality requirements. The proposed operation of the project continues to prioritize the diversions from the south Delta export facilities to the same extent as under existing conditions, while only using the north Delta diversion to (1) augment exports in winter and spring when excess flows are present or (2) shift some diversions from the south Delta facilities to the north Delta intakes if it is efficient to meet Delta water quality standards." [Footnote 66: Tunnel DEIR, Appendix 4B, p. 4B-1, lines 29-34.] All the comparisons are based in 2020 conditions, not 2040 which would be more realistic. DWR turned to CalSim 3 to model the effect of these revised criteria on reservoir storage, stream flows, Delta exports, and through-Delta survival of	operation proposed in the Alternative 5 of the EIR. While not necessary to support a CEQA analysis, the sensitivity analysis provides a means to determine if there would be appreciable differences in environmental impacts under different limited real-time operational circumstances. For example, Appendix 4B considered if prioritizing north Delta diversions would result in impacts on juvenile chinook salmon survivability and water quality different from those reported in the EIR. The analysis concluded that prioritizing north Delta diversions would not result in additional impacts. The 2020 hydrologic modeling assumptions used to support the impact analysis in the EIR were also applied to the Appendix 4B north Delta diversion priority sensitivity analysis. This ensured an apples-to-apples comparison when determining the potential environmental consequences of prioritizing north Delta diversions. The comment refers to a graphic provided that was intended to provide a visual interpretation of probability of exceedance graphs provided in Appendix 5A, Section B, Hydrology and System Operations Modeling, section titled Modeling Results for North Delta Diversions, and support their opinion that the modeling referenced in Appendix 4B should have used 2040 hydrology. The information contained in Appendix 5A was to provide readers information on how the conditions disclosed in the 2020 analysis may change under 2040 hydrologic conditions. With regard to the large discrepancy in Freeport flows noted between Appendix 5A and Appendix 4B, the flows in table titled Monthly Flows on Major Rivers under Existing Conditions, Alternative 5, and Alternative 5 North Delta Diversion Priority Scenarios (cubic feet per second) were displayed for the incorrect months in the Draft EIR. This has been corrected in the Final EIR. None of those revisions resulted in a new significant environmental impact or substantial increase in the severity of an

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	juvenile Chinook salmon. For storage, DWR modeling results indicate that Shasta, Oroville, and Folsom see small increases in end of September storage, between 8 and 14 TAF under existing conditions. For monthly streamflows, the modeling suggests there would be only small changes in streamflows, including at Freeport on the Sacramento River where average monthly flow changes would range from an increase of 138 cubic feet per second (cfs) in July to a decrease of -245 cfs in April. We [Restore the Delta] are troubled by the existing conditions monthly flows reported in Table 4B-2, however. These conflicting modeling results are excessive relative to long-term averages reported in modeling results in Appendix 5A, Section B. Attachment 9 to this letter shows the wide percentage and absolute discrepancies between what is reported as modeling results for Sacramento River near Freeport in the two different appendices. How does DWR explain this?	environmental impact or required additional mitigation measures to which DWR was unwilling to commit. Finally, please see Common Response 7, Implementation Considerations, regarding the Delta Conveyance Project and cost benefit analysis.
401-55	[Att 1:] Delta export results, which include modeling results for Delta outflow, reveal that the prioritization of North Delta Intakes over south Delta facilities for export pumping would yield only a marginal increase in total SWP exports over the Tunnel DEIR export results (2 TAF) for Alternative 5. This is a very marginal outcome for a scenario which is supposedly a study of what impact more aggressive use of the North Delta Intakes would yield to exports. The same table, however, makes clear that Delta outflow would be dramatically reduced by operation of either Alternative 5 as the preferred project in the EIR (reducing Delta outflow from existing conditions by 589 TAF) or as the "NDD priority" Alternative 5 of Appendix 4B (reducing Delta outflow by 613 TAF, 24 TAF more of a reduction than for the preferred alternative, Alternative 5).	The commenter noted that SWP exports only increase by 2 TAF under the north Delta diversions priority scenario compared to Alternative 5, while the Delta outflow reduced by 24 TAF. However, please note that the CVP exports are going up by about 25 TAF in the north Delta diversions priority scenario compared to Alternative 5. The change in combined SWP and CVP exports is thus comparable to the change in the Delta outflow. The sensitivity analysis demonstrates that if the SWP exports were to be prioritized from the north Delta diversions intakes, the estimated change in SWP exports under Alternative 5 are likely to be similar. As explained in Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, the analysis was conducted to evaluate the robustness of the impact analysis findings, if the diversion for the SWP exports were prioritized at the north Delta diversions intakes during the December through June period, instead of the south Delta priority export operation proposed for Alternative 5. Similarly,

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	[Footnote 67: Tunnel DEIR, Appendix 4B, p. 4B-6, Table 4B-3.] It seems clear that aggressive use of North Delta Intake priority would net only small boosts to yield while severely damaging the estuary. We see little value to anyone in this scenario, except billable hours for water attorneys.	the minor changes in Delta outflow and other Delta flows ensure that the environmental consequences disclosed in the EIR for Alternative 5 are valid even if the diversions at the north Delta diversions were prioritized. Please note that as explained in Chapter 6, Water Supply, changes in Delta outflow are not considered environmental impacts under CEQA; rather, they provide the basis for further analysis, impact assessments, and if needed, mitigation measures related to resources such as water quality (Chapter 9, Water Quality), aquatic resources (Chapter 12, Fish and Aquatic Resources) or recreation (Chapter 16, Recreation).
401-56	[Att 1:] Appendix 4B found that "in general, north Delta diversion prioritization...gave little difference in estimates" of juvenile Chinook salmon survival relative to the performance of the intakes in the preferred alternative despite reducing upstream flows notably during the December through June period. [Footnote 68: Tunnel DEIR, Appendix 4B, p. 4B-9, Figure 4B-5, and quote from p. 4B-10, lines 17-19, and compared with Table 4B-4.] A water quality analysis in Appendix 4B was then performed to gauge "sensitivity" of greater usage of north Delta intakes greater during December through June. It indicates a few things to us: - How is it that Alternative 5's compliance record with the Emmaton water quality objective of D-1641 would be identical with Existing Conditions in 2020 (despite reducing Sacramento River flow below Hood during operations)? Why, if Alternative 5's compliance record is the same as Existing Conditions, does Alternative 5 have a higher "percent of days exceeded" than SWP and CVP operations during existing conditions in Table 4B-5? [Footnote 69: Tunnel DEIR, Appendix 4B, p. 4B-16, Table 4B-5.] Is there an error in the table?	The comment paraphrases the discussion presented in Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, in the section titled Through-Delta Survival of Juvenile Chinook Salmon with respect to estimates of juvenile Chinook salmon survival and offers an interpretation of data provided in this section. As described in the introduction to Appendix 4B, the sensitivity analysis documented is not intended to disclose whether any of the surface water or water supply changes documented in Chapter 5, Surface Water, and Chapter 6, Water Supply, would be appreciably different under different limited real-time operational circumstances. A change in Appendix 4B in the table titled Probability of Exceedance of State Water Resources Control Board Water Right 6 Decision 1641 Water Quality Objective at Emmaton has been made in the Number of Days Exceeded column from 556 to 594 over the modeled period. This change requires no revision of Percent of Days Exceeded, Alternative 5 (2020), the correct value remains 4.66. As noted in Appendix 4B, in the section titled Delta Simulation Model 2 (Water Quality) the water quality modeled for Alternative 5 north Delta diversion priority scenario would be very similar to that modeled for Alternative 5. The commenter's assertion that increased use of north Delta diversions should increase exceedance of Emmaton salinity requirements is inaccurate because the north Delta

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		diversions would be operated only after it is fully in compliance with the proposed new bypass flow requirement and existing regulatory requirements.
401-57	[Att 1:] - It appears to us from Table 4B-6 [Footnote 70: Tunnel DEIR, Appendix 4B, p. 4B-16, Table 4B-6.] that operation of the north Delta intakes on the Sacramento River removes water from that river which would normally flow through the Delta Cross Channel (when open) and Georgiana Slough (especially), leaving the central Delta channels, such as the mainstem San Joaquin and the lower Mokelumne distributaries, to receive both more tidal flow (definitely salty) and more San Joaquin River flow, which is saltier than the Sacramento generally. We observe that comparison of Table 4B-5 with Table 4B-6 water quality results is evidence that the proposed Tunnel Project, Bethany Alignment, removes substantial volumes of fresh water from the Delta and would result in poorer water quality in the central and south Delta than at present. Table 4B-6 also indicates there would be a 13 percent increase in the frequency with which the Jersey Point salinity objective in D-1641 would be violated between just the preferred Alternative 5 and existing conditions, and an 11 percent increase in Jersey Point salinity violations with the reprioritized north Delta intakes of Alternative 5.	Tables that illustrate Probability of Exceedance of State Water Resources Control Board Water Rights Decision 1641 Water Quality Objectives at Emmaton and Jersey Point in Appendix 4B in the section titled Delta Simulation Model 2 support the statement that "D-1641 water quality objectives can be met at a very similar probability for existing conditions, Alternative 5 and Alternative 5 north delta diversion priority scenarios." Please see Common Response 10, Surface Water Quality and Groundwater Resources, as it relates to the discussion of Delta salinity and compliance with State Water Resources Control Board Water Right Decision 1641. The comment does not provide new information, raise a significant environmental issue relating to the proposed project or address the adequacy, accuracy, or completeness of the EIR. DWR has reviewed all comments and will consider all comments in its decision-making process.
401-58	[Att 1:] - There would be a 16 percent increase in Rock Slough (drinking water) salinity objective violations by Alternative 5, yet only a small increase in Rock Slough violations with the reprioritized north Delta intakes of Alternative (two percent), according to Table 4B-7. [Footnote 71: Tunnel DEIR, Appendix 4B, p. 4B-17, Table 4B-7.] Rock Slough is the entry point for Contra Costa Water District's (CCWD) Contra Costa Canal intake to water	As shown in the Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, table titled Probability of Exceedance of State Water Resources Control Board Water Right Decision 1641 Water Quality Objectives at Rock Slough (maximum 250 milligrams per liter daily average chloride concentration), the D-1641 water quality objective at Rock Slough can be met at a very similar probability for existing conditions, Alternative 5, and Alternative 5 north Delta diversion priority scenario. The small percentages of days exceeded (607 out of 33,603 days) is due to the modeling artifacts.

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	treatment. CCWD serves hundreds of thousands of eastern and central Contra Costa County with affordable, fresh drinking water direct from the Delta. A 16 percent increase in potential violations from Alternative 5 is unacceptable.	Please Common Response 10, Surface Water Quality and Groundwater Resources, as it describes the modeling artifacts resulting in the small number of days with exceedances. Chapter 9, Water Quality, provides a full assessment of the Delta Conveyance Project's impact on a range of water quality constituents, including at the Contra Costa Pumping Plant #1.
401-59	[Att 1:] The second portion of the water quality analysis addressed residence time of water in the Delta from June through November-the season during which most harmful algal blooms (HABs) occur. This analysis relied on DSM2, a commonly used model for analyzing hydrodynamics and water quality conditions in Delta channels. Since the North Delta Intakes sensitivity analysis changed only operating criteria for December through June, the only month overlapping the two analytic periods is the month of June. DWR presented no results for this, instead stating, "There may be some limited increase in residence time for the month of June [for the reprioritized intakes]...when compared to Alternative 5 because of the reduction in total south Delta exports." But the analysis pooh-poohs additional risk of HABs, which can be present in June and even in May, we at Restore the Delta have found. Yet, "water temperatures [in June] are cool and growth rates are low compared to the peak growing season of July through September," states Appendix 4B. [Footnote 72: Tunnel DEIR, Appendix 4B, p. 4B-17, lines 24-34.] This "sensitivity" analysis is premised solely on existing conditions, but it is insensate with respect to climate change's effects on the future of HABs in the Delta, say at 2040, especially in light of projected increases in extreme heat index days and expansion of the hot season in the five Delta counties (see Attachment 8 to this letter). In other words, May and June temperatures are	Appendix 4B, North Delta Diversion Priority Sensitivity Analysis, discloses whether surface water or water supply changes documented in Chapters 5, Surface Water, and Chapter 6, Water Supply, would be appreciably different under more shifting to the north Delta intakes 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. Further analysis of key water quality constituents and through-Delta Chinook salmon is provided to disclose whether those specific impact conclusions documented in Chapters 9, Water Quality, and 12, Fish and Aquatic Resources, would change. The ultimate conclusion of the appendix, which is noted by the comment, is that effects or impacts would not be appreciably different than what was evaluated and disclosed in the main chapters of the EIR (i.e., Chapters 5, 6, 9, or 12). Please see responses to comments 401-96 and 401-98 regarding the use of certain months in the EIR to evaluate CHABs, including in 2040. Please see Common Response 10, Surface Water Quality and Groundwater Resources, for a discussion regarding the use of DSM2 to evaluate water quality impacts and the approach to evaluation of CHABs, including the definition of residence time and use of residence time, as well as the use of channel velocities. Chapter 9, Water Quality, provides a full assessment of the Delta Conveyance Project's impact on a range of water quality constituents including algal blooms (Impact WQ-14).

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	likely to warm, extending the time period for which conditions are conducive to HAB formation and spread.	
401-60	[ATT 1:] Phase 2 Bay-Delta Plan Omission and Alternate Regulatory Scenario Sensitivity (ARSS) Analysis We [Restore the Delta] were dismayed to discover in Appendix 3A that the analytic framework of the Tunnel DEIR omits "Phase 2" Bay-Delta Water Quality Control Plan (Bay-Delta Plan) update for Delta outflows, Sacramento River and Delta Tributary Streams. This Bay-Delta Plan amendment has been on hold, delayed ever since proposed voluntary agreements have been undertaken with enthusiastic, if misplaced, support from the Newsom Administration. The amendment is officially included in neither existing conditions of 2020 (which is perhaps more forgivable given the present timing of VA negotiations) nor in the 2040 No Project future scenario. The "description" of this project/program in Appendix 3C fails to explain why Phase 2 is treated differently from Phase 1 (for San Joaquin River flow objectives whose implementation has also been delayed), which is nonetheless included in both existing conditions and 2040 No Project scenarios. DWR needs to provide an explanation and reasonable justification for Phase 2's omission, since the State Water Board had released a scientific basis report on this Phase of regulation in 2017 along with a framework document in the summer of 2018 that suggested an unimpaired flow criterion of 55 percent for the Sacramento River Basin streams' inflow to the Delta.	This comment is in reference to Appendix 3A, Identification of Water Conveyance Alternatives, which describes the process for identifying and screening alternatives to be evaluated in the EIR. The Bay-Delta Water Quality Updates were not omitted from the EIR. They are identified in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Considerations, and they are considered, as appropriate, in the cumulative impact analysis of different resources (e.g., Chapter 9, Water Quality). Phase 1 is included in existing conditions because the amendments to the Bay-Delta Water Quality Control Plan were approved in 2018 and therefore were part of baseline existing conditions. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for information on updates to the Bay-Delta Water Quality Control Plan and voluntary agreements. Please also refer to Common Response 3, Alternatives Development and Description, regarding the development of the reasonable range of feasible alternatives evaluated in the EIR.
401-61	[ATT 1:] We [Restore the Delta] find it especially alarming that DWR also omits Phase 2 from its 2040 No Project scenario. This omission implies strongly that DWR believes (because it has reason to believe behind the scenes) there will be no such regulatory framework for the Sacramento River over the next	Please see response to comment 401-60 regarding the Bay-Delta Water Quality Control Plan Updates, which explains the updates were not omitted from the EIR. The updates are identified in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Considerations, and are considered, as appropriate, in the cumulative impact analysis of

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	18 years after DWR and the State Water Board have succeeded already in delaying a full Bay-Delta Plan update for the last 16 years. Assuming continued delay strongly suggests DWR gives no quarter to Delta environmental justice communities, to Indian tribes who view the Delta as ancestral homelands, nor to the fisheries and aquatic systems that have languished without protective water quality regulation for now a generation. This omission of Phase 2 strongly implies that our grievances and concerns must languish for yet another generation.	different resources (e.g., Chapter 9, Water Quality). The consideration of the Bay-Delta Water Quality Control Plan Updates in the EIR is appropriate for the purposes of CEQA. Please see Common Response 4, No Project Alternative Description and Analysis, for the approach to describing the projects described and evaluated as part of the No Project Alternative.
401-62	[Att 1:] This omission [of SWB's Phase 2 from the 2040 No Project scenario] further foregrounds the voluntary agreements (VAs) so adored by state and water agency officials. At present, many water agencies throughout the Delta watershed, from Fresno to Redding, are negotiating with each other to reach "voluntary agreements" (VAs) over how to apportion flows to and through the Delta estuary. Appendix 4C of this Tunnel DEIR is an attempt to indicate how and under what regulatory conditions the North Delta Intakes of the Tunnel Project (Alternative 5) would mesh with some aspects of VAs under negotiation. This appendix "considers possible regulatory requirements for water quality and flow when an updated Bay-Delta Plan is implemented." It also offers a view of "the potential effects of the project under the Alternate Regulatory Scenario…" [Footnote 73: Tunnel DEIR, Appendix 4C, p. 4C-1, lines 24-26.] Because the Vas are neither complete nor public (but since DWR is party to the negotiations ongoing) it includes some provisions from the March 2022 memorandum of understanding, though the ARSS DWR created for this analysis does not pretend to be the same thing as the March MOU.	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the status of the voluntary agreements and the relationship to the Bay-Delta Water Quality Control Plan (Bay-Delta WQCP, or Bay-Delta Plan) updates. As noted by the comment and in Common Response 8, the voluntary agreements are not complete or public and the water quality control planning process for the updates to the Bay-Delta Water Quality Control Plan is on-going. Please see Common Response 4, No Project Alternative Description and Analysis, regarding CEQA requirements and the approach to defining the No Project Alternative. Additional scenarios were not included in the analysis (e.g., 2040 climate change scenario) because, as noted in Appendix 4C, Alternate Regulatory Scenario Sensitivity Analysis, the specific requirements of the Bay-Delta Water Quality Control Plan updates are uncertain as the State Water Board moves through the steps of the environmental review and water quality control planning process. As such, it is possible that the Bay-Delta Water Quality Control Plan could be amended yet again before the Delta Conveyance Project is operational. It should also be noted that the primary purpose of the sensitivity analysis presented in Appendix 4C is to assess whether the magnitude or type of environmental impacts identified in the EIR would change under an alternative regulatory scenario. The scenario described in Appendix 4C is based on DWR's best understanding of potential voluntary agreements and Bay-Delta Water Quality Control

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	This whole Tunnel DEIR and scenario-slinging effort is fraught with wistful, magical thinking and this appendix suggests that at least for the VA provisions it incorporates, all the effort adds to little. First, it examines, as did Appendix 4B, what changes would occur with respect to the existing conditions baseline, without considering the 2040 scenario, so this "sensitivity analysis" takes no obvious account of climate change in reaching its conclusions. This is fallacious.	Plan requirements at the time the appendix was prepared.
401-63	[Att 1:] Second, the VAs [voluntary agreements] are proposed to have an eight-year term (which is just over one-third the length of time that D-1641, our present failing water quality regulatory framework has been in effect), renewable for another seven years, for a total of 15 years. Fifteen years gets us somewhat close to 2040 (perhaps 2039 or 2038 depending on when a new Bay-Delta Plan/VA is adopted and implemented). Arriving at Vas, while a beehive of billable hours for many water attorneys throughout the Delta watershed, has been a mirage since they were announced in mid-2018 and presented in December 2018. For four years the Vas have been a chimera whose rumored twists, turns, "agreements to agree," and vaunted but still invisible outcomes would be superior to whatever regulatory scheme the State Water Resources Control Board could create. And yet - the magical thinking part - this appendix [Appendix 4C] analyzes a comparison to existing conditions across the board, as though the Vas were implemented tomorrow.	Please see response to comment 401-62 regarding the analysis contained in Appendix 4C, Alternate Regulatory Scenario Sensitivity Analysis, the assessment of the voluntary agreements, the timing of both the voluntary agreements, the updates to the Bay-Delta Water Quality Control Plan, and a description of the primary purpose of Appendix 4C.
401-64	[Att 1:] Still, DWR sought an analysis of a chimeric ARSS [Alternate Regulatory Scenario Sensitivity] based on VA [voluntary agreements] provisions in its Tunnel DEIR. It updated two elements of the 2019 VAs modeling effort by reducing SWP [State Water Project] and CVP [Central Valley Project] exports to reflect those in the 2022 VAs MOU, and	The primary purpose of the sensitivity analysis presented in Appendix 4C, Alternate Regulatory Scenario Sensitivity Analysis, is to assess if the magnitude or type of environmental impacts identified in the EIR would change under an alternative regulatory scenario. The scenario described in Appendix 4C is based on DWR's best understanding of potential voluntary agreements and Bay-Delta Water Quality Control Plan requirements at the

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	included a hypothetical Friant VA that would reduce recapture of San Joaquin River Restoration Program flows at SWP and CVP Delta export pumps (in other words, those restoration flows would also contribute to Delta outflow). But there are many flow components of previous VA versions omitted from this analysis, and Appendix 4C acknowledges that "the process to incorporate new diversions into the updated Bay-Delta Plan is not yet developed" though "the VA flows are to be protected from diversion." From this analysis we glean little change in any reservoir storage and stream flows though Alternative 5/Vas and just Alternative 5 (existing condition) flows would reduce Sacramento River flow downstream of "North Delta Diversion" by a few thousand cfs primarily in winter months and in July. [Footnote 74: Tunnel DEIR, Appendix 4C, pp. 4C-5 to 4C-9, Figures 4C-1 through 4C-8 for reservoir storage; pp. 4C-10 to 4C-16, Figures 4C-9 through 4C-16 for streamflow.] A similar impact pattern is visible in the results for net Delta outflow. [Footnote 75: Tunnel DEIR, Appendix 4C, p. 4C-14, Figures 4C-15 and 4C-16.] Indeed a similar pattern is shown for X2, the estuarine water quality objective measured in kilometers from the Golden Gate at San Francisco, which shifts upstream by a few kilometers for Alternative 5's existing condition, but is similar to existing conditions with Alternative 5/Vas. [Footnote 76: Tunnel DEIR, Appendix 4C, p. 4C-15, Figure 4C-17.] In addition to the underwhelming impact of ARSS provisions on Alternative 5 benefits, Alternative 5/Vas exports would have less benefit to total Delta exports in winter and spring months, while having little difference in summer and fall. Alternative 5 without the Vas, would generate on the order of 40 to 50 TAF	time the appendix was prepared. The section titled Alternate Regulatory Scenario Description and Modeling Results provides an explanation of the 2019 voluntary agreement assumptions used to develop this analysis, as well as the two specific elements that were updated. The differences are due to the different operational rules used for the north Delta diversion with respect to modeling voluntary agreements (no north Delta diversions January-June unless outflow is > 29,200 cfs).

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	more in the months of January and February, and yearly would tend to deliver about 250 to 300 TAF annually more in exports than would Alternative 5/Vas. [Footnote 77: Tunnel DEIR, Appendix 4C, pp. 4C-16 to 4C-17, Figures 4C-19 and 4C-20.] While these results might make Vas less attractive to water contractors, the ARSS suggests that applying some VA provisions into operational analysis of Alternative 5 would have a small impact on exports for little gain to other water quality and flow indicators. We conclude from the ARSS appendix to this point that there will be more gains to stream flows, Delta outflow and the Sacramento River without Alternative 5 (or any other alternative), Such futility means that the State Water Resources Control Board should just go ahead with applying unimpaired flow objectives suggested in the 2018 State Water Board framework for Phase 2 - and dispense with both the Tunnel Project and the ARSS.	
401-65	[Att 1:] Furthermore, this appendix [Appendix 4C] examined water quality impacts of the ARSS [Alternate Regulatory Scenario Sensitivity]-that is, Alternative 5/Vas-as compared with Alternative 5. It reveals that Alternative 5 is bad for Delta water quality - at Emmaton, Jersey Point, and Rock Slough. The impact pattern for these two bad ideas (Alternative 5 and Vas) is that Alternative 5 takes a given regulatory framework (whether existing conditions or "Alt Reg" Vas) and renders worse water quality outcomes. Alternative 5 at Emmaton increases violation days by seven percent under present D-1641 rules. The ARSS regulatory framework without Alternative 5, however, reduces water systems' violation days from 556 to 324 at Emmaton, a 42 percent improvement in water quality compliance there. Alternative 5 increases violation days at Emmaton by six percent in combination with the ARSS. Alternative 5 is just bad for water quality there.	The assertions of the comment regarding water quality are not supported by the analysis contained in Appendix 4C, Alternate Regulatory Scenario Sensitivity Analysis. The results show that the probability of exceedance of D-1641 water quality objectives at these compliance locations for Alternative 5 is similar to conditions without Alternative 5 for both existing conditions and the Alternate Regulatory Scenarios. CalSim 3 simulates operations on a monthly timestep; actual decisions associated with real time system operations are conducted on a daily timestep. The small modeled increased frequency of exceedance of objectives relative to the 93-year period of record modeled indicates that Alternative 5 would not be expected to increase the frequency of exceeding Bay-Delta Water Quality Control Plan objectives with actual real-time operations.

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	It's worse at Jersey Point and at Rock Slough. At Jersey Point, placing the ARSS framework over existing conditions would reduce violation days by 30 percent, and at Rock Slough by 20 percent. But add in Alternative 5 and the violation days rise: it worsens Jersey Point violation days by 13 percent, and at Rock Slough by 16 percent. Adding Alternative 5 to the ARSS boosts violation days 24 percent at Jersey Point and 22 percent at Rock Slough. [Footnote 78: Tunnel DEIR, Appendix 4C, p. 4C-22 Tables 4C-3, 4C-4, and 4C-5.] While DWR draws no conclusions in Appendix 4C, we conclude that the Tunnel Project is bad for Delta water quality—and bad for ecosystems and drinking water quality for Delta residents—regardless of the regulatory framework within which it would operate. The Tunnel Project, this ARSS analysis in Appendix 4C shows, is a parasite on Delta freshwater flows, and it is reflected in the increases in violation days that the project's operations add to the regulatory framework within which it would operate.	
401-66	[Att 1:] Concluding Remarks on Chapters 4 through 6, and Chapter 30 In general, DWR's approach to climate change is to take the likelihood of extreme storms and the supplies that could be skimmed from their runoff, and to discount other major climate change effects. It is unrealistic and unwise, however, to pick and choose which climate change effects to analyze when striving to comply with full disclosure laws like CEQA. Reality will bring them all at varying times and intensities. DWR's climate change rationales and modeling of the future for the Delta Tunnel Project is wholly inadequate for ignoring the	Please see responses to comments 401-10, 401-11, and 401-12 regarding the comprehensive analysis of climate change contained in the EIR, which exceeds CEQA requirements, and regarding the use of best available science in the EIR.

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	panoply of extreme heat, expanding hot seasons, and assuming current sea level rise assumptions from other state agencies remain reasonable in light of new scientific information about tipping point elements that we summarize in this comment letter. This Tunnel DEIR was out of date for climate change science when it was released this July. The Tunnel Project is out of step with looming realities of climate change and should be discontinued immediately so that other climate mitigation, adaptation, and resilience investments may be planned and implemented sooner than later.	
401-67	[ATT 1:] Chapter 7, Flooding As we have already discussed above, the DEIR's analyses of sea level rise and extreme storm impacts in actual modeling methods minimize these important aspects of future climate change impacts. Flows in DWR's analytic methods and modeling feed into its treatment of flood impacts from and on the proposed North Delta intakes of the Delta Tunnel Project, for which DWR claims will avoid flooding and provide reliable SWP and CVP deliveries south of the Delta. In the Draft Environmental Impact Report Explained, the Department of Water Resources states that the fundamental purpose of the Delta Conveyance project is to create new intake and conveyance facilities to ensure their reliable operation for SWP and CVP water deliveries South of the Delta.[Footnote 79: California Department of Water Resources, Delta Conveyance Project Draft Environmental Impact Report Explained, July 2022, p. 3, accessible at https://assets.websitefiles.com/627d556b0f4f5370e839b988/62e08f2e9432a72128856e5b_DCP%20Draft%20EIR%20Explained_July%202022_FINAL_ADA.pdf; also Tunnel DEIR, Chapter 2, p. 2-2 to 2-3.] With this in mind, DWR recognizes that the	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available tools and science, and the climate change projections used in the EIR. Please refer to Chapter 4, Framework for the Environmental Analysis, for an explanation regarding how climate change was incorporated into the EIR's analysis. Please refer to Impact FP-1 in Appendix 7A, Flood Protection 2040/2072 Analysis, for an evaluation of potential impacts on water surface elevations in the Sacramento River as a result of the project alternatives under future conditions. This analysis incorporates assumptions regarding changes to hydrology and sea level rise as a result of climate change.

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	project alternatives will address and mitigate for sea level rise and any foreseeable climate change impacts in order to ensure that the project minimizes public health and safety impacts.[Footnote 80: Tunnel DEIR, Chapter 7: Flood Protection, Draft Environmental Impact Report Explained, 2022, p. 3, accessible at: https://cadwr.app.box.com/s/lg4ega6ld9tc2xlt0xshl3kg70bbjc8a.] Modeling in the EIR suggests that there will be very gradual capturing of wet winter flows that on average there will be 0.08-foot increment increase of water surface elevation during flood flows because intakes crowd the channel. The 0.08-foot value is not an accurate depiction of projected climate changes that will occur in the next fifty years. The Tunnel DEIR evaluates the probability of flood and associated impacts from the North Delta Intakes almost entirely based on current climate conditions.	
401-68	[ATT 1:] The Tunnel DEIR fails to disclose accurately the baseline flood risk in the Delta. It is composed of both sea level rise and growing risk of extreme storms. Current Flood insurance rate maps from the Federal Emergency Management Agency (FEMA) are presented in the Tunnel DEIR. The DEIR implies that the current 100- and 500-year floodplains under FEMA are adequately described to address flood concerns but in actuality, the maps have expired and take as long as seven years to revise. A recent Washington Post analysis of videos from residents experiencing destructive floods found that current FEMA mapping as relevant flood destruction occurred in homes far from water sources, and which were unaccounted for in flood insurance rate maps.[Footnote 81: Samuel Oakford, John Muyskens, Sarah Cahlan, and Joyce Shogun Lee, "America Under Water: Extreme floods expose the flaws in FEMA's risk maps," Washington Post, 6 December 2022, more accessible	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, which discusses use of best available tools and science. Please also see Common Response 6, Climate Resilience and Adaptation, which addresses projections for extreme events like droughts and floods; potential impacts of climate change and sea level rise on the study area and its resources; and other aspects associated with the Delta Conveyance Project's ability to offer adaptation and resilience for water delivery to address anticipated climate change impacts. Additionally, Chapter 30, Climate Change, provides an assessment of how the Delta Conveyance Project can enable adaptation to potential climate change impacts. As described in Chapter 2, Purpose and Project Objectives, the fundamental purpose of the Delta Conveyance Project is to restore and protect the reliability of State Water Project deliveries. The proposed project is not a flood control project and does not include any changes in flood control operations, but it has been designed to ensure that intake structures on the Sacramento River and modifying

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	at: https://www.washingtonpost.com/climate-environment/interactive/2022/fema-flood-riskmaps-failures/] Therefore they do not keep up with climate change impacts on flood risk. But by relying on the map, the Tunnel DEIR implies that communities near the North Delta Intakes and lower San Joaquin will experience a less than 1 percent of flood risk presently and indefinitely.[Footnote 82: California Department of Water Resources, Chapter Seven: Flood Protection, Draft Environmental Impact Report Explained, 2022, p. 9, more accessible at: https://cadwr.app.box.com/s/lg4ega6ld9tc2xlt0xshl3kg70bbjc8a].	flood control levees would not reduce the protection afforded by the existing flood control system. Project facilities are designed with future climate change and sea level rise considerations per the Ocean Protection Council's guidelines. In addition, the project is proposing to minimize project site flooding risk by ensuring those sites are protected to withstand current 100-year Federal Emergency Management Agency (FEMA) standards since that is the best information available. Additionally, as discussed in the Areas Subject to Flooding section of Chapter 7, Flood Protection, FEMA is considered an information source of current flood risk information for this project. However, FEMA maps were not used to determine flood risk at project construction sites or to determine needed repairs or alternative flood protection measures that would be necessary during construction. The Delta Conveyance Design and Construction Authority Engineering Project Reports (Delta Conveyance Design and Construction Authority 2022f, 2022g) based the levee vulnerability analyses on criteria presented in guidance from the DWR Flood Hazard Mitigation Plan, Public Law 84-99, and DWR Bulletin 192-82. The project would not have a significant impact on levees maintained by Delta Reclamation Districts, as indicated in Chapter 7, Flood Protection. Levees in the vicinity of project features would continue to be maintained following construction in a manner consistent with current practices.
401-69	[ATT 1:] Additionally, revisions made to FEMA maps can be disputed or rejected by local and state entities if FEMA's changes deem an area incapable of economic development due to flood risk. Given known inadequacies of FEMA flood risk maps, the Delta Stewardship Council's flood hazard projection map for 2050 shows these areas will have a one-in-ten chance of flooding -- NOT one-in-a-hundred, as implied by the FEMA map. Stockton and lower San Joaquin county are also highly sensitive to San Joaquin river inflow assumptions. [Footnote	Please see response to comment 401-68 regarding discussions on FEMA maps, as well as Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available tools and science.

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	83: Delta Adapts, p. 4-13, Figure 4-3, accessible at https://deltacouncil.ca.gov/pdf/delta-plan/2021-06-25-delta-adapts-vulnerability-assessment.pdf.] The DSC's flood projections for communities and cities near the North Delta Intakes like Courtland and Hood show a 2 to 10 percent annual chance of flooding with risk increasing from 18 to 65 percent over ten years under the Flood hazard map for 2085 conditions from the Delta stewardship council -- much higher risk than hinted at by the Tunnel DEIR. [Footnote 84: Delta Adapts, p. 4-14, Figure 4-4.]	
401-70	[ATT 1:] Reliance on the FEMA maps understates the flood threat to Delta communities and adjacent cities leads to environmental justice impacts. Chapter 30 of the Tunnel DEIR shows that Legal Delta communities are majority communities of color and Native Americans. Many are tenants and do not own the land or housing in which they reside. Reliance on outdated flood hazard maps leaves homeowners and renters in communities and cities like Courtland, Hood and Stockton in the dark about dangers from flood risks they face. Tenants are especially at risk as they are not informed on the flood risks that their homes may undergo.	Please see response to comment 401-68 regarding discussions on FEMA maps.
401-71	[ATT 1:] Based on current projections, sea level will increase from 0.6 to 1.1 feet by 2050. Sea level rise beyond 2050 is projected at 1.2 to 2.7 feet with an upper range estimate of 5.8 feet under a moderate emissions scenario. Under an extreme emissions scenario, sea level will increase by 1.7 to 3.4 feet with an upper range of 6.9 feet. [Footnote 85: Delta Adapts, p. 5-4.] Past 2150, global mean sea level (GMSL, an integrative measure of the state of the climate system, including the ocean and ice-covered portions of Earth) [Footnote 86: The National Aeronautics and Space Administration describes GMSL this way: "Global mean sea level provides an integrative	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding use of best available tools and science, and the climate change projections used in the EIR. Please refer to Chapter 4, Framework for the Environmental Analysis, for an explanation regarding how climate change was incorporated into the EIR's analysis. Please also see Common Response 6, Climate Resilience and Adaptation, regarding how the Delta Conveyance Project will provide climate change and sea level rise resilience to the State Water Project. Please refer to Chapter 3, Description of the Proposed Project and Alternatives, and Impact FP-1 in Chapter 7, Flood Protection, for a discussion of the design standards for the intake structures. As noted in

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	measure of the state of the climate system, encompassing both the ocean and cryosphere (ice covered portions of Earth), and it can be viewed as an important indicator of what is happening to the climate in the present and what may happen in the future. Long-term changes in global mean sea level (GMSL) are predominantly driven by three processes: Ice Melt: Due to the warming atmosphere and ocean, ice sheets and mountain glaciers are melting, resulting in the addition of fresh water into the ocean. Thermal Expansion: Ocean water expands as it absorbs trapped heat, causing sea levels to rise. Land Water Storage: Water that is either removed from land (through groundwater pumping, for example) or impounded on land (through dam building, for example) can cause a net change in the total water found in the ocean…"Accessible 22 November 2022 at https://sealevel.nasa.gov/understanding-sealevel/global-sea-level/overview.] will rise even with low warming levels of 1.5 degrees celsius the committed sea level rise associated will be about 3 meters (about 10 feet). For upper range increases due to high warming levels there will be a rise of 6 meters (about 20 feet) for 2 degrees celsius. The rise of sea levels are indisputable and ice mass loss in Greenland can induce sea level increases in the Northwest and Southwest coastal regions of North America.[Footnote 87: National Oceanic and Atmospheric Administration, Global and Regional Sea Level Rise Scenarios for the United States, Section 2: Future Mean Sea Level: Scenarios and Observation-Based Assessments, 2022, p. 7, accessible at https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-reportsections.html.] With sea levels on average expected to increase by seven feet by century's end and the increased intensity and frequency of	Chapter 3, the river intakes, sedimentation basin, and outlet channel would be designed to accommodate a 1.8-foot sea level rise occurring in 2040 (H++) and a 10.2-foot seal level rise in 2100 (also H++). The intakes and associated structure would accommodate a 200-year flood event. Project operations under climate change and sea level rise are evaluated in Chapter 30, Climate Change, and in Appendix 4A, Consideration of 2070 Conditions. This chapter and appendix conclude the project would be operable under the modeled sea level rise conditions. DWR used the H++ scenario as a conservative scenario, given the long-term use of the project as infrastructure that may be subject to climate change and potentially extreme scenarios. In addition, Appendix 5A, Modeling Technical Appendix, Section B, Hydrology and Systems Operations Modeling, Attachment 4, Climate Change Development for Delta Conveyance Process, provides background information on the input DWR considered when developing the 2040 climate change scenario. Please also see Common Response 6 regarding project operations under climate change.

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	extreme storms by the middle, it appears dubious to us that the 0.08 feet flood impact of the tunnel project is even the relevant measure or question of flood impact here. The more relevant question is, why place tunnel intakes along the most flood-powerful river in California, making it flood vulnerable when high king tides coincide with extreme storm runoff?	
401-72	[ATT 1:] Expected increases in extreme storm frequency also brings the daunting consequence of scouring flows during flood events that can facilitate the motion of sediment particles. This raises concern over sediment build-up at the North Delta Intakes. Though the Tunnel DEIR mentions some mitigation for the anticipated normal hydrological build-up of sediment in the Delta, it is evident that there is no solid plan or mitigation tactic put in place to prevent or stop sediment from building up during an extreme storm/flood event. Extreme storm sediment and debris at the Sacramento [sic] is where sediment can build due to raging rivers that can pick up more sediment faster due to peak flows.[Footnote 88: N. Knowles, 2002. Natural and Management influences on freshwater inflows and salinity in the San Francisco Estuary at monthly to interannual scales. Water Resources Research , accessible at doi: https://doi.org/10.1029/2001WR000360.] Depending on how extreme storms are and how quickly they subside due to climate change patterns, sediment could build up in front of the intake sites. Peak sediment and pollutant load occurs during the rising limb of the storm hydrograph.[Footnote 89: M. Karimaee Tabarestani and A.R. Zarrati. 2015. Sediment transport during flood event: a review. International Journal of Environmental Science and Technology, accessible at doi: https://doi.org/10.1007/s13762-014-0689-6.] Deposition of sediment and pollutant loads occurs as peak flows subside. Similar to barrages, intakes also trap sediment and need to be	Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available tools and science, and the climate change projections used in the EIR. Please refer to the Intake Maintenance Activities section in Chapter 3, Description of the Proposed Project and Alternatives, for a discussion of the intake maintenance activities, which include inspection and maintenance of the cylindrical tee fish screens to prevent buildup. The North Delta Intake Facilities Configuration, Construction, and Operations technical memorandum (Delta Conveyance Design and Construction Authority 2022d) in the Delta Conveyance Design and Construction Authority Engineering Project Report describes design and operational provisions and activities required for sediment management and debris buildup. Sediment and debris management for tee screens is not the same as for dams of other types of intake facilities. Note that the bottom elevations of the proposed tee screens are located several feet above the normal river bottom and should be higher than the expected moving bed elevation at each intake site, even during flood flow periods. Surveys conducted to date following high flow events indicate that the river bottom elevations can vary plus or minus several feet in the intake reaches, but such variation does not appear to encroach on the proposed screen locations. Proposed debris fenders and log booms, similar to those used at other intakes and marinas along the river, will deflect the majority of the debris without intervention. However, in rare cases, human intervention may be required to remove debris. Any major debris would be removed as river

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	flushed from time to time even under current climatic conditions.[Footnote 90: C. Gabbud and S.N. Lane. 2016. Ecosystem impacts of Alpine water intakes for hydropower: the challenge of sediment management. WIREs Water 3: 41, accessible at https://wires.onlinelibrary.wiley.com/doi/pdf/10.1002/wat2.1124] The fish screens and sedimentation ponds of the tunnel project intakes could clog badly during extreme storm runoff plus tidal maximum events. In projects where the flow regime is modified, which is the case with the SF Bay Delta waterways, accumulation of sediment at an intake is a common phenomenon that occurs in dams, reservoirs and intake pumps. Indeed, it is well if not widely known that many Sierra Nevada reservoirs have growing sediment buildups in their basins against dams, volumes of which were once transported downstream before dams blocked river channels and slowed river velocities. Extreme storm runoff can mobilize and scour sediment thereby increasing flood and erosion risks to these facilities. Below dams, less sediment load in flow releases increase the erosive power of high flows and contribute to high sediment loads that reach the Delta. Sediment may also be contaminated with pollutants and other contaminants. In the San Francisco Bay, no sites in the area were classified to have no contaminants, instead 77 percent of the area was classified as impacted by pollutants and contaminants. [Footnote 91: Southern California Coastal Water Research Project. 2008. Sediment Quality in California Bays and Estuaries, p. 1 and p.iii, accessible at: https://www.waterboards.ca.gov/water_issues/programs/bptcp/docs/sediment/sedimentqual_baysestuaries.pdf.] In this area, the observed sediment contaminants were three times	conditions allow. Screen cleaning cycles would likely be increased during high flow events. Water level differential sensors would be used to monitor cleaning cycles and operations. If operational design set limits are exceeded, the screen units and associated gates would be closed for protection of the facility, as necessary. Suspended sediments would pass through the intake screens and be deposited in the sedimentation basins as described in the Engineering Project Report and EIR. Sediment dried and removed from the intake sedimentation basins during maintenance would be disposed of at appropriately permitted waste disposal facilities. Sediment that may accumulate in front of and below the tee screens (in the river), although unlikely, would be jetted to help keep the material in suspension and prevent excessive accumulation under the screens. The frequency of this jetting would be adjusted as necessary during high sediment/debris events. In the event of an abnormal accumulation of sediment, emergency dredging may be required and is described in the Delta Conveyance Design and Construction Authority technical memorandum referenced above.

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	greater than that measured in other regions. Sedimentation on its own poses several threats to California's water supply, water quality, environmental health and public safety.[Footnote 92: R.J. Mahoney. 2018. Sedimentation in California Reservoirs: A Long-Term Problem of Immediate Concern. California Water Law Journal, accessible at https://waterlawjournal.com/sedimentation-incalifornia-reservoirs-a-long-term-problem-of-immediate-concern/.] It is no surprise that sediment build up at intake pumps poses a health concern, but when coupled with atmospheric rivers and intense storms, it proves to be a major flaw in project design when it comes to preventing flood impacts as the climate adapts.	
401-73	[ATT1:] Atmospheric river storms are one of the main threats posing flooding concerns as the same hazards present during sunny-day conditions are more prevalent during high water events.[Footnote 93: Delta Adapts, p. 3-17.] Additionally, Delta water levels are influenced by Golden Gate tide levels. Levee failure and extreme seepage can occur in the Delta during these events due to storm surges combined with winter tides and wind waves.[Footnote 94: Peter D. Bromirski, Storm Surges in the San Francisco Bay/Delta and nearby Coastal Locations, 2008, p. 29, accessible at https://www.researchgate.net/publication/266069797_Storm_surge_in_the_San_Francisco_BayDelta_and_nearby_coastal_locations.] Shallow localized flooding can occur around the North Delta Intakes due to natural depressions and flooding conditions can be exacerbated due to highwater events that are caused by stormwater runoff like the megastore that threatens California in the future.[Footnote 95: Tunnel DEIR, Appendix 7A: Flood Protection Analysis, p. 7A-10, accessible at: https://cadwr.app.box.com/s/dcb5klvarbi1hb4e90mrd8coi5zm	Floods have occurred in California and will continue to occur regardless of construction or operation of the proposed project. As described in Chapter 2, Purpose and Project Objectives, the fundamental purpose of the Delta Conveyance Project is to restore and protect the reliability of State Water Project deliveries. The proposed project is not a flood control project, and does not include any changes in flood control operations, but has been designed to ensure that intake structures on the Sacramento River and modifying flood control levees would not reduce the protection afforded by the existing flood control system, as described 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, 2022c). Please see Chapter 7, Flood Protection, which provides an assessment of potential impacts from construction, operation, and maintenance of the Delta Conveyance Project, and includes mitigation measures to reduce potential impacts. Effects on flood protection were assessed by identifying flood risks within the study area to evaluate whether flood protection

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	vht5.] Moreover, these levees will not withstand the pressure from the underappreciated risk of severe floods. Data from UCLA climate scientist Daniel Swain reveals that "the coming superstorm is a rapid procession of atmospheric rivers and will be the ultimate test of the current dams, levees and bypasses in place." It is known that levee failures can also damage key features of the Delta ecosystem existing on the heavily altered landscape, including managed wetlands. Global warming is expected to worsen droughts and storms as warmer air can hold more moisture while the atmospheric rivers will carry more precipitation. After a month, 16 inches of rain will fall across the state.[Footnote 96: Zhong, "Megastorm," p. 2.] The continual burning of fossil fuels will heat up the planet and thus increase the chances of a month-long, state-wide megastorm as temperatures climb another 1.8 degrees Fahrenheit which is what current trends suggest. Studies of this hypothetical megaflood project that $725 billion in property damage and economic destruction will ensue.[Footnote 97: Zhong, "Megastorm," p. 3.] Delta flooding will not only interrupt the conveyance of water for in Delta users who rely on Delta water supply, but will also have impacts on environmental justice communities in cities like Stockton and Antioch where equity is also a factor.[Footnote 98: Delta Adapts, p. xii.] Moreover, the Delta Stewardship Council data shows, "California is already experiencing warmer temperature, more extreme heat, harsher storms that increase flood risk and rising sea levels."[Footnote 99: Delta Adapts, p. 3-10.] With the combination of these factors, there is a high probability that flooding will occur all over the state but will mainly impact cities like Stockton which are underfunded due to their status as a resource extraction region to support other	would be affected temporarily by construction or permanently by operations of permanent facilities of the project. Impacts during operations were evaluated for both existing conditions (i.e., 2020 conditions) and future conditions (i.e., 2072 conditions) with climate change, including corresponding hydrologic change and sea level rise. Please also refer to the Chapter 7 section titled Regional Planning Efforts Related to Delta Flood Management for a discussion of levee programs that DWR manages that are critical to Delta flood risk management, including levee maintenance and improvements. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the California Water Resilience Portfolio, which identifies actions to ensure safe and resilient water supplies, flood protection, and healthy waterways; see also the discussion on levee management.

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	sectors in California's economy. If DWR does not increase flood risk management in San Joaquin County, such extreme storms will threaten the operation of the existing export pumps, which will still be in use the majority of the time despite tunnel construction and operation, and will endanger the lives and homes of environmental justice communities living in one of the most vulnerable flood points in the state. According to the Delta Stewardship Council's Climate Vulnerability Assessment, 17,000 homes will be affected by flooding and $28 billion dollars in damages for critical buildings will ensue for the city of Stockton. Families living at Conway Homes in south Stockton are just one example of communities that will be affected by this. The tunnel distracts DWR from solving this important climate change challenge in the Delta, and eats up funding that should be used to help protect the state's 13th largest city.	
401-74	[ATT 1:] The billions to be spent on the proposed Tunnel Project could be used instead for more effective climate adaptation purposes like flood protection investments throughout the Delta. There are many flood facilities that need funding now and soon but are deferred and delayed actions. For example, the State Plan for Flood Control (SPFC) is a comprehensive plan for levee protection throughout the Delta watershed. Though in theory, levees set to protect cities and sites from Sacramento to Merced County seem like a good fit, DWR ignores deferred maintenance for SPFC levees needed to account for climate change impacts. SPFC includes 1,600 miles of levee and 150 reservoirs that protect the Central Valley. [Footnote 100: DWR 2022 Central Valley Flood Protection Plan Update, pp. xxiv https://water.ca.gov/-/media/DWRWebsite/Web-Pages/Programs/Flood-Management/Flood-Planning-and-Studies/Central-Valley-Flood-Protection-Plan/Files/CVFPP-Updates/2022/Central-	As described in response to comment 401-73 and Chapter 2, Purpose and Project Objectives, the fundamental purpose of the Delta Conveyance Project is to restore and protect the reliability of State Water Project deliveries. The proposed project is not a flood control project and does not include any changes in flood control operations, but it has been designed to ensure that intake structures on the Sacramento River and modifying flood control levees would not reduce the protection afforded by the existing flood control system, as described 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, 2022c). Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, provides a discussion on the state's obligations or commitments to levee maintenance or management throughout the Delta. In addition, please refer to the Chapter 7, Flood Protection, section titled Regional

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	Valley-Flood-Protection-Plan-Update-2022.pdf; see also DWR, Central Valley Flood Protection Plan Conservation Strategy, 2016, pp.6-14 https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Flood-Management/Flood-Planningand-Studies/Central-Valley-Flood-Protection-Plan/Files/CVFPP-Updates/Files/2016-CVFPPConservation-Strategy_ay11.pdf.] This becomes a main point of concern for cities like Stockton, Lathrop and Manteca. The levees that are currently in place were built in the 1920s then updated by the Army Corps of Engineers after the 1944 Flood Control Act before being updated for 200 year level protection after Hurricane Katrina.[Footnote 101: D. Des Jardins. 2017. "Urban Delta: 235,000 people at risk from levee failure in Stockton," accessible at: https://cah2oresearch.com/2017/02/27/urban-delta-264000-people-at-risk-from-flooding-in-stocktonarea/] In the southern Delta, the Lower San Joaquin River Flood Control Project is also part of SPFC facilities and includes levees that protect, or partially protect, urban or urbanizing communities such as Stockton, Lathrop, and Manteca.[Footnote 102: SJAFCA, Lower San Joaquin and Delta South Regional Plan, 2014, pp. 13 and 51 https://www.sjafca.org/home/showpublisheddocument/178/637195161638300000.] The Sacramento River Flood Control Plan (SRFCP) and Lower San Joaquin River Flood Control Project also protect islands within the Delta, such as Sherman Island, Jones Tract, Upper Roberts Island, Middle Roberts Island, and Lower Roberts Island.[Footnote 103: Delta Adapts, p. 7-17, accessible at https://deltacouncil.ca.gov/pdf/delta-plan/2021-06-25-delta-adaptsvulnerability-assessment.pdf.] Non-SPFC levees also protect portions of the deep-water ship channels to	Planning Efforts Related to Delta Flood Management for a discussion of levee programs that DWR manages that are critical to Delta flood risk management, including levee maintenance and improvements.

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	the two major inland ports at Sacramento and Stockton.[Footnote 104: DWR, State Plan of Flood Control Descriptive Document, 2022, Figure A-9. Detail 8: American River from Carmichael Bluffs to Sacramento River at River Mile 50, accessible at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Flood-Management/Flood-Planning-and-Studies/FSSR-and-SPFC/2022-SPFC_508.pdf.] Though updates improved the levees, the infrastructure is still inadequate to provide real protection from atmospheric rivers that are expected to increase in frequency as the climate continues to warm.[Footnote 105: Zhong Raymond, The New York Times, The Megastorm That Could Inundate California, 2022, p. 5, accessible at: https://www.nytimes.com/interactive/2022/08/12/climate/california-rain-storm.html. Hereafter Zhong, "Megastorm."] While SPFC levees are under the jurisdiction of DWR for maintenance and inspection every five years, non-SPFC levees are the responsibility of landowners and local reclamation districts.[Footnote 106: DWR, State Plan of Flood Control Descriptive Document, 2022, pp. 6-4, accessible at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Flood-Management/Flood-Planningand-Studies/FSSR-and-SPFC/2022-SPFC_508.pdf.] DWR recognizes that the levee systems surrounding each Delta island along the central, eastern, and Bethany Reservoir alignments (where various facilities are located) provide the first line of defense against flooding.[Footnote 107: California Department of Water Resources, Appendix 7A: Flood Protection, Analysis, 2022, p. 7A-9, accessible at: https://cadwr.app.box.com/s/dcb5klvarbi1hb4e90mrd8coi5zmvht5] However, this assumes that the levees are continually updated to protect against climate change conditions.	

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	The main issue that local flood agencies and the entities in charge of maintenance of SPFC levees face is that they lack the proper funding for such projects. For every ten dollars Sacramento receives for flood control, Stockton only gets one dollar. When local flood agencies are attempting to garner enough funding for both SPFC and non-SPFC levees, it is clear that the issue behind funding is tied to the economic investment of a certain area outside of flood infrastructure improvements. For instance, when looking at the Mossdale project under the San Joaquin Area Flood Control Agency's (SJAFCA) belt, the existing plan to meet the state requirements is to (1) repair the ongoing Levee Seepage Repair Project (LSRP); and (2) SJAFCA Levee Improvements to achieve 200-year flood protection project. The estimated cost for this project is $270 million and is expected to come from the following resources: a regional development impact fee, an assessment of all benefiting properties, the Mossdale Tract Enhanced Infrastructure Financing district (EIFD), and remaining funds from the completion of RD 17's Levee Seepage Repair.[Footnote 108: San Joaquin Area Flood Control Agency, Reducing Flood Risk for the Mossdale Tract, 2019, accessible at: https://www.sjafca.org/projects/mossdale-tract.] Chris Elias, executive director of SJAFCA, notes that, "If the levees were to be strengthened, the areas behind them often become attractive for development (fancier homes, bigger buildings, more people).[Footnote 109: Zhong Raymond, The New York Times, The Megastorm That Could Inundate California, 2022, p. 7, accessible at: https://www.nytimes.com/interactive/2022/08/12/climate/california-rain-storm.html] In other words, federal agencies	

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	consider recreational and other economic investments over saving homes and lives. Not funding infrastructure projects that induce growth in flood prone areas is a huge issue as it is almost impossible to raise funds for a local levee especially if it is difficult to justify economic activity or facilitate growth from the project. That becomes evident when analyzing a large area like south Stockton (one of San Joaquin's major cities) as flood protection projects have been on pause for years because "the Army Corps of Engineers fears it would spur growth." DWR projects that a $30 billion investment is needed to keep the Central Valley safe, yet in the last fifteen years, the state has only allotted $3.5 billion.[Footnote 110: R. Zhong, "Megastorms," p. 7.] Even without the funding or climate change flood protection improvements, DWR claims that the new SPFC levee would extend to existing levees at the north and south ends of the intake structure to ensure that there is proper flood protection around the site, surrounding areas and down into structure for a 200-year flood event due to sea level rise. However, that is not the case as the current RD 17 levees protecting the Mossdale Tract Area do not provide a 200-year flood protection level as required by state law.[Footnote 111: Tunnel DEIR, Chapter 7, p. 7-39, accessible at: https://cadwr.app.box.com/s/lg4ega6ld9tc2xlt0xshl3kg70bbjc8a.]	
401-75	[ATT 1:] The Tunnel DEIR acknowledges that Stockton will be affected by Delta flooding as the region is dependent on Delta water supply. Though inland, the Delta is vulnerable to rising seas. The stability of the levees protecting the community are tested daily by tides, river inflows, and a rising sea level. Stockton is a port city surrounded by bodies of water with decaying levee systems that were built long ago, before climate change and water diversion infrastructure was set in	Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose of the project. Although the Delta Conveyance Project is not a flood control project, it would not affect current or future flood control activities within the Delta. The levee improvements discussed in the EIR will be made following the appropriate guidelines, design standards, and permitting requirements. These standards and guidelines establish minimum criteria for levee design and maintenance. Levee improvements will be conducted under the US Army Corps of Engineers and/or Central

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	place. These levees will not withstand the pressure from the broadly under-appreciated risk of severe floods. Additionally, levee failure could degrade Delta water quality if waters rush into a heavily subsided Delta island, pulling higher-salinity water, mainly from direct tidal action. More importantly, there is no accountability to ensure that levee improvements are made as DWR relies on several entities (local and federal agencies) to make the appropriate decisions and adjustments when the funding is not adequate in vulnerable Delta flood point areas like San Joaquin County. This project cannot properly be executed without ensuring that its impacts and the lasting impacts of climate change are not fully addressed or mitigated.	Valley Flood Protection Board permitting processes, which require the use of the 1957 Design Profiles to ensure levee functions. See Chapter 7, Flood Protection. Please also see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the California Water Resilience Portfolio, which identifies actions to ensure safe and resilient water supplies, flood protection, and healthy waterways. Common Response 8 also provides a discussion about levee management.
401-76	[ATT 1:] Lastly, the Tunnel DEIR should address the degradation of levee roads due to high volume truck traffic during tunnel related construction. It will add another cost to maintain these roads to ensure that flooding does not occur once the new intakes become operational. (Actually, the roads will have to be built up continuously during the 12 to 14 long years of construction. Will DWR and CalTrans care about levee roads once it's over?) Current flood prevention measures are inadequate and generalized and thus need further analysis to ensure the protection of the communities impacted.	The comment assertions regarding the significance of impacts on flood control and drainage are not supported by the analyses contained in Chapter 10, Geology and Seismicity. Please refer to Impact GEO-5 in Chapter 10 regarding construction truck traffic impacts on levee stability. With very few exceptions, the conceptual project design avoids the use of existing levees as haul routes. The location of levees and project access roads is provided in Chapter 10 in the figure titled Levees Near Access Roads and Levee Access Roads. As described under Impact TRANS-3, in Chapter 20, Transportation, roads, bridges, and interchanges were evaluated to identify facilities that would need to be improved to accommodate construction traffic in a manner to protect the continued use of those facilities in a safe manner. Impact GEO-5 in Chapter 10 analyzes the potential for the use of heavy equipment to damage roads and found that project construction would not result in ground failure. Additionally, as described in the Potential Future Field Investigations technical memorandum for the central and eastern alignments (Delta Conveyance Design and Construction Authority 2022e:24), equipment for monitoring movement and settlement during

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		levee repairs and new levee construction would be installed during construction. As described in Chapter 3, Description of the Proposed Project and Alternatives, and Chapter 23, Air Quality and Greenhouse Gases, access roads would be repaved during and following construction, as needed due to construction activities; and periodically following construction for maintenance routes. Levee roads along State Route 160 would not be used for operations and maintenance traffic related to the intakes. The Intake Haul Road constructed to the east of the intakes would be maintained by DWR to provide for all operations and maintenance activities at the intakes. DWR will also coordinate with Caltrans regarding roads under their jurisdiction (e.g., State Route 160), and Caltrans will continue to have oversight over these roads once construction is completed.
401-77	[ATT 1:] There is insufficient evidence and analysis in the Tunnel DEIR that the new intakes will not be affected by sea level rise from intense heavy rains due to climate change. Its modeling suggests that there will be very gradual capturing of wet winter flows that on average there will be 0.08 increment increase of sea level rise (under Alternative 5) because intakes crowd the channel.[Footnote 112: Under Alternatives 1, 3, and 5, WSEs for the 100- and 200-year flood event would increase by a 28 maximum of 0.08 foot (RM 45.6; see Figure 7-2 for the corresponding location) in the river reaches 29 with urban levees and 0.10 foot (RM 40.0) in the river reaches with non-urban levees when 30 compared to existing conditions (Table 7-2). p. 7-40.] Sea level rise during and after construction are projected to have little to no significance with a 0.08 increase. Sea-level rise will displace and raise some small amount of water but this analysis completely ignores massive flooding as a whole during and after construction. DWR's analysis reports on average increases while ignoring worst-case scenarios for	Please refer to Chapter 3, Description of the Proposed Project and Alternatives, and Impact FP-1 in Chapter 7, Flood Protection, for a discussion of the design standards for the intake structures. As noted in Chapter 3, the river intakes, sedimentation basin, and outlet channel would be designed to accommodate a 1.8-foot sea level occurring in 2040 (H++) and a 10.2-foot sea level rise in 2100 (also H++). Note that the H++ Scenario is considered an extreme risk aversion scenario and DWR conservatively used this in its modeling for design. As described in Chapter 2, Purpose and Project Objectives, the fundamental purpose of the Delta Conveyance Project is to restore and protect the reliability of SWP deliveries. Although the Delta Conveyance Project is not a flood control project, it has been designed to ensure that intake structures on the Sacramento River and modified flood control levees have been designed to maintain the existing levels of flood protection. The intakes and associated structure would also accommodate a 200-year

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	flood impacts and damages.	flood event as described in the Intake Flood Management technical memorandum and the Levee Vulnerability Assessment technical memorandum (Delta Conveyance Design and Construction Authority 2022a, 2022c).
401-78	[ATT 1:] Additionally there is no evidence in the Tunnel DEIR to suggest that the Sacramento River intakes will not succumb to flooding thus raising concerns for Delta communities like Clarksburg, Locke, Isleton, Courtland, and Hood which need protection from flooding induced by the tunnel and climate change. Environmental justice communities in the North Delta are also at risk due to possible sediment build-up at the intakes, while in Stockton the onset effects of climate change that will put our current levees to the test. Instead, the state and DWR need to sit down with SJAFCA and environmental justice communities affected by potential flooding to discuss allocation of their resources and time.	Please see response to comment 401-72 for a discussion regarding sediment management and response to comment 401-77 regarding the intakes ability to accommodate sea level rise and maintain the existing levels of flood protection for Delta communities.
401-79	[ATT 1:] The Tunnel DEIR makes it clear that the project is meant to "help" the Delta while ignoring needed levee improvements in the north, central and south Delta. There is an urgent need to improve existing Delta conditions outside of this project first, to ensure adequate flood protection. Yet, DWR simultaneously downplays their calculations concerning climate change effects on sea level rise and related water elevations while needlessly inflating confidence in mitigation measures. It is time that DWR makes protecting the lives of Delta residents from flooding as much as they prioritize export.	Please see Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, regarding the California Water Resilience Portfolio, which identifies actions to ensure safe and resilient water supplies, flood protection, and healthy waterways; see also the discussion about levee management. Please also refer to the section in Chapter 7, Flood Protection, titled Regional Planning Efforts Related to Delta Flood Management, for a discussion of levee programs that DWR manages that are critical to Delta flood risk management, including levee maintenance and improvements. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available tools and science, and the climate change projections used in the EIR, as well as the adequacy of mitigation measures.

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401-80	[ATT 1:] The Tunnel DEIR makes clear that the project is meant to "help" the Delta while ignoring needed levee improvements in the north, central and south Delta. DWR needs to re-allocate their resources for levee upgrades instead of focusing on the tunnel project in order to protect Delta residents from the current and projected climate change conditions (such as ark storms, sea level rise, etc.) that will pose a threat to current levee infrastructure.	As described in Chapter 2, Purpose and Project Objectives, the fundamental purpose of the Delta Conveyance Project is to restore and protect the reliability of SWP deliveries. The proposed project is not a flood control project but has been designed to ensure that intake structures on the Sacramento River and modifying flood control levees would not reduce the protection afforded by the existing flood control system. The assertion that DWR ignores the need for levee improvements is unfounded. As described in Chapter 7, Flood Protection, DWR oversees and provides funding to levee maintaining agencies to protect and improve critical levees through the Delta Levees Maintenance Subventions Program and the Delta Special Flood Control Projects Program. These programs and funding opportunities are independent of the project and will continue regardless of the approval of the project. Please also refer to Common Response 8, Relationship to Other Plans, Projects, Policies, and Programs, for discussions of the California Water Resilience Portfolio and levee management. The assertion that the EIR did not analyze flood management facilities is not supported by the EIR. Chapter 7, Flood Protection, considers flood management systems including downstream channels using the DWR's CEQA criteria and 1957 USACE levee design profile assessment as detailed in Appendix 7B, Evaluation against U.S. Army Corps of Engineers 1957 Design Profiles. Where levee upgrades are necessary for project implementation, such as Lower Roberts Island or Bouldin Island, they would be improved to current appropriate standards, such as the Delta-specific Public Law 84-99 standards. Chapter 10, Geology and Seismicity, discusses existing conditions, faults, and areas susceptible to levee failure.
401-81	[ATT 1:] The DEIR inflates confidence in mitigation measures while also suggesting that their analyses on sea level rise are accurate and true, but they do not meet current climate projections and worst-case scenarios. Furthermore, sediment	The assertions that the analysis does not meet current climate projections and worst-case scenario are not consistent with the analysis in the EIR. As noted in Chapter 3, Description of the Proposed Project and Alternatives, the river intakes, sedimentation basin, and outlet channel would be

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	buildup can occur at the North intakes and will pose a flood threat to North Delta communities and DWR must develop a more comprehensive mitigation strategy to prevent buildup of sediment and fish in their screens and consequently the intakes. The dangers of flood are looming over Delta residents and are only expected to worsen, therefore there is an urgent need to shift the focus on how the state can properly fund the flood risk management projects first, before using up resources for a tunnel that will only exacerbate current flood and climate threats.	designed to accommodate a 1.8-foot sea level occurring in 2040 (H++) and a 10.2-foot seal level rise in 2100 (also H++). The intakes and associated structure would accommodate a 200-year flood event. Note that the H++ Scenario is considered an extreme risk aversion scenario and DWR conservatively used this in its modeling for design. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the use of best available tools and science, and the climate change projections used in the EIR, as well as the adequacy of mitigation measures. Please see response to comment 401-72 for a discussion regarding sediment management. Please also refer to the Intake Maintenance Activities section in Chapter 3 and the Intakes Operations and Maintenance Equipment and Facility Needs technical memorandum (Delta Conveyance Design and Construction Authority 2022b) in the Engineering Project Report, which explains that unlike with vertical flat-plate screens, sediment does not accumulate in front of the cylindrical tee-screen intakes. Common Response 9, Hydrologic Modeling and Approach, provides an explanation of the future climate change scenarios selected by DWR and incorporated into the hydrologic modeling effort. The project has been designed to ensure that intake structures on the Sacramento River and modifying flood control levees would not reduce the protection afforded by the existing flood control system.
401-82	[ATT 1:] Chapter 9, Water Quality Water quality is at the heart of Tunnel Project impacts. The project's "footprint" is large in the Delta for both its construction and operational period effects. This reality is	The EIR has been prepared in compliance with CEQA and evaluates the full range of potentially significant environmental impacts and a wide variety of resources, including water quality, that may result from construction and operation of the alternatives. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the requirements of mitigation measures under CEQA, the enforceability of mitigation measures under CEQA, and the use and

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	dismissed in the Executive Summary of the DEIR where all 17 Tunnel project water quality impacts are deemed less than significant, and only one—Impact WQ-6, relating to mercury impacts from Tunnel operations effects—is to be mitigated by a mercury monitoring and management plan. We remind DWR that it is the implementation of such a plan not its proposing that complies with CEQA.	incorporation of mitigation measures throughout the EIR, including Chapter 9, Water Quality. Mitigation Measure WQ-6, which requires preparation of site-specific mercury management plans, incorporates adaptive management for DWR to take action when mean mercury concentrations in fish tissues collected within and immediately adjacent to the new tidal habitat are significantly greater than mercury concentrations in tissues of the same species collected from appropriate reference habitats. These actions will be developed in coordination with the State Water Board and Central Valley RWQCB and guided by these regulatory agency standards related to mercury concentrations.
401-83	[ATT 1:] Mercury is, of course, a legacy contaminant embedded in Delta channel sediments since the gold rush 170 years ago. Disturbance of mercury can lead to bacterial transformation of elemental or ionized mercury into methyl mercury. This form becomes bio-available and can be accumulated into tissues of a variety of aquatic organisms. Some of these could be consumed by birds, mammals, and humans. [Footnote 113: Tunnel DEIR, p. 9-114, lines 38-46, p. 9-115, lines 1-5.] In-channel construction and ecosystem restoration activities could mobilize methylmercury contamination if not properly and consistently mitigated. Construction of intakes in the north Delta and construction activities associated with Bouldin Island's "compensatory mitigation" actions are two concerning areas we have that the mercury management and monitoring plan must mitigate to prevent methylmercury contamination.	In Chapter 9, Water Quality, Impact WQ-1 (construction) determined that construction impacts would be less than significant. Appendix 3B, Environmental Commitments and Best Management Practices, includes the development of erosion and sediment control plans to address construction-related water quality effects. Potential impacts associated with compensatory mitigation and potential for mercury loading from Bouldin Island are evaluated in Impact WQ-6 (mercury). Impact WQ-6 describes how Bouldin Island wetlands would not be hydraulically connected to adjacent Delta waterways and discharges would be managed to not contribute additional mercury loading to the Delta. Please also refer to response to comment 401-82 and 401-84 regarding the analysis of mercury in the EIR and regarding Mitigation Measure WQ-6.
401-84	[ATT 1:] As with flooding impacts, water quality impacts appear to be modeled along the same narrow, gradualistic basis as with surface flows (Chapter 5), and water supply (Chapter 6). Impact	Please see response to comment 401-83 regarding impacts related to mercury associated with project construction. For the reasons provided in response to comment 401-83 and in Impact WQ-1, construction-related impacts on selenium, legacy pesticides, or other contaminants residing in sediments would be less than significant. Impacts WQ-6 (mercury), WQ-10

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	analysis recognizes no role for the presence of new north Delta intakes having disturbed channel sediments at any point in the Tunnel's construction period, coupled with high runoff from extreme storm events that may scour channel beds and mobilize contaminants like methylmercury and bioavailable selenium. Any legacy pesticide contaminants could also become bioavailable ecologically and in drinking water supplies drawn from Delta channels. Chapter 9 does a poor job at best of disclosing where these and other contaminants as well as the most at-risk small community drinking water systems may likely co-occur in Delta channels so that decision makers may realistically assess risks of Delta tunnel intakes construction and operation. California's drinking water maximum contaminant load for mercury is 2 µg/L while in the California Toxics Rule it is set at 0.05 µg/L in water. It appears from Appendix 9A screening analysis that there is no set standard for methylmercury, which is far more toxic than elemental mercury. [Footnote 114: Tunnel DEIR, Appendix 9A, Table 9A-6, p. 9A-24.]	(selenium), and WQ-11 (pesticides) address impacts from project operations. These analyses found less than significant impacts for mercury, selenium, and pesticides associated with operation of the Delta Conveyance Project. As described in Impact WQ-6, total mercury concentrations in the Delta under existing conditions and project operations are below the drinking water maximum contaminant level (2 µg/L) and the California Toxics Rule (CTR) criterion for the protection of human health from drinking water and consumption of organisms (0.05 µg/L). Furthermore, modeled fish tissue methylmercury concentrations under existing conditions and for project alternatives do not substantially differ. As described in Impact WQ-10, total selenium concentrations in the Delta under existing conditions and project operations are well below CTR criteria and the North Bay Selenium Total Maximum Daily Load (TMDL). As described in Impact WQ-11, the changes in Delta source waters would not significantly affect pesticide concentrations in the Delta. Impact WQ-6 evaluated potential increases with mercury associated with compensatory mitigation activities in the Lower Yolo Bypass and Cache Slough Complex. The analysis describes multiple studies which suggest a low potential for increases in methylmercury in the waters and fish tissues in restored tidal wetlands, but acknowledges conditions are site-specific and vary over time and therefore may not be predictive of mercury methylation in all tidal wetlands created within the Delta. Therefore, in an abundance of caution, DWR determined mercury related to compensatory mitigation to be potentially significant. As a result, Mitigation Measure WQ-6 will be implemented requiring the development and implementation of a mercury management and monitoring plan to minimize the generation of methylmercury within the new tidal habitats by siting of the compensatory mitigation projects, design of the compensatory mitigation projects, source control and management measures to minimize mercury bioaccumulation.

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401-85	[ATT 1:] Selenium contamination can also result from soil and sediment disturbance as well as water column partitioning in which elemental or ionic forms of aqueous selenium become bio-available and accumulate upward from the base of benthic food webs. While proximate selenium contamination risk is greatest during extended droughts, new levels of selenium are mobilized for deposition downstream by storm events causing erosion in selenium-rich soils of the western San Joaquin Valley; past hydrologic and selenium monitoring indicate that even with the Grassland Bypass Project capturing and diverting runoff away from Mud Slough and Salt Slough, such pulses of selenium loading supply new increments of available selenium to downstream San Joaquin River and south Delta channels where, once flow peaks subside and residence time of water increases, selenium partitioning resumes. Such events, as they may affect both methylmercury and selenium, are not examined in the DEIR. The DEIR fails to adequately address these pathways for methylmercury and selenium contamination in the Delta. North Delta intake operations can also result in exportation of methylmercury and selenium contaminants, the risk of which is inadequately examined in the DEIR.	The comment assertions that the Draft EIR did not examine methylmercury and selenium are not supported by the analyses in the Draft EIR. Project operations would not affect San Joaquin River operations and flows, as described in Chapter 5, Surface Water. Therefore, the project would not affect these sources of selenium. Concentrations of selenium and methylmercury at Delta export locations, including Banks and Jones Pumping Plants, as well as the north Delta intake, were modeled and assessed in Impacts WQ-6 (mercury) and WQ-10 (selenium). Modeled results showed concentrations did not differ substantially with project operations relative to existing conditions and impacts would be less than significant.
401-86	[ATT 1:] The rest of our water quality comments will address the interactive effects of harmful algal blooms, reduced Delta flows, and north Delta intake operations. The Port of Stockton operates two aeration facilities in the channel, constructed by DWR in 2007, to improve dissolved oxygen concentrations. The Port of Stockton operates the aerators whenever dissolved oxygen concentrations drop	Chapter 9, Water Quality, provides a complete analysis of the project impacts on Cyanobacteria Harmful Algal Blooms (CHABs) in the Delta. The CHAB impact analysis concludes that the project alternatives would not affect the factors associated with CHAB formation in the Delta: water temperature, nutrients, turbulence, or mixing clarity. There could be some increases in residence time at some Delta locations in some months, but these increases would not be sufficient to cause increased frequency or magnitude of HABs. As shown in the residence time modeling results,

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	below 5.2 mg/L from December through July, or below 6.2 mg/L from August through November. [Footnote 115: Tunnel DEIR, Chapter 9, p. 9-13, lines 32 to 34] We appreciated that the DEIR acknowledges the Port of Stockton's dissolved oxygen (DO) aerators help address the DO impairment in the Deep Water Ship Channel (DWSC). In the past absent the DO aerators, fish kills occurred in the DWSC, creating a barrier to both escaping adult salmon looking to spawn, and juvenile salmonids heading to the Bay and Pacific Ocean. Surviving fish would have to deplete precious fat reserves when rerouting to avoid the DWSC. Whether the DO problem in the DWSC killed fish directly or not, it had a negative impact on San Joaquin River salmon survival. In the current era of harmful algal blooms (HABs), the DEIR fails to acknowledge that these same aerators may represent a mitigation for bolstering DO concentrations may now contribute to aerosolizing HAB cells and toxins—in effect converting a serious water quality problem into an air quality problem as well. It is hypothesized that those same bubblers distress the surface of the water enough to aerosolize toxins. RTD [Restore the Delta] is working with University of North Carolina HABs researchers to confirm, but it appears to be a case of a solution to one problem now creating a new problem. Should air testing by UNC find links between air and water, this will represent new information relating to the Delta Tunnel Project that will require that impacts from north Delta intake operations be re-examined and a supplemental environmental impact report prepared to address them.	residence time in the vicinity of Stockton would generally decrease relative to existing conditions. Additional information on the potential for aerosolization of CHABs and associated cyanotoxins would not change the analysis contained in Impact WQ-14. This is because the project alternatives are not expected to substantially increase microcystin or any other cyanotoxins in the Delta, relative to existing conditions at the Delta assessment locations. The project would have a less than significant impact on the frequency and magnitude of CHABs in the Delta, including the Stockton area.

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401-87	[ATT 1:] The situation with DO [dissolved oxygen] aerators raises questions about Tunnel Project operational flow effects. By removing flow in the Sacramento River, there will be less flow remaining to enter the Delta Cross Channel when that facility is open (presently for much of the summer and fall when migrating salmonids are largely absent), and whose flows enter the Central Delta and under low flow conditions may result in less fresh water mixing as far south and east as the DWSC [Deep Water Ship Channel] and downtown Stockton than would now occur in the absence of north Delta intake operations. The reduction in these fresher flows would be replaced by poorer quality flows (that is, more saline flows) from either the San Joaquin River or from tidal action. We find no analysis of this component of flow in Chapter 9 of the DEIR. It represents a direct operational impact of the north Delta intakes on residence times and flows of water in this part of the Delta. Residence times are an important factor recognized to contribute to blooms of harmful cyanobacteria.	A complete assessment of the alternatives' effects on dissolved oxygen (DO) is provided in Chapter 9, Water Quality, Impact WQ-9. The assessment addressed the primary factors that affect DO levels in surface waters (e.g., temperature, velocity, nutrients) and found impacts would be less than significant. Furthermore, Chapter 9 evaluates the impact of the alternatives on the five primary factors (i.e., temperature, flows/velocities, residence time, irradiance, and nutrient availability) that have been related to the emergence and subsequent growth and accumulation of cyanobacteria harmful algal blooms (CHABs) in the Delta in Impact WQ-14. The chapter specifically evaluated these five factors at multiple locations throughout the Delta that experience CHABs, including the Stockton area (please also see response to comment 401-86). Hydraulic residence time at various locations within the Delta was assessed directly using the QUAL module of the DSM2 model, which is an appropriate model to assess site-specific residence time in the shallow and tidal Delta.
401-88	[ATT 1:] It is well-established scientifically that nitrogen and phosphorus and their bio-available nitrate and phosphate forms are also key nutrient factors in HAB production. We finding it alarming then to read in the Delta Tunnel Project DEIR that Nitrogen and phosphorus water quality objectives have not been developed or adopted into WQCPs [Water Quality Control Plans] for waterbodies within the study area. [Footnote 116: Tunnel DEIR, Chapter 9, pp. 9-17, lines 12 to 13.]	There are no numeric state water quality objectives or federal water quality criteria regulating nitrogen and phosphorus concentrations in the EIR study area water bodies. Certain state and federal agencies are responsible for establishing water quality objectives for water bodies, including the State Water Resources Control Board and the U.S. Environmental Protection Agency. The assessment of project operations impacts on these nutrients in Chapter 9, Water Quality, Impact WQ-7 addressed potential shifts in concentrations and whether the changes would adversely affect beneficial uses. Impact WQ-7 concluded that algal and macrophyte growth rates are not phosphorus- or nitrogen-limited in the Delta because these nutrients are available in excess. Thus, potential minor increases or decreases in these nutrient concentrations that may

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	High nutrient concentrations have also been suggested as facilitating the spread of invasive macrophytes throughout the Delta; however, at this time the exact role of nutrients in driving macrophyte expansion remains unknown. [Footnote 117: Tunnel DEIR, Chapter 9, pp. 9-17, lines 42 to 44.] The first quote is alarming because it describes an egregious omission from Delta water quality regulation generally. We note that Appendix 9A at least finds that the State of California has drinking water quality objectives for nitrite and nitrate, but not phosphorus. [Footnote 118: Tunnel DEIR, Appendix 9A, Table 9A-6, p. 9A-24.] Neither regional water board plans nor objectives of the California Toxics Rule regulate these nutrients. These two nutrients are drivers for HABs and if the Tunnel Project is built, the impact of both the north Delta intakes and the Bouldin Island Compensatory Mitigation Plan on nutrient discharges, flows, and stagnant water must be carefully considered. The second quote is concerning because it makes clear that high nutrient concentrations facilitate spread of invasive macrophytes (many of which are also known as submerged aquatic vegetation). We appreciate this passage acknowledging the importance of ammonium (NH3+) nutrient food sources for HAB formation. This section however fails to acknowledge that nitrate and phosphate nutrients stimulating invasive macrophage growth contributes to greater water clarity and greater penetration of sunlight into the water column adjacent to these plants. Invasive macrophyte growth eases greater sunlight access into the water column, another key factor in HAB formation because of cyanobacteria's reliance on	occur under the project alternatives would have negligible, if any, effects on macrophyte and algae growth in the Delta. The effects of the Compensatory Mitigation Plan (CMP) on nutrients also were addressed in Impact WQ-7, which found that the CMP would not cause nutrient levels in the Delta to be substantially higher than under baseline existing conditions. The cyanobacteria harmful algal bloom (CHAB) analysis in Impact WQ-14 also considered the potential for changes in nutrient levels in the Delta and found that small increases in nutrients at some locations in some months would not contribute to CHAB growth because nutrients are not a limiting factor under existing conditions and would not be with project operations. The Nutrients section of the Chapter 9 setting was edited to state that factors other than nutrients appear to be contributing to extensive aquatic plant growth, based on the Southern California Coastal Water Research Project Technical Report 870 prepared by Boyer and Sutula (2015). None of the revisions to the existing setting in Chapter 9 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.

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	photosynthesis when other factors are present. This portion of the "setting" section of Chapter 9 of the DEIR should be revised and clarified to reflect this indirect relationship between nutrients, macrophytes, and sunlight as factors in HAB formation.	
401-89	[ATT 1:] [M]onitoring for cyanotoxins has been dependent on funds that support bloom response, special projects, or opportunistically at other Delta locations … As such, Delta CHAB and cyanotoxin monitoring has generally been inconsistent and incomplete in terms of geographic coverage, which makes it difficult to assess changes over time. Nevertheless, the California Cyanobacteria and Harmful Algal Bloom Network Harmful Algal Bloom incident report portal and published studies suggest that cyanotoxins are increasing since they were first detected in the Delta. [Footnote 119: Tunnel DEIR, Chapter 9, p. 9-27, lines 27 to 31.] We appreciate as well that DWR recognizes that HABs monitoring needs funding for more research. When we can't put together a solution for HABs, why are we discussing changing Delta hydrology and ecology with a huge new Tunnel? We find this confusing and perverse.	This comment discusses current CHAB monitoring efforts in the Delta and a lack of a comprehensive solution for the CHAB problem in the Delta. The comment does not raise a significant environmental issue associated with the Delta Conveyance Project or the CHAB analysis presented in Chapter 9, Water Quality. Please see response to comment 401-87 regarding the multiple factors evaluated in the CHAB analysis contained in Chapter 9, Impact WQ-14, and the less-than-significant impact determination related to CHABs under project alternative operations.
401-90	[ATT 1:] The Tunnel DEIR also comments: Microcystis blooms and associated microcystins have occurred in the SWP/CVP export service area waterbodies including San Luis Reservoir. However, only low levels (i.e., <1 µg/L reportable limit) of microcystins have been measured in Delta	This comment discusses current CHAB issue related to CHAB presence in the SWP/CVP export area and a lack of a comprehensive solution for the CHAB problem in the Delta. The comment does not raise a significant environmental issue associated with the Delta Conveyance Project or the CHAB analysis presented in Chapter 9, Water Quality. Please see response to comment 401-87 regarding the multiple factors evaluated in the CHAB analysis contained in Chapter 9, Impact WQ-14, and the less-than-significant impact determination related to CHABs under project

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	waters exported from Banks and Jones Pumping Plants to the SWP and CVP. [Footnote 120: Tunnel DEIR, Chapter 9, p. 9-28, lines 1 to 3.] DWR also makes a point that's concerning because the quote above indicates that low concentrations of microcystis are making it through the export pumps. Suddenly the threat of HABs problems increase as the water exported south becomes stagnant in storage. Combine this with nutrient loading, which could still find a way down those pipelines, and heat; suddenly the bloom threat isn't just a Delta concern anymore. We need to solve the problems at the Delta's source before we start exporting MORE water down south.	alternative operations.
401-91	[ATT 1:] Analyses of reverse flow effects upstream of the project alternative intakes indicates that a very slight increase in reverse flows would be associated with intake operations. The results of these analyses are provided in Chapter 5, Surface Water and the potential for effects on the Freeport Regional Water Facility and Sacramento River Regional Wastewater Treatment Plant operations are addressed in Chapter 21, Public Services and Utilities. [Footnote 121: Tunnel DEIR, Chapter 9, p. 9-31, lines 27 to 31.] We think this is a weak assessment of the risk and likelihood of reverse flows impacting the north Delta intakes. Reverse flows in the vicinity of Freeport from north Delta intakes operation are not an impact that would occur tomorrow or even two years from now, but one that would occur 12 to14 years beyond the point at which the Delta Tunnel actually obtains sufficient approvals to begin construction work. Final approvals	Reverse flows in the Sacramento River upstream of the Delta Conveyance Project intake occur naturally, especially during low flows in the Sacramento River. 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 Chapter 5: Frequency of Duration of Reverse Flow Events and Frequency of Reverse Flow Distances; these 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. 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 response to comment 401-51 through 401-53 regarding sea

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	could take several more years, in which case, the Delta tunnel project would begin operations around 2040. The potential for extreme heat and extended heat seasons in Central Valley summers and early autumns undermines DEIR blithe assurances that reverse flow risks would be "very slight." We have already commented on DWR's claim that even with sea level rise, the north Delta intakes will be located above any point of inundation from rising sea levels at Clarksburg and Courtland (see "Sea Level Rise and the North Delta Intakes' 'Invulnerability'" above). Suffice to say that DWR's analysis does not account for the type of geology comprising the "shoal" at the bend in the Sacramento River near Rio Vista.	level rise and the north Delta intakes.
401-92	[ATT 1:] But reverse flows are already occurring during drought in the Delta. Just three months ago, early on September 7, 2022, during the recent extreme heat event that California experienced, electrical conductivity (a common salinity measure) just downstream of Isleton in the central Delta, was measured at 912.61 µS/cm at 3:00 in the morning, and the day before the value was about 840 µS/cm. At this point in time, tidally unfiltered flow downstream of Isleton included tidal ebb flows amounting to 16,454 cfs at about 8:00 a.m., against an upstream tidally influenced flow of about -10,923 cfs at about 11:30 p.m. the night before. (For data charts obtained from the California Data Exchange Center, see Attachment 10 to this letter [Attachment 10].) While not reversing flow all the way up to Freeport at this point in time, it is clear that tidally-influenced flow in the Sacramento [River] was reaching close to Isleton at this point in our current drought, and under worse drought conditions (influenced by increased heat and	Part of this comment references the Bay Delta Conservation Plan/California WaterFix project and does not directly address the Delta Conveyance Project Draft EIR. The Delta Conveyance Project is different from California WaterFix, including the capacity of the water conveyance facility and operational criteria. 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. DWR is responding to the comments on the current Delta Conveyance Project. Please see response to comment 401-91 regarding reverse flows. Operation of the Delta Conveyance Project is not expected to change the frequency or duration of reverse flow events. Sacramento County Water Authority (SCWA) is required to implement controlled shutdowns of Freeport Regional Water Project (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

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	evaporative demand in the atmosphere for water vapor) it is entirely plausible that saline reverse flows would reach the north Delta intakes, let alone Freeport. Courtland is just 26 miles upstream of Isleton with no apparent obstructions. We remind DWR too that East Bay Municipal Utilit[y] District modeled reverse flows and flow events at its Joint Freeport Diversion Facility with Sacramento County Water Agency. The district found that during the modeling period based on 1976-1991 hydrodynamics in the Delta—which is much earlier in our climate-altered hydrologic epoch—there was far greater potential for reverse flows with North Delta intake diversions occurring in the future than if no such intakes were present. When such reverse flows occur it can force Freeport Regional Diversion Facility to undergo temporary but costly shutdowns to avoid poor quality water. [Footnote 122: Testimony and Presentation exhibits of Dr. Benjamin Bray, East Bay Municipal Utilit[y] District, August 31, 2016, Exhibits 101 and 152, California WaterFix Change Petition Archive in Restore the Delta's archives.]	reverse flow event recedes to a point 0.7 miles upstream of the Sacramento Regional Wastewater Treatment Plant outfall in the Sacramento River. As stated in response to comment 401-91, figures are included in Chapter 5, Surface Water, of the Final EIR, demonstrating 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.
401-93	[ATT 1:] Reverse flows affect nutrient build-up and water stagnation, which once again add to favorable conditions for HAB formation. Reverse flows also cause issues with fish migration. [Footnote 123: Vogel, D.A. 2004. Juvenile Chinook Salmon radiotelemetry studies in the northern and central Sacramento-San Joaquin Delta, 2002–2003, Final Report. Contract report for CALFED, administered by the National Fish and Wildlife Foundation. Red Bluff (CA): Natural Resource Scientists, Inc. 188 pages. Available at: https://www.waterboards.ca.gov/waterrights/water_issues/pr	The comment assertions regarding nutrient build-up and water stagnation and associated effects on HAB formation and fish migration are not supported by the analyses contained in the EIR. Please see response to comment 401-87 regarding the multiple factors evaluated in the CHAB analysis contained in Chapter 9, Water Quality, Impact WQ-14, including flows/velocity and residence time, and the less-than-significant impact determination related to CHABs under project alternative operations. Chapter 9 refers to the reverse flow analysis in the Evaluation of Operations and Maintenance section. Chapter 9, Impact WQ-1, describes the limited potential for suspended sediment increases related to CMP construction activities. It describes environmental commitments and project design would be implemented to reduce, minimize, or avoid

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	ograms/bay_delta/wq_control_plans/2006wqcp/exhibits/appe nd2/doi/doi-16.pdf.] Such flows ought to be taken far more seriously than DWR appears to in this section. CMP construction activities, through excavation, grading, and other soil disturbance in and around waterways, could cause temporary increases in suspended sediment or increased contaminant concentrations in runoff to adjacent surface waters. [Footnote 124: Tunnel DEIR, Chapter 9, p. 9-46, lines 37 to 38.] This is a problematic statement because DWR claims it could be "temporary" and it's unclear how long that "temporary" could be. In the interview with John Morais (Should be uploaded to Youtube by Friday), at time stamps 0:13 and 2:25 you can see sediment trapped in aquatic weeds and John Morais points out that this sediment has been building up over years, making navigation more and more problematic. That and the sediment build up starts to form more shoreline, constricting those areas in Walnut Grove. This is why we are skeptical of the use of the word "temporary" because the sediment problems outside of this site are not being solved? How can we expect sediment problems to be solved in the site?	discharge of sediment to surface waters. The potential impacts of reverse flows in the Sacramento River downstream of the north Delta intakes during key fish migration periods were evaluated in Chapter 12, Fish and Aquatic Resources (e.g., Impact AQUA-2). As discussed in Chapter 12 under Impact AQUA-2, the incidence of reversing flows in the Sacramento River downstream of Georgiana Slough are anticipated to be greater under all project alternatives than existing conditions, and the evaluation of through-Delta survival indicates that modeled changes in flow velocity would somewhat impact through-Delta survival rates. However, these effects would be limited by operational criteria including bypass flows and would be less than significant through inclusion of tidal habitat proposed for Mitigation Measure CMP, specifically CMP-25.
401-94	[ATT 1:] Even with the Central Valley RWQCB's [Regional Water Quality Control Board] irrigated lands regulatory program efforts and point-source discharge regulations to decrease and control sources of nutrient loading, nutrient levels throughout the Delta are not a limiting factor to macrophyte or algae growth in Delta waters. [Footnote 125: Tunnel DEIR, Chapter 9, p. 9-121, lines 17 to 19.]	The assessment of nutrients in Chapter 9, Water Quality, Impact WQ-7, specifically addressed changes in source water flow fractions (e.g., smaller proportions of Sacramento River water) at various Delta locations. The analysis determined the alternatives would have a less-than-significant impact on nitrogen and phosphorus levels. The assessment of cyanobacteria harmful algal blooms (CHABs) in Impact WQ-14 similarly concluded that changes in nutrient levels with the alternatives would not cause increased frequency of CHABs, because nutrients would not be a

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	This quote reveals the ineffectiveness of voluntary regulation of nitrogen and phosphorus based nutrients. We need more action from the Regional Board and from other agencies to deal with nutrient problems, which is why it needs to be taken as seriously with the Delta Conveyance Project. This project will actively remove flows that could otherwise help dilute and disperse nutrient loads and concentrations, but with their removal will enable nutrients to continue supplying HAB formation and spread in the Delta when other factors also permit.	limiting factor, just as they are not a limiting factor under existing conditions.
401-95	[ATT 1:] The project alternatives would result in some seasonal differences in Delta inflow rates from the Sacramento River relative to existing conditions. However, for many months, there would be little to no change in flow under the project alternatives relative to existing conditions, and for those months when there are changes in flow the flow rates would be within the range occurring under existing conditions. … Consequently, there would be negligible, if any, flow-related changes to nitrogen and phosphorus concentrations in rivers upstream of the Delta. [Footnote 126: Tunnel DEIR, Chapter 9, p. 9-121, lines 26 to 34.] Changes to inflow is exactly the problem with this tunnel project in terms of nutrients and nutrient loading. It would make sense that there would be no changes to flow in upstream rivers, but the issue is in-Delta flows. It's necessary to point out that freshwater flow is essential for in-Delta purposes pertaining to managing nutrient loading. As we point out in our previous comment, more in-Delta flows would help to reduce, dilute, and disperse nutrient loads and concentrations.	Freshwater inflow to the Delta would continue to occur under operating conditions of all project alternatives. Changes in river flows under the alternatives and flow-related effects on nutrient levels and residence time are evaluated in Chapter 9, Water Quality, under Impact WQ-7 and WQ-14, with respect to nutrient levels and CHAB formation. The impact analysis shows operation of the alternatives would result in less-than-significant impacts on Delta nutrient levels (Impact WQ-7) and the frequency and magnitude of Delta CHAB blooms (Impact WQ-14).

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	Additional flows would also reduce residence time of water in Delta channels and cul-de-sacs, reducing the stability of the water colure on which HABs depend as another factor in their formation.	
401-96	[ATT 1:] This assessment focuses on the June through November time period when CHABs have been present within the Delta. [Footnote 127: Tunnel DEIR, Chapter 9, p. 9-154, lines 38 to 39.] The Tunnel DEIR focuses on the HABs season in the Delta as ranging from June through November. The month of May should be included as well as April since by 2040 under our present global warming average temperature trajectory, the hot season through the Central Valley will be lengthening (see Attachment 8).	June through November is the focus of the CHABs analysis in Chapter 9, Water Quality, Impact WQ-14, because these are the months that encompass when problem-level blooms typically occur as discussed under Impact WQ-14 and Appendix 9E, Cyanobacteria Harmful Algal Blooms. The technical memorandum cited in Chapter 9 and Appendix 9E (ESA 2022) synthesized visual Microcystis observation data from three monitoring programs collected between 2007 and 2019. This is the largest and most comprehensive Microcystis dataset available for the Delta. Based on synthesis of this data in different regions of the Delta, Microcystis are most frequently in the water column from June through November and problem level blooms are most likely to occur from July through September. As such the data synthesis in the technical memorandum supports the June through November assessment period. The EIR uses site-specific residence time as modeled directly using DSM2 in combination with modeled temperature, modeled velocity, an assessment of nutrients, and irradiance to assess the impacts of the project alternatives on CHABs during the June through November period. Based on these assessments the project alternatives would not result in increased bloom severity or extent in any of these months at any Delta location, relative to existing conditions. While climate change-related increases in Delta water temperature are anticipated at 2040, it is uncertain that problem-level blooms will occur earlier in the year. As described in Appendix 9L, Water Quality 2040 Analysis, project alternatives would not result in increased bloom severity or extent, relative to the No Project Alternative.
401-97	[ATT 1:] As part of RTD's [Restore the Delta's] mission to undertake systematic water quality and HABs monitoring and testing in	Impacts on public health from CHABs were determined to be less than significant, as discussed in Chapter 26, Public Health, Impact PH-5. The project would not cause a significant increase in microcystin or any other cyanotoxins as compared to existing conditions, and therefore there would

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	partnership with the Central Valley Regional Water Quality Control Board (Region 5), our staff has been trained to use appropriate personal protective equipment when in the field gathering data. Their PPE includes masks, gloves, and solutions for hand-washing to guard against lung and skin irritations that can ensue when in proximity to HABs. Our staff has been trained to wear PPE as soon as a bloom is present in the area. This raises the question of public safety because if it is a safety practice to wear PPE in the field, why isn't there a similar safety notice for the public? Public safety implications from HABs are not examined as part of DWR's HABs discussion in relation to tunnel operations, despite significant safety concerns.	be no increased potential for public health to be affected by exposure to cyanotoxins.
401-98	[ATT 1:] Attachment 9 to this letter shows these modeling results: without tunnel intakes in 2040, May through November, Sacramento River flows decrease between 3 percent (in November) and 22 percent (in May) across all years. These are modeled climate change impacts. With the tunnel intakes in place in 2040, its operational effects will add to climate change effects. May through November operational effects at Hood, according to CalSIM 3 modeling, would be modest, from zero to 3 percent on top of climate change. DWR's statement blithely assumes that its modeling of flow changes is correct and that Tunnel alternatives will have little, if any, impact on future HAB formulation.	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. Please refer to Chapter 30, Climate Change, and the section titled Impacts of the Project Alternatives with Climate Change, for a discussion of potential impacts associated with the project alternatives, and which of those impacts may exacerbate climate change effects. Please also see information regarding a sensitivity analysis for Alternative 5 in Appendix 30A, CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections.
401-99	[ATT 1:] The project alternatives would have negligible, if any, effect on the probability with which any given 15-minute absolute velocity would occur at the assessment locations during the	The potential for the project to contribute to reverse flows upstream of the proposed intake location is addressed in Chapter 5, Surface Water, which describes that the frequency of reverse flows on the Sacramento River near the north Delta intakes would be limited in duration, frequency, and location as compared to baseline conditions. Specifically, there would be

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	June through November period, relative to existing conditions (Appendix 9E, Figures 9E-2-1-1 through 9E-2-11-6). Therefore, the project alternatives would not cause lower velocities, or reduce the frequency with which any given velocity would occur when velocities are low during the months of June through November, relative to the existing conditions. [Footnote 128: Tunnel DEIR, Chapter 9, p. 9-156, lines 37 to 42.] Exporting water from the Delta would contribute to reverse flows, which would impact in-Delta flows, making residence time of water more stagnant each year. The graphs in Appendix 9E referenced are not explained, but they show modeled results that there are no changes to flow from No Project Alternative and Alternative 5. Considering CalSim 3 is developed for smooth operational modeling conditions, we are skeptical that there will be no altering of conditions since the modeling fails to account generally for heat and storm extremes.	no increase in the frequency of reverse flow events having an effect greater than 0.8 mile. The limited frequency, duration, and location of reverse flows would not make residence time of water more stagnant each year. Chapter 9, Water Quality, Impact WQ-14, addresses changes in residence time in Delta waterways as it could affect CHABs along with four other primary environmental factors (water temperature, velocity, nutrient availability, and water column clarity). As described in Impact WQ-14, DSM2 modeling was used to assess residence time under existing conditions and under the project alternatives. Under the project alternatives there could be increases in residence time at some Delta locations, however, effects of project operations on residence time would not be sufficient to allow for substantial increases in cell density or the formation of surface scums. Please see Common Response 9, Hydrologic Modeling and Approach, regarding the use of CalSim 3 as the best available tool to conduct the hydrologic modeling to support the analyses in the EIR.
401-100	[ATT 1:] [C]hanges in nutrient concentrations would not cause increases in the frequency or magnitude of CHABs in Delta waters, relative to existing conditions. This is because (1) any increases in nutrient concentrations that would occur at some Delta locations would be small in magnitude, and (2) nutrients would continue to be in excess under the project alternatives as they are under existing conditions, even with some seasonal decreases in nutrients at Banks and Jones Pumping Plants. Consequently, the small increases in nutrients at some locations in some months would not alleviate nutrients as a limiting factor to CHAB growth because nutrients are not a	Please see response to comment 401-94 regarding the nutrient analysis in Chapter 9, Water Quality, Impact WQ-7, which considers the changing conditions of the Delta and changes to flows under operating conditions of the project. Impacts regarding nutrients are determined to be less than significant. Please see response to comment 401-87 regarding the multiple factors evaluated in the CHAB analysis contained in Chapter 9, Impact WQ-14, including nutrients, flows/velocity and residence time, and the less-than-significant impact determination related to CHABs under project alternative operations. As described in Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, mitigation measures are not required for impacts determined to be less than significant.

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	limiting factor under existing conditions. [Footnote 129: Tunnel DEIR, Chapter 9, p. 9-158, lines 10 to 17.] There needs to be an update to measures that restrict nutrients and it needs to be applied in situations where the Delta is ever-changing. Exporting water will alter flows in the Delta, which will limit freshwater flow downstream, which ultimately can lead to optimal conditions for HABs to form. If nutrients will remain in excess, it stands to reason that this needs to be solved before we change Delta ecology further. Increased water exports should wait until things are stable here.	
401-101	[ATT 1:] Based on the discussion and findings above, the project alternatives would not cause additional exceedance of applicable water quality criteria or objectives associated with CHABs or their toxins because none currently exist. [Footnote 130: Tunnel DEIR, Chapter 9, p. 9-180, lines 21 to 23.] There are no standards in place to control CHABs, yet they are badly needed. To reach this conclusion, DWR has denied the disruptive aspects of anticipated climate change effects and extreme heat events, as well as the lengthening of hot seasons, in particular, DWR irresponsibly assumes that voluntary regulation of excess fertilizer discharges of nutrients from upstream San Joaquin River growers will continue indefinitely, resulting in a steady supply of nutrients that HABs consume when other conditions (including slack water, hot temperatures) are right for bloom formation. The State Water Board and DWR need to do better; this is unacceptable considering the implications. -	This comment discusses that there are no regulatory standards in place to control CHABs and the lack of a comprehensive solution for the CHAB problem in the Delta. DWR conducted a complete CHAB assessment (please see Chapter 9, Water Quality, Impact WQ-14) even though there is no applicable water quality criteria or objectives associated with CHABs. DWR currently participates in the California Cyanobacteria and Harmful Algal Bloom (CCHAB) Network along with other state agencies, Tribes, and other interested parties. Established in 2006, this Network works toward the development and maintenance of a comprehensive, coordinated program to identify and address the causes and impacts of cyanobacteria and HABs in California.

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	In a legislative report on the Freshwater Estuarine Harmful Algal Bloom (FHAB) Program, the staff from the FHAB program highlighted the necessity of setting standards for HABs in the Delta. In the report, it's mentioned that a HABs standard is currently being worked on for drinking water, but not for beneficial uses (fishing, cultural uses, recreation, etc.) due to how dynamic the HABs threat is. DWR consistently uses the excuse that absent a HABs standard, they cannot truly limit HABs assessments for the Tunnel Project, which is short-sighted. The lack of a needed regulatory HABs standard for the beneficial uses of surface water is a convenient cover for DWR to not complete the necessary analysis for the DEIR. In relation to projects and management decisions, the lack of regulatory standards makes it difficult to solve the short and long-term problems with HABs. Without objectives that protect beneficial uses from HABs, their management will be impossible. Introducing the north Delta Intakes to deplete freshwater flows in the Delta in the absence of such protection will be a travesty.	
401-102	[ATT 1:] Appendix 9E: Cyanobacteria Harmful Algal Blooms Microcystin concentrations continue to increase in extent and severity in the Delta and in 2020 the toxin was detected at 1,239.4 µg/L in scum in the Stockton Deep Water Ship Channel and at 138.6 µg/L in a water sample taken from Mormon Slough (State Water Resources Control Board 2021). [Footnote 131: Tunnel DEIR, Appendix 9E, p. 9E-8, lines 13 to 16.] For reference, the test strips used by RTD [Restore the Delta]	Chapter 9, Water Quality, Impact WQ-14, provides a complete analysis of the project impacts on cyanobacteria harmful algal blooms (CHABs) in the Delta. The CHAB impact analysis concludes that the project alternatives would not affect the factors associated with CHAB formation in the Delta: water temperature, nutrients, turbulence or mixing clarity. There could be some increases in residence time at some Delta locations in some months, but these increases would not be sufficient to cause increased frequency or magnitude of CHABs. As shown in the residence time modeling results, residence time in the vicinity of Stockton would generally decrease relative to existing conditions. Additional information on the potential for benthic cyanobacteria mats would not change the analysis contained in Impact WQ-14. This is because the project alternatives are not expected to

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	for microcystins only measure up to 10 µg/L. Levels above 20 µg/L are dangerous and require media coverage, shutting down access for public safety, etc. The numbers above are egregiously bad in recent years. And. Highlighting the issues around HABs in the Delta. Water becomes too stagnant, nutrients load the site and promote algal growth, and increases in temperature of the water all add together to create quite a toxic bloom. Add in problems with benthic mats of Microcystis that likely line the bottom of the Stockton Deep Water Shipping Channel and it becomes essential that protective standards must be in place before the Delta Tunnel Project disrupts flows to and within the Delta further.	substantially increase any cyanobacteria, relative to existing conditions, at the Delta assessment locations. It is also important to note that Microcystis is a planktonic species and does not form benthic mats. There is also no evidence of benthic cyanobacteria mats forming at the bottom of the Stockton Deep Water Ship Channel. The project would have a less than significant impact on the frequency and magnitude of CHABs in the Delta, including the Stockton area.
401-103	[ATT 1:] Overall, in Appendix 9E, there are sections for different things being measured with no explanation for what the graphs are showing: daily average temperature, 15-minute velocities, residence times, etc. Each section has numerous graphs, and a small blurb at the beginning of each section describing what each term means seems necessary in the Appendix section. Maybe the graphs are described in the chapters more clearly, but having to cross reference back to the DEIR chapters is annoying for the reader when explanations can instead be made clearly in one document. It would clarify the graphs, which track how probability of exceedance intersects with the temperature and 15-minute velocities data.	Appendix 9E, Cyanobacteria Harmful Algal Blooms, provides tables and figures that are cited in Impact WQ-14 (Cyanobacteria Harmful Algal Blooms) in Chapter 9, Water Quality. The appendix provides information that supports the impact assessment. In Chapter 9, Impact WQ-14 contains explanations of the content of tables and figures. The explanations describe whether implementation of the alternatives would affect the parameters depicted in the tables/figures by frequency and magnitude that would, or would not, impact CHABs in the Delta. Appendix 9E contains the tables and figures because they are too numerous to include in the impact assessment itself.
401-104	[Att 1:] Chapter 15, Agriculture As shown in the Executive Summary of the DEIR, the Delta Tunnel's direct impacts to prime agricultural land, lands under Williamson Act contracts, and farmlands of statewide importance are significant and unavoidable. Over 2,150 acres	Mapbooks 15-1 through 15-3 show the footprint of all the construction features along with the distribution of Important Farmland and Mapbooks 15-4 through 15-6 shows the footprint of all construction features along the distribution of land under Williamson Act contracts. These mapbooks identify the specific locations where there would be temporary impacts, including those associated with geotechnical investigations and other field

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	of such lands will be permanently lost to crop production once construction of Delta Tunnel facilities is completed. Another 186 acres will be "temporarily" taken from production—but the DEIR fails to summarize adequately the location, duration, acreage, and reason for temporary withdrawal of such lands. Geotechnical and hydrological field studies are indicated, but the DEIR fails to indicate the location and duration of these studies. "Excavation and installation of utility infrastructure" would also be temporary according to the DEIR, but it is acknowledged, "these areas would be unavailable for agricultural production" during the construction period- which lasts 12 to 14 years. For most farmers this would be tantamount to permanently closing their businesses.	studies. Temporary impacts as considered under Chapter 15, Agricultural Resources, are limited to areas where converted farmland could be returned to active farmland shortly after cessation of construction activities. Areas of temporary impacts under Chapter 15 are not anticipated to result in substantial disruptions of agricultural operations or result in conversion of farmland to a non-agricultural use. Only a small fraction of the construction footprint is presented in Chapter 15 as temporarily converted; to be conservative during analysis, the majority of farmland conversion is considered to be permanently impacted. Please refer to Chapter 15 regarding general duration of conversion of farmland considered to be temporary in the EIR. As described in Chapter 15, temporary impacts on agricultural resources were considered to be those where the duration of farmland conversion is expected to be short-term (i.e., generally not extending beyond 2 years).
401-105	[Att 1:] The mitigations proposed in MM Ag-1 are appropriately deemed incapable of reducing the Tunnel Project's significant impacts to the status of "avoidable." The conversion of important farmland is generally irreversible, since soil fertility, even under temporary withdrawal from production and soil conservation practices, is difficult to recover once lost. A similar project has proven the negative effects on the soil composition when projects of this magnitude have been built. The study was conducted by Iowa University when the Dakota Access Pipeline was built. "Our findings show extensive soil disturbance from construction activities had adverse effects on soil physical properties, which come from mixing of topsoil and subsoil, as well as soil compaction from heavy machinery," according to an Iowa State University soil researcher. [Footnote 132: M. Tekeste and A.Y. Robinson. 2021. "Pipeline study shows soil compaction and crop yield impacts in construction right-of-way," Iowa State University, College of	The comment provides a summary of impact determination and proposed mitigation under Mitigation Measure AG-1. The impact analysis considers direct and indirect effects of project effects to agriculture and concludes that the project impacts under Impact AG-1 and Impact AG-2 as significant and unavoidable even after proposed mitigation measures. As described in Chapter 15, Agricultural Resources, conservation of agricultural farmland through acquisition of agricultural conservation easements, even at a ratio of greater than 1:1, would not avoid a net loss of Important Farmland in the study area. Furthermore, Chapter 15 considered many areas where no permanent physical structures were planned as part of construction to be considered permanent impacts on farmland due to the potential for peat soil compaction that may hinder the ability for such areas to be returned to productive agricultural use or habitat/grassland through land reclamation. Previously cultivated lands that cannot be reclaimed for agricultural purposes following disturbance because of topographic alteration may be reclaimed as grasslands. Mitigation Measure AG-1 would require that any Important Farmland considered permanently converted be mitigated at an

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	Agriculture and Life Science, November, accessible at https://www.cals.iastate.edu/news/releases/pipeline-study-shows-soil-compaction-and-cropyield-impacts-construction-right-way.]	acreage ratio of at least 1:1 through a combination of acquisition and dedication of agricultural land, acquisition of development rights or conservation easements to permanently protect agricultural land, or payment of in-lieu fees to fully fund the acquisition and maintenance of such real property interests by a third party. In addition to implementation of Mitigation Measure AG-1, as described in Common Response 12, Agricultural Resources, DWR is committed to returning any prior farmland that is converted as part of construction activities and no longer needed for long-term operation of the Delta Conveyance Project back to productive agricultural use or wildlife use through land reclamation where feasible. The land reclamation process will include identifying strategies appropriate for Delta soils that can address soil compaction.
401-106	[Att 1:] The third impact from the Delta Tunnel Project to agriculture we believe should be recategorized from less-than-significant to significant and unavoidable. The CEQA conclusions for Impact Ag-3 is clear that indirect changes to groundwater elevation and surface water quality attributable to Delta Tunnel Project construction and operations could raise salinity in irrigation water whether pumped or diverted from Delta channels. DWR merely proposes to compensate farmers for ruined water supplies, when this would be a significant unavoidable impact to them and their croplands. This represents avoidance of mitigation responsibility not real environmental mitigation or full economic compensation. [Footnote 133: Tunnel DEIR, Chapter 15, p. 15-51, lines 41-46, p. 15-52, lies 1-29.]	Please refer to Chapter 9, Water Quality, which concludes that while there could be some increases in salinity (based on modeled electrical conductivity) at some Delta locations in some months, these effects would be less than significant. Please refer to Chapter 8, Groundwater, regarding the potential for the project to affect agricultural drainage; these effects were analyzed and impacts were found to be less than significant. As described in Chapter 15, Agricultural Resources, the design of the project considered how the project could affect local infrastructure supporting agricultural properties, including drainage and irrigation facilities. During project planning, known infrastructure serving agricultural properties was avoided to the greatest extent possible. Construction of the project may result in situations where avoidance of any disruptions to such infrastructure cannot be achieved. As such, the EIR identifies Mitigation Measure AG-3 which would reduce the impacts on agricultural land in the study area associated with infrastructure disruption to a less-than-significant level. This mitigation measure first calls for project designs to be modified to the extent feasible to avoid such conflicts with infrastructure servicing agricultural land. If avoidance is not possible through redesign, then DWR would seek to relocate or replace the affected infrastructure.

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		Only in the event that none of the above options is feasible would DWR seek a negotiated settlement process.
401-107	[Att 1:] In Chapter 15 "Agriculture Resources," we also find problems with the map used on Figure 15-1, Crop Distribution in the Study Area. This map does not show where any of the projects will be, including Alternative 5. The figure is a poor representation of how the land use will be affected just by the fact that none of the project alternatives are on the maps nor on the legend of the figure. There is no way to see how much land and which crops will be affected if any of the alternatives were to be built. The same problem is on Figure 15-2, Williamson Act Parcels in the Study Area, and on Figure 15-3, Farmland Classification in the Study Area. These three figures need to have the project alternatives properly identified so that it is understood which crops and lands will be permanently and temporarily affected.	The figure titled Crop Distribution in the Study Area in Chapter 15, Agricultural Resources, shows the general distribution of crop types within the study area. Mapbook 15-4 shows the footprint of the Central Alignment alternatives along the distribution of land under Williamson Act contracts. Mapbook 15-5 shows the footprint of the Eastern Alignment alternatives along the distribution of land under Williamson Act contracts. Mapbook 15-6 shows the footprint of the Bethany Alignment along the distribution of land under Williamson Act contracts. Please refer to Chapter 17, Socioeconomics, regarding an analysis of the changes in values of agricultural production and production costs as a result of the project. This assessment uses project-specific geospatial data for each alternative to evaluate acreages of crop type conversion within the construction footprint.
401-108	[Att 1:] When looking at Table 15-1, all the crops that will potentially be affected are listed, but not without a breakdown of how much and for how long they will be affected. Why are there no specifics of how much each crop per county will be affected in the building of the project? It does not explain the potential losses for each landowner. Moreover, a grand total for each county and the Delta study area is not provided. This should be corrected in the Final EIR.	Please refer to Chapter 17, Socioeconomics, regarding an analysis of the changes in values of agricultural production and production costs within the study area as a result of the project alternatives. It also includes a summary of changes in acreages and production values relative to existing conditions by aggregate crop category for each alternative (the analysis uses the following groups for crops: grains; field crops, forage crops; vegetable, truck, and specialty crops; orchard and vineyard).
401-109	[Att 1:] Section 15.1 states that farms within the Delta had a gross revenue of $965 million in 2016, earned mainly from almonds, wine grapes, tomatoes, alfalfa, and wheat. There are 70 distinct crops that are grown on 415,000 farmed acres in the Delta [Footnote 134: Delta Protection Commission, The State of Delta Agriculture: Economic Impact, Conservation and Trends, last modified February 3, 2020, accessible at http://delta.ca.gov/wp-content/uploads/2020/07/Ag-ESP-	The comment assertion that the information presented in Chapter 15, Agricultural Resources, regarding impacts on crops in the Delta is not sufficient does not consider all information present in the EIR. Though the EIR states that the gross revenue earned by farms within the Delta in 2016 was mainly earned by certain crop types, the statement does not exclude other crop types from consideration of their contribution to the Delta's economy. Please refer to Chapter 17, Socioeconomics, regarding the potential effects that construction activities would have on general crop

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	update-agricultural-trends-FINAL-508.pdf.]. Construction of the Delta Tunnel Project will affect all 70 crop types, not just the ones that produced the most because the project will affect water quality, air quality, transportation (since workers often commute to Delta islands and crops must be trucked out to distribution points).	categories such as field crops, forage crops, and orchard and vineyards.
401-110	[Att 1:] Table 15-2 is inconsistent with Table 15-3 and Table 15-1. For example, with 70 distinct crop types, why are these not the same or similar crops mentioned in all other tables as well? As indicated already, these crops will be affected once the project is fully functioning, so data table breakdowns should include them as well. Remaining inconsistencies need to be explained, and where erroneous, corrected. If necessary, further studies need to be done to get a better understanding of how this project will affect the outcomes in 15 years when it's fully built and after 2040.	Alterations in crop production could alter the economics of agricultural operations in the Delta and subsequently influence crop choices by growers. The Average County Crop Yield by Type in Crop Year 2017-2018 (tons per acre per year) table in Chapter 15, Agricultural Resources, provides a summary of average crop yields by type for each of the counties within the study area. Such yield statistics are not available for every single crop type grown within the study area. The information is solely intended as background context to orient the reader in terms of the productivity of key crops grown in the different Delta counties.
401-111	[Att 1:] In the "Setting" section on "Irrigation and Drainage", the information disclosed was from a source close to thirty years old. Is there not a more current source? Or is DWR not taking the time to seek more research done on the crop tolerances and needs, types of irrigation systems, and drainage? Since 1997, there has been a great leap of technology that farmers are applying to reduce their water use. Also, the type of pesticides, fertilizers and amounts of additives have changed since 1997. Throughout this whole section all the sources used are outdated. DWR needs to find more recent sources to make sure this is viable information. Resources from 1977, 1986, and 1997 are not good enough due to how much technology has changed in the last decade; further research needs to be done. Again, this needs explanation and, if erroneous, correction.	The sources referenced in Chapter 15, Agricultural Resources, reflect the most accurate information available regarding agricultural resources in a consistent manner throughout the study area. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding best available science.

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401-112	[Att 1:] In "General Crop Production Practices and Characteristics," it is pointed out that that the Delta has different forms of irrigation due to its "high rainfall during the winter and low rainfall during the majority of the growing season." However, due to climate change California is bound to see longer and hotter summers [Footnote 135: Becker, Rachel, "Four in a row: California drought likely to continue." last modified, September 28, 2022, accessible at, https://calmatters.org/environment/2022/09/california-drought-likely-to-continue/] with shorter and drier winters, with less snowfall. [Footnote 136: Mount, Jeffrey, Escriva-Bou, Alvar, and Sencan, Gokce, Droughts in California, last modified, 2022, accessible at, https://www.ppic.org/publication/droughts-in-california/] How will cutting the amount of flow from the Sacramento River into the Delta by down to 6,000 cfs help farmers meet their irrigation needs in a warmer climate? Table 15-3, Applied Irrigation Requirements of Crops Grown in the Study Area by Acreage, just 13 of the 70 crops grown in the Delta are mentioned here, that is not even a quarter of the types of crops grown in the study area. This is troublesome considering the fact that this project's effects will cut the amount of water that will be available after the project is built knowing that climate change will also have an impact on the amount of water any of the crops in the Delta will receive.	As described in Common Response 3, Alternatives Development and Description, considerations for how much the intakes would divert at a given time would be determined by a number of factors including how much water is actually available in the system (e.g., based on river water levels and flow), the presence of threatened fish species, and water quality standards. While the proposed project contains a conveyance capacity of up to 6,000 cfs, the intakes would often convey less flow than their total operating capacity due to regulatory restrictions. The implementation of the proposed Delta Conveyance Project will not involve any new water rights. A key goal of modernizing Delta conveyance is to more reliably capture water during and after storm events. The proposed project and its alternatives do not reduce the protections for other water right holders, including agricultural operators in the Delta with established water rights. For Delta agricultural operators, water quality, particularly salinity, is a more important factor than availability of water. Please refer to Chapter 15, Agricultural Resources, which considers how salinity in irrigation water can affect crop yields. Please refer to Chapter 9, Water Quality, which concludes that while there could be some increases in salinity (based on modeled electrical conductivity) at some Delta locations in some months, these effects would be less than significant. Please refer to Common Response 12, Agricultural Resources, regarding how the EIR evaluated crop salinity tolerances in its analysis. The commenter expresses concern regarding the effects of climate change on crops in the Delta. As described in Common Response 6, Climate Resilience and Adaption, projected future conditions under climate change will result in higher average temperature and more extreme variability in annual precipitation patterns, altering seasonal flow patterns within the Delta. As discussed in Appendix 9L, Water Quality 2040 Analysis, climate change and sea level rise are primary drivers of water quality changes, including salinity levels, in the study area. Regardless of the increased

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		salinity levels resulting from climate change, DWR would still comply with existing water quality standards protecting agricultural beneficial uses in the Delta when operating the proposed north Delta intakes.
401-113	[Att 1:] In the section on "Crop Salinity Tolerances," DWR states, "Agricultural drainage is another major source of salinity in the Delta, particularly from the San Joaquin Valley. Because the San Joaquin River carries a higher concentration of salt load than the Sacramento River (the Sacramento River basin ultimately contributes more salt load to the Delta than the San Joaquin River basin because the total magnitude of its flows is much higher)," in addition to the above statement, in Chapter 9, DWR estimated that sea level rise will only be 0.8 feet. However, the Delta Stewardship Council mentioned that by 2050 sea level rise will be between 1.2 to 2.7 feet. [Footnote 137: Delta Adapts, p. 5-4.] but Table 15-5. Crop Tolerance and Yield Potential of Selected Crops as Influenced by Irrigation Water Salinity (Ecw) or Soil Salinity (Ece) in DeciSiemens per Meter (dS/m) the salinity does not reflect any changes in the future when looking at the increase of salinity from Agriculture now, or how salinity will increase just by the natural level sea rise that is expected by 2050.	Please see response to comment 401-112 regarding increases in salinity and climate change effects. Please see Appendix 15C, Agricultural Resources 2040 Analysis, Impact AG-3, regarding analysis of the effects of project construction and operations on crops from salinity over time. Please refer to Common Response 12, Agricultural Resources, regarding how the EIR evaluated crop salinity tolerances in its analysis. As discussed in Appendix 9L, Water Quality 2040 Analysis, climate change and sea level rise are primary drivers of water quality changes, including salinity levels, in the study area. As such, it is reasonable to expect that there may be some changes in crop types in the Delta in future decades, as operators adjust to changing baseline conditions and shift to crop types that are more tolerant of higher salinity levels in applied irrigation water. Such a change would be triggered regardless of whether any of the proposed project alternatives were implemented.
401-114	[Att 1:] Upon looking at Table 15-5. Crop Tolerance and Yield Potential of Selected Crops as Influenced by Irrigation Water Salinity (ECw) or Soil Salinity (ECe) in DeciSiemens per Meter (dS/m) further adds to the disappointment. There are various reasons for this. First, the table used is dated 1985, making it 37-year-old data. Why doesn't DWR have an updated source? Second, because the table is so dated, it doesn’t describe all the same crops identified in Table 15-3. Crop patterns have changed.	Please refer to Common Response 12, Agricultural Resources, regarding how the EIR evaluated crop salinity tolerances in its analysis and use of the findings from Ayers and Westcot 1985. During preparation of the EIR, DWR reviewed various sources regarding salinity tolerances that were published more recently, but retained the existing source because it is commonly cited in discussions at the State Water Board hearings regarding programs and projects that may influence Delta water quality conditions and standards. The commenter also notes that a table in the EIR that summarizes the influence of irrigation water salinity on crop yields does not include all the

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		crop types identified in the table titled Applied Irrigation Requirements of Crops Grown in the Study Area by Acre found in Chapter 15, Agricultural Resources. The table titled Crop Tolerance and Yield Potential of Selected Crops as Influenced by Irrigation Water Salinity (ECw) or Soil Salinity (ECe) in DeciSiemens per Meter (dS/m), also found in Chapter 15, does not include the same crops types listed in the Applied Irrigation Requirements of Crops Grown in the Study Area by Acre table because the salinity tolerance thresholds for all crops grown in the study area have not been previously documented in literature in a consistent manner. Nevertheless, the available information provided in the Environmental Setting section of Chapter 15 does reveal certain trends in crop salinity tolerances that would be expected to be relevant for other similar crop types and are useful for planning and analysis purposes. For example, perennial orchard and vineyard crops generally tend to be more salt sensitive than most, but not all, other crop varieties grown in the study area. As described in Chapter 15, water operations of the project are modeled to be protective of agriculture in the Delta. For example, the State Water Resources Control Board based the southern Delta objectives for the protection of agricultural beneficial uses on the calculated maximum salinity of applied water that sustained 100% yields of beans, which are very sensitive to salinity (i.e., more sensitive than orchard and vineyard crops); since future project operations remain subject to compliance with D-1641 standards, the effects of changes in salinity patterns on agriculture in the study area as a result of project operations is considered less than significant.
401-115	[Att 1:] This table [Table 15-5] only points out what salinity the crops can withstand given a certain yield at a particular time 37 years ago, but it does nothing to explain what impact this project will have on crops with increased salinity levels. According to the California Department of Food and Agriculture (CDFA), it is understood that plants need a certain level of sodium and chloride for basic survival, but at a very low level. When plants take up too many ions from high salinity,	The comment assertion that the EIR does not consider the effects of changes in salinity as a result of the project on crops is not supported by the analysis contained in the EIR. As described in Common Response 12, Agricultural Resources, evaluation of the project operations on the ability to protect agricultural beneficial uses was based on adherence to the State Water Resources Control Board (State Water Board) Water Right Decision 1641 (D-1641) water quality standards. Salinity standards are set by the State Water Board for

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	they will damage tissue. In some plants that can result in leaf burn. [Footnote 138: Jessica Fu, "Scientists trying to make plants love salt," The Counter, last modified March 2, 2022, accessible at https://plantingseedsblog.cdfa.ca.gov/wordpress/?p=20852.] DWR has failed to diligently research the topic and needs to start investigating before building the Tunnel Project. It is putting the wagon before the horse because the severity of the effects from tunnel operation on water quality for irrigation are not being taken into consideration. With creating this project the amount of farmland will decrease due to salinity increase before it is taken over by urbanization.	protection of beneficial uses throughout the entire system, including agricultural use. As described in Chapter 9, Water Quality (Impact WQ-5), while there could be some increases in salinity (based on modeled electrical conductivity) at some Delta locations in some months, these effects would be less than significant, mainly since future project operations remain subject to compliance with D-1641 standards. Ayers and Westcot 1985 remains used as a basis for evaluating the effects of salinity on crops during current State Water Resources Control Board hearings pertaining to programs and projects that may influence Delta water quality conditions and standards. However, as discussed in Common Response 12, while advances in agricultural sciences in recent decades have resulted in crop varieties that are more tolerant of saline conditions, DWR retained the reference to the 1985 Ayers and Westcot publication to ensure a conservative characterization of the environmental setting. This approach is ultimately more protective of agricultural operators in the study area because it avoids assuming that operators have changed to the more salt-tolerant seed varieties.
401-116	[Att 1:] In Appendix 15C, DWR states: As described in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions, water agencies participating in the Delta Conveyance Project have been grouped into four geographic regions: northern coastal, northern inland, southern coastal, and southern inland. The water agencies within each geographic region would likely pursue a similar suite of water supply projects under the No Project Alternative. Desalination project would most likely be pursued in the northern and southern coastal regions. [Footnote 139: Tunnel DEIR, Appendix 15 C, p. 15C-2, lines 1-5.] The discussion proceeds to explain how groundwater recovery	Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose of 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 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 the Delta Conveyance Project in compliance with all state and federal water quality and environmental laws. Please see Common Response 3, Alternatives Development and Description, for the development of the range of alternatives and analysis in the EIR. As explained in Appendix 3A, Identification of Conveyance

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	will also be treated for higher salinity. DWR discusses how farmers south of the Delta will need surface water from the Delta to treat San Joaquin Valley groundwater salinity and without Delta water this would be a significant impact. What DWR omits or fails to recognize is that there are other solutions that reduce the burden of using water from the Delta to sustain agriculture South of the Delta. Where is the sustainable water plan for the San Joaquin Valley? By omitting this, they (DWR) is off the hook from truly fixing San Joaquin Valley water quality, and they are setting a straw man (e.g., nine different alternative which are all relying on a tunnel and Delta water). They are not considering real alternatives independent of Delta exports to prop up agriculture that has to evolve to be sustainable. This lack of full agricultural analysis contradicts the "policy of the state policy to reduce reliance on the Delta for California future water needs."	Alternatives, and addressed in Common Response 3, screening criteria were developed, based on the project objectives, to systematically evaluate whether various alternatives could reasonably meet most of the project objectives. Those that could were further considered in the second-level screening analysis. In this way, the EIR meets the requirements of CEQA to consider a reasonable range of alternatives that meet most of the objectives, could reduce significant impacts and are potentially feasible, while not forestalling consideration of other types of alternative projects or predetermining alternatives, as asserted in this comment. See Common Response 4, No Project Alternative Description and Analysis, regarding the purpose and description of the No Project Alternative analysis. As described in Appendix 3C, Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions, the No Project Alternative takes into account projects, plans, and programs that would “be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” These actions could include water conservation programs, groundwater recovery projects, and conjunctive use of groundwater and surface water supplies. For the purposes of this EIR, this assortment of actions that could be undertaken by water agencies was not considered as a project alternative on their own because, amongst multiple reasons, they fail to meet the fundamental project purpose and objectives to restore and protect reliable State Water Project supplies from the Delta. Chapter 15, Agricultural Resources, describes potential effects to agricultural land that could result with construction of water supply projects under the No Project Alternative. Construction of these types of water project could result in conversion of Important Farmland or farmland

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		subject to Williamson Act contract, although the extent of this potential conversion would vary depending on the footprint and geographic location of any new or expanded water supplies facilities implemented under the No Action Alternative. Appendix 15C, Agricultural Resources 2040 Analysis, considers the No Project Alternative in 2040 relative to existing conditions with current facilities and operations and their impact on the agricultural resources that could result. The effects to agricultural land as considered in Appendix 15C are similar to those described under the 2020 baseline analyzed in Chapter 15.
401-117	[ATT 1:] Taking water from Delta farmers, who have riparian water rights, and redistributing Delta water to a more powerful set of farmers in the San Joaquin Valley is not mitigation; it is an abuse and redistribution of water rights. This prejudice to favor south of Delta farmers over Delta farmers is reinforced when DWR states "This impact would be potentially significant. Mitigation Measure AG-3: Replacement or Relocation of Affected Infrastructure Supporting Agricultural Properties would require disrupted agricultural infrastructure to be relocated or replaced; otherwise, the affected landowner would be fully compensated for any financial losses. After mitigation, this impact would be less than significant." Just as farmers in the south need water, farms in the Delta need to be treated with the same respect and have the right to clean, fresh water as well.	Please refer to Common Response 3, Alternatives Development and Description, regarding water rights, contracts, and the use of water. As identified in multiple EIR chapters including Chapter 6, Water Supply, the project does not include any action that would modify deliveries to existing water rights holders, including in-Delta water rights holders, nor is it seeking any new water rights or modification of existing water rights for which the State Water Board, not DWR, has decision power and authority. Please refer to Chapter 2, Purpose and Project Objectives, regarding the purpose of 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. In addition, as noted by the commenter and identified in Chapter 15, Agricultural Resources, Impact AG-3 is reduced to less-than-significant with the implementation of Mitigation Measure AG-3. Chapter 29, Environmental Justice, further concludes that Mitigation Measure AG-3 would ensure potential effects on local infrastructure supporting agricultural properties would not disproportionately affect minority and low-income populations compared to the general population. Please refer to Chapter 9, Water Quality, which concludes that while there could be some increases in salinity (based on modeled electrical conductivity) at some Delta locations in some months, these effects would

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		be less than significant.
401-118	[Att 1:] Overall, DWR has relied on outdated resources to assess direct impacts on Delta agriculture. A number of variables are not being accounted for: longer droughts, less rainfall, gas well complications prime Delta farmlands, farmers, sea level rise, salinity effects on water quality, and extreme flooding.	See responses to comments 401-112 through 401-114 regarding data used and climate change analysis and effects on agriculture. As described in Chapter 3, Description of the Proposed Project and Alternatives, in the section titled Location of Buried Groundwater and Natural Gas Wells, a future field investigations program would be used to evaluate the suitability of various geophysical techniques to detect buried and abandoned wells. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, for a discussion of why it is appropriate to evaluate impacts at a conceptual design level.
401-119	[ATT 1:] Chapters 17 and 29, Appendix 29A These two chapters are closely linked, despite the twelve chapters separating them in the content of the Tunnel DEIR. The DEIR misses a huge opportunity to examine the intersection of Delta Tunnel environmental impacts with the economic and environmental justice consequences of the proposed project. Instead, the Tunnel DEIR employs misdirection with a narrow scope for Delta economic and environmental justice analysis to avoid finding environmental justice impacts altogether in the document. It erroneously claims that water quality impacts of the project will be less than significant, and therefore avoids modeling the manner by which impacts of increased salinity (and potentially other contaminants) would move through economic and community linkages and degrade not only water quality but economic output and social life. The DEIR considers Stockton, with about half of its population living in the secondary zone, outside of the footprint for the majority of impacts discussed elsewhere in the document despite water quality impacts on beneficial uses of water, including drinking	The overall organization and content of the resource-specific analyses in the EIR is consistent with CEQA (Pub. Resources Code § 21000 et seq.) requirements. Socioeconomic impacts on environmental justice communities are analyzed in Chapter 29, Environmental Justice. Because this resource topic is not considered an environmental impact under CEQA, the socioeconomic analysis in the EIR, per CEQA, is provided on the socioeconomic implications of reasonably foreseeable adverse physical changes by the project in other resource chapters. For example, the socioeconomics analysis considers the regional social or economic effects of physical changes identified in analyses for aesthetics and visual resources, agriculture, and recreation. These resource topics are analyzed for impacts on environmental justice communities and considered part of the analysis of socioeconomic impacts on environmental justice communities, which Chapter 29 concludes as potentially significant (refer to the table titled Level of Effect on Environmental Justice Populations, by Resource and Alternative). Regarding water quality, several of the effects (such as salinity) raised in the comment were found to be less than significant environmental impacts

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	water. In addition, construction staging which will rely heavily on the Port of Stockton, which will also increase the air pollution burden within Stockton's AB 617 community. Ignoring the disparate impacts on urban Delta populations from the construction and operation of the project seems to ignore the civil rights of communities of color under state and federal environmental justice laws.	(or less than significant after mitigation) in the detailed resource analysis in Chapter 9, Water Quality. The effects of water supply reliability on environmental justice communities from elements such as salinity intrusion were considered in Chapter 29. Overall, increases in reliability of the total existing water portfolio is expected with implementation of the proposed project and its alternatives by sustaining and improving water supply reliability and supplementing or reducing groundwater use, which would increase water supply reliability in the export service areas that ultimately serve environmental justice communities. Please see Chapter 6, Water Supply, and Chapter 9, Water Quality, for details on the water supply and water quality reliability changes that could potentially result from the project alternatives. Regarding air quality, Chapter 23, Air Quality and Greenhouse Gases, considers air quality impacts in Stockton at the regional scale (included in the study area in the San Joaquin Valley Air Basin) and concludes significant air quality impacts during construction of the project alternatives. The air quality analysis in Chapter 29 analyzes air quality impacts on environmental communities at this broader or regional scale that extended beyond the environmental justice study area and concluded that the air quality effects of the proposed alternatives would represent a disproportionately adverse effect on environmental justice. Please see Chapter 23 for details of the regional air quality impacts from the project alternatives and the section titled Air Quality and Greenhouse Gases in Chapter 29, for the analysis of air quality impacts on environmental justice communities.
401-120	[ATT 1:] Chapter 17's baseline setting description surveys broad population, housing, jobs, and economic/fiscal characteristics of county jurisdictions that would be affected by construction and operation of the Tunnel Project, but it fails completely to carry through a parallel impact analysis of many of the same characteristics resulting from the Delta Tunnel project. Data tables for population and "Income and Poverty	The section titled Potential Socioeconomics Effects Area in Chapter 17, Socioeconomics, explains how regions were differentiated in the chapter, why they were differentiated this way, and what data are included for different regions. Throughout the section titled Socioeconomic Conditions, Alameda County is included with the other five counties as a part of the Delta region because part of it is in the statutory Delta and the project area. However, the IMPLAN analysis includes only the other five Delta

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	Levels" present data for counties not just in the Delta but throughout the service area of the State Water Project - the South Bay area, San Joaquin Valley, Central Coast counties, and Southern California, another 15 counties in all in these two instances. However, all other tables (the other fifteen) present data on just Delta counties, and some include Alameda County while others do not. We think it is highly questionable to include Alameda County, with 1.67 million people, when this county represents just a tiny sliver of land within the southwestern portion of the Legal Delta and the project study area. Its presence, particularly when it comes to representing income, poverty rates, average farm value, and government farm payments, skews grand Delta total and average statistics. Take poverty: most of Alameda County's impoverished populations are found in the west county cities from Fremont north to Berkeley, with the highest concentrations in Oakland, Berkeley, and Hayward—all cities that are NEVER considered part of the Legal Delta. The same effect is true of per capita and median household income, and the number of persons living below the poverty line as well—their presence in Table 17-9 is fallacious when it comes to a true representation of the Delta Region as an economy. The vast majority of the legal Delta is represented by the other five counties—Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties.	region counties. This is due to concerns that Alameda County as a whole is not representative of the demographics of residents and workers in and near the statutory Delta and project area relative to the other counties. IMPLAN was used as a tool to measure the change regional economic activity resulting from constructing and operating the project, measured as changes in regional employment and income. This is explained in the Assumptions and Limitations section of Delta Regional Employment and Income. This section includes references to the information provided in the section Socioeconomic Conditions where Alameda County is compared to the other Delta region counties.
401-121	[ATT 1:] To be consistent about including State Water Project service area counties in the population and income data tables, then DWR must include the service area counties everywhere else. [Footnote 140: Tunnel DEIR, Chapter 17, Tables 17-1 and 17-9, pp. 17-14 and 17-24.] Moreover, we find it insulting that DWR's Tunnel DEIR would insert data on SWP service area	The comment assertions that Stockton is excluded is not supported by the analysis in the EIR. Socioeconomic data on Stockton is included in Chapter 17, Socioeconomics, in the section titled Socioeconomic Conditions. The socioeconomic effects analysis includes all of San Joaquin County, including Stockton. The section Socioeconomic Conditions includes information about counties south of the Delta receiving SWP and CVP water (i.e., the

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	counties when it declines to include Stockton in its socioeconomic and environmental justice analyses. By doing so, you leave readers with the strong impression that some data are included while others are excluded arbitrarily, cherry-picked—that the socioeconomic analysis presented is neither serious nor methodical, and inadequate for connecting the causal chain of physical effect to economic effect to a new environmental effect.	south-of-Delta export service area) in addition to counties in the Delta region. This is because the south-of-Delta export service area could experience some socioeconomic effects. However, the effects analyses primarily focus on the Delta region because there are more potential socioeconomic effects in that region. The section Potential Socioeconomics Effects Area in Chapter 17 provides further information about how regions were differentiated in the chapter, why they were differentiated this way, and what data are included for different regions. In Chapter 29, Environmental Justice, section titled Minority Populations, Stockton is identified as a part of the study area with a large percent minority population. Stockton is also identified in the section titled Low-Income Populations as including areas with substantial proportions of the population being low income.
401-122	[ATT 1:] The Tunnel DEIR at least acknowledges the long construction period that for practical purposes should be considered permanent in their effects on community character: Construction activities would occur over a multi-year period [12 to 14 years] and could create sources of noise, air pollution, traffic, and other conditions that may affect the characteristics of some communities in the statutory Delta located near the project area. These activities, along with the long-term placement of the conveyance facilities, could also alter the character of these areas if they substantially reduce the extent of undeveloped land in proximity to communities and change the viability or desirability of important economic and social pursuits, including agricultural activities and water-based recreation. [Footnote 141: Tunnel DEIR, Chapter 17. p. 17-44,	Chapter 17, Socioeconomics, ECON-1 provides a summary of estimated employment effects by construction year for each project alternative, and clearly distinguishes effects during the construction phase from effects during operations and maintenance. The construction period also includes preliminary field investigations. Chapter 17 also provided an assessment of the Delta Conveyance Project's effect on community character. ECON-3 provides a qualitative analysis of potential community-based effects resulting from changes in other resources attributable to Delta Conveyance Project, including agriculture, recreation, noise, and traffic. The analysis in ECON-3 draws on the findings from ECON-1, which is based on and presented by construction year. As shown in the Chapter 17 Socioeconomics table titled Temporary Regional Economic Effects on Constructed-Related Employment and Labor Income during the Construction Phase, construction would range from 14 to 16 years depending on the alternative. Text has been added to ECON-3 to reiterate the length of the construction period.

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	lines 5 to 10.] The magnitude of the tunnel's construction period is never contextualized throughout Chapter 17. This raises questions for us whether the Environmental Commitments and Mitigation Measures we describe above will be fulfilled timely and actually protect beneficial uses of water and land throughout the Delta.	Please refer to the response to comment 401-22 for information on the MMRP. The MMRP includes specific details regarding the responsible parties, timing, location, and reporting requirements for mitigation measures and environmental commitments. Under CEQA, social or economic effects alone are not treated as impacts on the physical environment. Therefore, there are no CEQA impact findings and no mitigation measures or environment commitments addressing socioeconomic effects in Chapter 17.
401-123	[ATT 1:] Chapter 17 also would have benefited greatly from creating connection to and analysis of the findings from Appendix 29A (about which more below) where actual input from real-live Delta residents and regional Delta users was obtained by DWR. This appendix legitimately makes some claims to meaningful representation of Delta environmental justice communities, but DWR all but ignores it, even in Chapter 29, to which Appendix 29A is attached as a supporting document (yet it is never drawn in to provide support). Characteristics of the Delta EJ population from Appendix 29A include: - Two-thirds of survey respondents provided sufficient demographic information to make a determination as to whether they lived or worked in the region and could be considered a member of a disadvantaged community (DAC). - Of the 2117 survey participants, 979 were categorized as living or working (or both) in the Delta region. Of those, 540 were categorized as DAC respondents, and 166 of them were further subcategorized as severely disadvantaged community (SDAC) respondents.	Chapter 17, Socioeconomics, has been modified to create a connection to the survey summarized in Appendix 29A. Text has been added to ECON-3 which connects the qualitative discussion of community character effects to the community priorities identified by this survey.

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	- Two-thirds (66%) of DAC respondents from the Delta region identify as an ethnicity other than white, and 53% of Delta-region SDAC respondents identify as other than white. - Nearly one-fifth (19%) of Delta-region DAC respondents and 23% of those subcategorized as SDAC respondents report a primary language other than English. - This survey was the first time participating in a public process related to a Delta tunnel-related proposal for at least 557 respondents, 230 of which were Delta-region DAC respondents. The highest increases in participation came from respondents who identify themselves as an ethnicity other than white or primarily speak a language other than English. [Footnote 142: Tunnel DEIR, Appendix 29A, p. 10.]	
401-124	[ATT 1:] Within the Setting section, baseline data are inconsistently presented, though the emphasis is on setting data for counties of the legal Delta, but undermined by including Alameda County, making it appear that the Delta is wealthier AND more impoverished than it actually would be without this county.	Please see response to comment 401-120 regarding the consideration of Alameda County in Chapter 17, Socioeconomics.
401-125	[ATT 1:] Conversely, Table 17-17 presents information on average farm size, average farm production value, and average value of government payments for Delta counties from the crop subsidy programs but omits the same indicators for the SWP service area counties. [Footnote 143: Tunnel DEIR, Chapter 17, p. 17-36.] For the Final EIR we would prefer that DWR enlarge this table so readers may see for themselves the extent to which farms in SWP service area counties receive additional subsidies (which add value over time that is capitalized into their farm values). These would be for farms in	The setting in Chapter 17, Socioeconomics, describes information that is used as the basis for the economic effects analysis later in the chapter. The table titled Average Farm Sizes and Revenues in Delta Region Counties, 2007 and 2017 provides information that is used to identify agricultural economic effects on areas which could be directly physically affected by the project construction footprint. This includes farmland in the six counties shown in Chapter 17 in the table titled Average Farm Sizes and Revenues in Delta Region Counties, 2007 and 2017. Potential economic effects on agriculture in the SWP export service areas

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	the counties of the South Bay Area, San Joaquin Valley, Central Coast counties, and Southern California. If these counties are not added to the Final EIR, then they should be deleted from the other tables in which they appear. However, we recognize that DWR has included an impact discussion of the proposed Delta Tunnel on agricultural economics in the Legal Delta and the Project area, so in that case, we request that the setting section be made parallel with this discussion - include all the service area counties for other indicator tables relating to housing, employment, age groups, agricultural output, and crop subsidies, and then analyze the proposed project's impacts on each of these economic indicators. As it stands, Chapter 17 is sub-par.	are discussed qualitatively in ECON-7 but are not analyzed quantitatively. Please refer to Common Response 7, Implementation Considerations, regarding the scope of economic analysis in an EIR and the approach used in Chapter 17.
401-126	[ATT 1:] Moreover, the Tunnel DEIR states, "Operations and maintenance activities would not directly result in effects on productive irrigated agricultural acreage and production values," a complete dismissal of potential salinity impacts on irrigation water supplies drawn from Delta channels, including numerous diversions just downstream of the North Delta Intakes from Hood at least to Isleton. The Tunnel DEIR analysis fails to take the salinity impacts, model their effects on farmer crop selection and then estimate the impact to crop economic value and return to farmers as well as employment effects of decreased value. This approach has been done in the 2011 Delta Economic Sustainability Plan conducted by the Delta Protection Commission. This study's results were also submitted to the State Water Resources Control Board as exhibits associated with the testimony of former State Senator and long-time Delta farmer Michael Machado. The analysis in Impact ECON-6 should be revised for the Final EIR to take account of this approach to assessing salinity impacts on the economics of Delta agriculture and the socioeconomics of the	Analysis and conclusions in ECON-6 were based on the analysis and conclusions in Chapter 9, Water Quality, and Chapter 15, Agricultural Resources. Neither of those chapters identified physical changes related to water quality that were significant. Therefore, no further quantification of the economic value of such changes was warranted. Qualitative discussion of the economic implications was provided. Chapter 9, Water Quality, analyzes potential surface water quality impacts, including salinity level changes in some locations during project operations. The analysis concluded that the project would result in less-than-significant impacts on the quality of surface water. The locations identified as having some increases in salinity levels are in the western Delta, where existing water quality has already resulted in selection of more salt-tolerant field and forage crops (see Chapter 15, Agricultural Resources, section titled Crop Salinity Tolerances). Please refer to Common Response 12, Agricultural Resources, for additional information regarding crop salinity tolerances. As suggested in Common Response 12, future salinity conditions within the western Delta and associated changing of crop types, would be attributable to climate change and not operation of the proposed

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	Delta region. [Footnote 144: Delta Protection Commission. 2011. Draft Delta Economic Sustainability Plan, October, accessible at https://delta.ca.gov/wp-content/uploads/2021/05/Delta-Economic-Sustainability-Plan-2012-508.pdf. This plan was presented in testimony by former Delta Protection Commission executive director Michael Machado to the State Water Resources Control Board during Part 1B of the California WaterFix Change Petition Hearing in December 2016, Exhibits RTD-30 and -31, and RTD-301 through -305; available on request to Restore the Delta.]	project or alternatives. Chapter 15, Agricultural Resources, Impact AG-3 concluded that operations and maintenance activities would not directly result in the conversion of productive farmland. Based on the location and magnitude of salinity changes described in Chapter 9, and the current distribution of crops in the Delta and their salinity tolerances shown in Chapter 15, no additional quantifiable effects on crop revenues associated with yield effects were identified. It is possible that changes in salinity levels due to operation of the project might influence some growers' crop selection in the long run, and, as a result, affect total agricultural production value. Therefore, the text in Chapter 17, Socioeconomics, under ECON-6 has been modified to identify this as a possibility. However, the available information does not support that there would be substantial changes in crops grown nor would these changes result in the conversion of those lands to nonagricultural uses associated with these salinity changes. The comment also refers to the Delta Protection Commission's Economic Sustainability Plan (ESP). Information from the ESP and other Delta Protection Commission documents was reviewed and used in Chapter 17. The comment cites specific analysis of salinity effects on crop selection. The ESP analysis used salinity increases ranging from 25 percent to 200 percent (see Table 18 in the ESP). Even a 25% increase is many times greater than the average salinity changes during the growing season in the east, north and south Delta, as summarized in Chapter 9. EC levels in the western Delta near Emmaton are estimated to rise in September by 22%, yet the analysis summarized in Table 18 of the ESP indicated that a rise of 25% would influence crop selection but would not change the total acreage in production. Therefore, that analysis is consistent with the conclusion in Chapter 15 that "changes in the level of salinity in the western Delta under the project are not expected to result in exceedance of any significance thresholds." Also, as discussed in the previous paragraph and in Common

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		Response 12, Agricultural Resources, current salinity levels have already influenced the selection of salt-tolerant field and forage crops in the western Delta. Finally, the comment references testimony provided to the State Water Board in 2016 regarding the salinity effects of WaterFix. 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. DWR is responding to the comments on the current Delta Conveyance Project. The current project's operations and salinity effects are different than those of Waterfix. Further, the State Water Board received testimony and documents regarding Waterfix from many parties, much of which disagreed with or rebutted other submitted testimony.
401-127	[ATT 1:] Similar problems plague the analytic framework of Chapter 29, Environmental Justice, in which the socioeconomic impacts bear substantially on environmental justice communities (that is, also, disadvantaged and severely disadvantaged communities). Both Chapters 17 and 29 lack any substantial details of the impacts on environmental justice communities while at the same time avoiding and ignoring Appendix 29A, DWR's 2021 survey entitled Your Delta, Your Voice. This is consistent throughout the environmental justice analysis even when Chapter 29 mentions state of California policies on environmental justice to which the Tunnel Project and its DEIR must adhere. [Footnote 145: Found at California Public Resources Code sections 71110-71118 and Government Code section 65040.129(e)(1). These policies specify that environmental justice is "the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws,	As discussed in the response to comment 401-119, socioeconomic impacts on environmental justice communities are analyzed in Chapter 29, Environmental Justice. Because this resource topic is not considered an environmental impact under CEQA, the socioeconomic analysis in the EIR, per CEQA, is provided on the socioeconomic implications of reasonably foreseeable adverse physical changes by the project in other resource chapters. For example, the socioeconomics analysis considers the regional social or economic effects of physical changes identified in analyses for aesthetics and visual resources, agriculture, and recreation. These resource topics are analyzed for impacts on environmental justice communities and considered part of the analysis of socioeconomic impacts on environmental justice communities, which Chapter 29 concludes as potentially significant (refer to the table titled Level of Effect on Environmental Justice Populations, by Resource and Alternative). Also, Appendix 29A, Environmental Justice Community Survey Report, of the EIR provides a comprehensive summary of the Your Delta, Your Voice online environmental justice survey and highlights the perspectives of the Delta region respondents. Those perspectives inform the environmental justice

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	regulations, and policies."] This chapter does the minimum in reaching "beyond the outreach associated with the fair treatment and meaningful involvement" of environmental justice communities by narrowing down the survey to less than a page worth of environmental justice analysis. The purpose of doing environmental justice analysis gets lost among repeated sections that do not connect to the community input provided in the survey.	analysis by shedding light on how certain environmental changes might need to be evaluated for a disproportionate effect on an environmental justice population in the study area.
401-128	[Att 1:] We focused our review of Chapter 29 on the communities around the North Delta Intakes, which will cause both construction impacts and long-term operational impacts of intake operations on Delta flows and water quality: Clarksburg, Hood, Courtland, Locke, and Walnut Grove (even Isleton could be impacted as well). Conceptually, Chapter 29 defines the environmental justice community under analysis as confined to census tracts and blocks wholly or partially within the Legal Delta boundary---in other words, only to community members residing within the Legal Delta. This inappropriately ignores and excludes the potential environmental justice population of the Delta Region affected by Tunnel Project impacts on Delta landscapes and water ways from consideration in the impact analysis. People do not have to live in the Delta to experience the Delta and be impacted by changes to the Delta. The Tunnel DEIR is inadequately prepared and should be revised to include environmental justice communities in the Delta region as well.	Chapter 29, Environmental Justice, identifies minority communities and low-income communities from census tracts and block groups intersected by the footprint of the project and assesses impacts associated with resource topics that were analyzed on a broader or regional scale (e.g., air quality) that may extend beyond the environmental justice study area. The environmental justice analysis also identifies and provides discussion of minority populations and low-income populations in the SWP export service areas.
401-129	[Att 1: Exhibit 1: Table listing Census Tract numbers, Descriptions, and Percent of Native Americans and Communities of Color.]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.

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401-130	[Att 1:] Despite this narrow method of analysis, Chapter 29 reveals that Delta census tracts have a total "minority" population of 80,435, representing 61.2 percent of the total population---which makes the Delta a "majority minority" region. [Footnote 146: Tunnel DEIR, Chapter 29, Table 29-1, pp. 29-10 to 29-12.] Legal Delta communities are home to 12,456 low-income households (defined as those having household income at or below $60,000 per year), representing 32 percent of total Delta households---nearly one-third. [Footnote 147: Tunnel DEIR, Chapter 29, Table 29-2, pp. 29-15 to 29-18.] From the presentation of census tract-level data in Chapter 29, we observe that the census tracts immediately around the North Delta Intakes have an even larger proportion of non-white community members, as shown in the Table below [see Exhibit 1]. This is clear evidence, which Chapter 29 ignores, that just the construction impacts of the North Delta Intakes will have disproportionate impacts on environmental justice disadvantaged communities in these north Delta communities. The communities in this table are located in a range from Freeport in the north Delta to Isleton in the central Delta area, the area where immediate and direct impacts of both North Delta Intakes construction and operation will be direct and pronounced. The construction impacts will directly affect what respondents in 2020 to DWR's Your Delta, Your Voice (YDYV) community survey reported were heavily-used fishing locations in the north Delta and local businesses that support fishing and related recreational activity.	Chapter 29, Environmental Justice, identifies disproportionately adverse effects (e.g., air quality, noise, aesthetics) on environmental justice communities (the minority and low-income populations identified in the table titled Median Household Income in Study Area by Census Tract Block Groups 2019) from construction of the proposed project and its alternatives, which includes construction of the north Delta intakes. Please refer to the section titled Analysis of Disproportionately High and Adverse Effects in Chapter 29. Regarding impacts on fishing locations, Chapter 29 identifies impacts associated with the loss of fishing access specifically under Fish and Aquatic Resources and Chapter 17, Socioeconomics, specifically under ECON-5. As stated in Chapter 29, the project would not substantially affect recreational and subsistence fishing. Please see response to comment 401-131 for additional details regarding the analyses of recreation and fishing in the EIR.
401-131	[Att 1:] The construction period for these intakes will destroy fishing access along the left (east) bank of the Sacramento River between Hood and Courtland, which could generate greater congestion among anglers for remaining fishing spots, or discourage fishing all together in this area of the Delta.	As discussed in responses to comments 401-15 and 401-130, impacts associated with loss of fishing access are identified in Chapter 29, Environmental Justice, specifically in the discussion titled Fish and Aquatic Resources, and Chapter 17, Socioeconomics, specifically under ECON-5. These sections explain that although construction of one or more intakes

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	Chapter 29 fails to recognize these as significant environmental justice impacts, yet these are also significant environmental impacts since they involve human beings connected to their estuary through fishing as the act of predating on fish by human beings for consumption purposes. DWR misreads official environmental justice principles to accord no status to these environmental justice beneficial uses of the Delta. In the context of CEQA and NEPA analysis DWR ignores evidence of direct ecological interaction of human beings with their physical environment, the population of whom are demonstrably disproportionately represented in the Legal Delta population and beyond in the vicinity of the proposed sites for North Delta intakes. Despite this, the Tunnel DEIR states, "If the project is approved and completed, project operations are not expected to result in disproportionately adverse effects on minority and low-income communities in the environmental justice study area." [Footnote 148: Tunnel DEIR, Chapter 29, p. 29-1, lines 31 to 34.] The DEIR can only conclude this because no analysis is provided of disproportionate presence in the Legal Delta, as RTD [Restore the Delta] does here[.]	on the Sacramento River would obstruct access to fishing spots along the east riverbank at intake locations, these shoreline areas are very small compared to the total riverine and nearshore areas found alongside the Sacramento River main channel and total shoreline areas found through the Delta and there is ample access to the river for bank fishing from numerous other locations on both sides of the Sacramento River in the study area and throughout the Delta. Further, as stated in Chapter 16, Recreation, under Impact REC-1, no documentation was found that indicated these areas receive much use, if any; these areas represent a very small amount of shoreline compared to the many miles of shoreline accessible by adjoining roads; and anglers would still have abundant choices for accessing desired locations for shoreline fishing in and around the intake locations without these areas. The project operations statement mentioned in the comment refers to the operational outcome from implementation of the proposed project and its alternatives of providing potential benefits on environmental justice communities by improving reliability of water delivery. Impacts on environmental justice communities from operation of the project facilities are also analyzed and conclude disproportionately high and adverse impacts on environmental justice communities (i.e., visual effects from substantial presence of the project throughout the study area). Please refer to the section titled Analysis of Disproportionately High and Adverse Effects in Chapter 29 for further information and analysis.
401-132	[Att 1: Exhibit 2: Table listing Census Tracts with Minority Populations (as percent of total) and the number of Census Tracts in each percent range category.]	The commenter is providing this exhibit in support of their comments. Those comments are addressed in these responses to the commenter's letter.
401-133	[Att 1:] This table [see Exhibit 2] shows further potential for disproportionate impacts of the Delta Tunnel on Delta environmental justice communities. Twenty-eight of 54 Delta census tracts have majority minority populations in them, and twenty-six of them have more than 70 percent non-white	As discussed in previous responses to this letter (see comments 401-4, 401-14, and 401-128), the study area for the environmental justice analysis consists of the census tracts and block groups intersected by the footprint of the project and assesses impacts associated with resource topics that were analyzed on a broader or regional scale (e.g., air quality) that may

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	populations in them. Now, we recognize that the above table reports on environmental justice residents of the North Delta from Chapter 29, and our comments have also pointed out that more environmental justice folks than just those residing in the Delta use the Delta for various purposes. Chapter 29 fails to incorporate the findings about fishing activity of its own (rather expensive) survey on Delta environmental justice communities within and beyond the Legal Delta. RTD [Restore the Delta] provided a detailed critique of the YDYV [Your Delta, Your Voice] methodology and outreach approach in 2021. [Footnote 149: Tim Stroshane, "The Window Dressing of Environmental Justice in Delta Tunnel Planning," Delta Flows, 19 September 2021, accessible at https://www.restorethedelta.org/2021/09/19/delta-flows-9-19-21-the-window-dressing-of-environmental-justice-in-delta-tunnel-planning/.] We incorporate this analysis by reference and request that DWR respond in the Final EIR to its points as well as those in this letter.	extend beyond the environmental justice study area. Fishing was a concern identified as a priority by the survey responders of the Your Delta, Your Voice online environmental justice survey under the survey headings "Natural Environment" and "Parks and Recreation" and Chapter 29, Environmental Justice, recognizes this concern as community priorities (see section titled Community Priorities) and considers potential environmental justice impacts from the project alternatives on fish and fishing activity in the section titled Fish and Aquatic Resources. Regarding the critique of the Your Delta, Your Voice online environmental justice survey and the environmental justice analysis, environmental justice and disadvantaged communities in the Delta region are an important concern to DWR and although not a requirement of CEQA, DWR conducted the survey and analysis to provide information to decision makers on potential impacts of the proposed project and its alternatives on these communities. Please refer to Chapter 35, Public Involvement, for information on DWR's public involvement activities under CEQA, including outreach to the Delta's environmental justice and disadvantaged communities.
401-134	[Att 1:] Whites represent about 32 percent of the total Legal Delta population, but in the YDYV [Your Delta, Your Voice] survey Whites represented 62 percent of all respondents to the survey. So, as we point out in our methodology critique in 2021, white people are overrepresented in the YDYV survey. That does not mean there is no useful information derivable from it. For disadvantaged and severely disadvantaged community members responding to YDYV, 28 and 29 percent respectively stated that they used the Delta for outdoor activities, with another 18 and 19 percent respectively also stating that they used fishing spots. Their responses reflect nearly identical responses for "all respondents" to YDYV (30 and 18 percent respectively). [Footnote 150: Ag Innovations.	The Your Delta, Your Voice online environmental justice survey gathered the perspectives of members of low-income, minority, Indigenous, historically burdened, and otherwise underrepresented or disadvantaged communities (including limited English speakers) who live or work in the Delta region, which is broader than the area of the Legal Delta. The "Delta region" was defined in the survey as slightly larger than the Delta and people across the socioeconomic spectrum and from areas throughout the state responded. Therefore, the percentages of the ethnicities between the responders of the survey and the total legal Delta population may not be the same. The purpose of the survey was not to provide a representative sample of the Delta community for the effects analysis contained in the EIR. Nevertheless, the findings of the survey illuminated a sample of the priorities and concerns of a subset of the Delta environmental justice

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	2021. Survey Findings: Your Delta, Your Voice: Environmental Justice Community Survey, May, p. 77, "Map Markers by Type for Delta Region DAC Participants." Hereafter cited as YDYV Survey.] In addition, the study finds that communities of color identified outdoor activities and fishing spots as 43 to 45 percent of their engagement with the Delta, while communities of "mixed heritage" and Native Americans identified these activities as representing at least half of their engagement with the Delta. [Footnote 151: YDYV Survey, p. 79] Even more to the point, Delta environmental justice (DAC) respondents disclosed that 246 of 274 respondents or 90 percent of respondents rely on Delta fish to feed their families on a nearly costless basis---subsistence fishing. [Footnote 152: YDYV Survey, p. 90. Survey authors apparently could not believe their eyes at this finding. "These map markers revealed a remarkable pattern. For 90% of the map markers placed by Delta-region DAC respondents, the respondent indicated that they or their family eat fish from the Delta four or more times per week. Because survey takers could place multiple map markers, we also ran this calculation after removing any instances in which survey takers answered this question for more than one map point. This resulted in the same 90% proportion indicating they eat fish from the Delta four or more times per week." We at Restore the Delta knew already that subsistence fishing is an important means by which Delta Region residents supplement their diets with a costless form of fish protein, but we were pleasantly surprised by the high rate of reliance environmental justice community respondents disclosed to the survey. We also think DWR is to be commended for allowing, and Ag Innovations for including, this map marker approach used in the survey to elicit such responses.] Map 5 of YDYV Survey shows results of map	community that helped inform the environmental justice analysis. Regarding fishing access, as discussed in previous responses to this letter (see comments 401-15, 401-130, and 401-131), impacts associated with loss of fishing access are identified in Chapter 29, Environmental Justice, specifically under the section titled Fish and Aquatic Resources, and in Chapter 17, Socioeconomics, specifically under ECON-5. These sections explain that although construction of one or more intakes on the Sacramento River would obstruct access to fishing spots along the east riverbank at intake locations, these shoreline areas are very small compared to the total riverine and nearshore areas found alongside the Sacramento River main channel and total shoreline areas found through the Delta and there is ample access to the river for bank fishing from numerous other locations on both sides of the Sacramento River in the study area and throughout the Delta. Further, as stated in Chapter 16, Recreation, under Impact REC-1, no documentation was found that indicated these areas receive much use, if any; these areas represent a very small amount of shoreline compared to the many miles of shoreline accessible by adjoining roads; and anglers would still have abundant choices for accessing desired locations for shoreline fishing in and around the intake locations without these areas.

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	marking by Delta environmental justice (DAC respondents) indicating that over one-fifth of that 90 percent (about 55 respondents) relied on north Delta fishing spots (55 dots). A twelve to fourteen year construction period at North Delta fishing spots will greatly impair environmental justice communities' access to Delta fish for their diets disproportionately relative to the Delta Region and add travel costs to their fishing activities---a direct environmental effect. Given their reliance on Delta fisheries for a significant portion of weekly protein intake, this is a clear environmental justice and environmental impact (again, the latter because fishing is a direct human interaction with environmental resources---fish; and the former because the impact would be imposed by DWR's Tunnel Project construction activity in the North Delta disproportionately). The Tunnel Project DEIR gets this just plain wrong when it states: Construction of one or more intakes on the Sacramento would obstruct access to fishing spots along the east riverbank at intake locations. However, there is ample access to the river for bank fishing from numerous other locations. Therefore, the project would not substantially affect recreational and subsistence fishing for minority or low-income populations and [there] would be no disproportionately adverse effect on environmental justice. [Footnote 153: Tunnel DEIR, Chapter 29, p. 29-26, lines 30 to 33.] This needs to be corrected in the Final EIR. Here DWR and its consultants engage in deliberate, blithe erasure of a beneficial use of water and fish by Delta environmental justice communities, as if it is of no consequence. It is a cruel finding and must be struck from the Tunnel DEIR.	

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401-135	[Att 1:] In the operational period of the Tunnel Project, two principal water quality impacts go ignored as to their effects on Delta environmental justice communities: increased salinity downstream from North Delta Intake operations and increased risk Delta-wide of harmful algal blooms. Contrary to DWR's claim that water quality is not a significant environmental impact of the project on environmental justice communities, we include Attachment 9 [ATT 9] to this letter addressing the effect of North Delta Intake diversions on Delta flows. These charts are drawn from Tunnel DEIR appendices and show that there will be impacts in significant portions of each year from North Delta Intake diversions. DWR is misrepresenting its flow analyses by contending there are no significant water quality impacts from Tunnel diversions. These substantial but relatively modest impacts in Attachment 9 [ATT 9] reflect statistical averaging in DWR's hydrodynamic modeling, and fail to disclose minimum low flow conditions that will bring increased salinity with it, whether from sea level rise, tidal action, or both. Moreover, as we discussed above in our comments on Chapter 9, Water Quality, harmful algal blooms occurring in the Delta threaten to spread to areas of the Delta where flows will be lower and residence times of water longer due to diversions introduced by the North Delta Intakes. Candidate reaches of Delta channels for HAB spread could include reaches downstream of the Intakes, the Delta Cross Channel, Georgiana Slough, and other channels of the Central Delta that rely on Delta Cross Channel flows. Such spread could reach the drinking water supply intake owned and operated by the City of Stockton Municipal Utilities Department, which serves thousands of Stockton households and businesses with fresh, potable drinking water.	The EIR's description of effects on Sacramento River flows upstream and downstream of the proposed intakes is based on comparison of CalSim 3 modeling results for baseline existing conditions and project alternative conditions for a 94-year period of record, which includes a range of flow conditions for all water year types when flows are lower during critical years and higher during wet years. Inputs to the DSM2 model used to support the analyses and impact determinations in Chapter 9, Water Quality, include the 94-year period of monthly Sacramento River inflows modeled by CalSim 3 for baseline existing conditions and the project alternatives. Therefore, the water quality modeling and analyses, including those for salinity parameters and cyanobacteria harmful algal blooms (CHABs), directly account for changes in river inflows for a full range of conditions as a result of project operations. As described in Appendix 5A, Modeling Technical Appendix, DSM2 is a calibrated and verified model for simulating Delta water quality and the best available tool to support the water quality analyses. Please see response to comment 401-86 regarding the CHABs analysis in Chapter 9, Impact WQ-14, which describes how project operations could increase residence times in some Delta channels, but those increases in residence times would not lead to significant increases in CHABs. Also please see Common Response 10, Surface Water Quality and Groundwater Resources, regarding DSM2 calibration and verification, averaging and use of modeling output, and the approach to the CHABs analysis. Regarding water quality impacts on environmental justice communities, water quality is a resource in the EIR found to have less-than-significant impacts under CEQA, and therefore it would not have a disproportionately high and adverse effect on environmental justice.

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401-136	[ATT 1:] We are deeply disappointed that DWR resorted to ignoring its YDYV Survey as a basis for informing how and what kind of environmental, environmental justice, and community impacts the Delta Tunnel Project would impose on the Delta EJ community both of the direct Legal Delta and of the Delta Region as a whole. It is plainly obvious that[:] 1) the Legal Delta as well as the Delta Region are bona fide environmental justice communities, with relatively small proportions of white and wealthy populations; 2) Delta residents AND Delta region community members rely substantially on the Delta directly, and the north Delta in particular, for subsistence fishing, and it is thus an environmental impact to have both fishing spots taken away from anglers and fish removed from the vicinity for North Delta Intakes construction activities; and 3) in the operational phase, lost flows in the Delta will increase salinity in the Delta as it reduces flows in north and central Delta channels, and thereby contributing to the spread of harmful algal blooms which will disproportionately injure Delta people who rely on fishing and broad outdoor activities to enjoy the Delta. In sum, the Delta Tunnel Project will harm such beneficial users of water as fish, outdoor water-contact recreation, and environmental justice communities.	This summary comment repeats text from previous comments in this letter (comments 401-13, 401-14, 401-15, and 401-16). Please refer to the responses provided for comments 401-13, 401-14, 401-15, and 401-16.
401-137	[Attachment 2: Table showing Weighted Average Frequency of North Delta Diversion Operations]	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.
401-138	[Attachment 3: Comments on SWRCB Staff Report from Restore the Delta, dated March 31, 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.
401-139	[Attachment 4: Letter from Restore the Delta, Little Manila Rising, and Save California Salmon to SWRCB, DWR, DOI Regional Solicitor's Office, and USBR dated June 4, 2021 to	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenters letter.

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	transmit their protest with objections to the TUCP submitted on May 17, 2021.]	
401-140	[Attachment 5: Letter from Restore the Delta to SWRCB, DWR, and USBR dated April 4, 2022, transmitting its protest of the TUCP filed regarding permits and a license of the SWP and CVP.]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenters letter.
401-141	[Attachment 6: Letter from Restore the Delta to USACE dated July 18, 2022, regarding the Dredge and Fill (404) Application from DWR to construct North Delta Drought Salinity Barriers Project (Public Notice SPK #2021-00763)]	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.
401-142	[Attachment 7: Letter from Restore the Delta to DWR dated August 22, 2022, regarding its comments on the Draft EIR on the West False River Drought Salinity Barrier]	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.
401-143	[Attachment 8: Series of six graphs labeled "Extreme Heat Index Days for Sacramento Valley, Delta, and San Joaquin Valley Counties During 21st Century" attributed to Dahl et al. 2019.]	The commenter provided this attachment for reference purposes in support of their comments. Those comments are addressed in these responses to the commenters letter.
401-144	[Attachment 9: Four charts labeled "Sacramento River Flows Upstream and Downstream of North Delta Intakes, Percentage Change in Monthly Average Flows" attributed to Appendix 5A, Section B, Modeling Technical Appendix -- Hydrology and Operations Modeling, Attachments 3 and 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. This figure compares 2020 modeling results to the 2040 modeling results. This is not an appropriate comparison for the purposes of the CEQA analysis. Please refer to Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues, regarding the CEQA environmental baseline. Please refer to Chapter 4, Framework for the Environmental Analysis, for a description and purpose of the 2040 and 2070 analyses provided as part of the EIR.
401-145	[Attachment 10: Two graphs labeled "Early September 2022 Sacramento River Flow and Salinity Conditions at Isleton with West False River Barrier in Place" attributed to the California Data Exchange Center.]	The commenter is providing this attachment in support of their comments. Those comments are addressed in these responses to the commenter's letter.

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401-146	[ATT 11: Table titled "Comparison of Monthly Average Sacramento River near Freeport Flows in Appendix 4B and Appendix 5A" attributed to DEIR Appendices 4B and 5A,]	The commenter is providing this attachment in support of their comments. Those comments are addressed in these responses to the commenter's letter.
401-147	[Attachment 12: Figures depicting California land change projections between 2010 and 2100, including for agriculture, from the USGS Western Geographical Science Center.]	The commenter is providing this attachment in support of their comments. The attachment includes a series of maps which prognosticate the distribution of different landcover types – including agriculture – within the state of California in future decades up to 2100. Please see Common Response 1, CEQA Process, General Approach to Analysis, and Other Environmental Review Issues. As described in Common Response 1, DWR as the CEQA lead agency followed CEQA Guidelines Section 15125(a) to develop a baseline to assess the significance of impacts of the alternatives in relation to existing conditions at the time of the 2020 Notice of Preparation. Appendix 4A of the EIR, Consideration of 2070 Conditions, considered whether the type and magnitude of impacts may change from those considered under an earlier 2040 baseline. This 2070 conditions analysis is not required by CEQA. As described in Appendix 4A, conditions in 2070 would be similar to those reported in Appendix 15C, Agricultural Resources 2040 Analysis, for 2040 conditions. Climate change would be a large driver of salinity levels in the Delta, which would affect agricultural production in the study area, especially in the western Delta.
401-148	Attachment 13: List of Restore the Delta Commenters	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.