

Contents

Common Response 6: Climate Resilience and Adaptation	2
Overview	2
Climate Change Analyses in the EIR.....	3
Adequacy of Climate Change Analysis in the EIR	3
Climate Change Assumptions, Scenarios, and Timeframes	5
Future Changes in Temperature, Precipitation, and Salinity.....	7
Climate Change and Water Supply Reliability	9
References Cited	11

Common Response 6: Climate Resilience and Adaptation

Overview

This Common Response addresses the common themes and topics raised in public comments concerning climate change and requirements of California Environmental Quality Act (CEQA) related to climate change. It focuses on contents discussed in Chapter 30, *Climate Change*, and addresses recurring themes in public comments about future projections for temperature, precipitation, and 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 (project) ability to offer adaptation and resilience for State Water Project (SWP) and potentially Central Valley Project (CVP) water delivery to address anticipated climate change impacts.

Some topics and themes in this Common Response overlap with those in other Common Responses. References to other Common Responses are made herein, where appropriate. In general, this Common Response has intersections with the following other Common Responses.

- Common Response 1, *CEQA Process, General Approach to Analysis, and Other Environmental Review Issues*
- Common Response 3, *Alternatives Development and Description*
- Common Response 4, *No Project Alternative Description and Analysis*
- Common Response 9, *Hydrologic Modeling and Approach*
- Common Response 15, *Air Quality and Greenhouse Gases*

In the following sections, this Common Response discusses the range of climate change analyses provided in the Environmental Impact Report (EIR) and how the California Department of Water Resources (DWR) has exceeded the CEQA requirements by including a dedicated chapter on climate change (Chapter 30), which discusses how trends in observed and projected climate change clearly demonstrate the need for the project and how it can enable adaptation to potential climate change impacts in the study area. This Common Response also points the reader to a number of appendices associated with numerous resource chapters that present additional supporting analyses under the 2040 and 2070 climate change scenarios, demonstrating that DWR has made every effort to factor climate change into the analysis of each resource. As described in this Common Response, the use of 2040 and 2070 covers multi-year periods of climate modeled data. As such, the use of the term "at 2040" or "at 2070" throughout this Common Response means those climate change conditions under the 2040 or 2070 scenarios. This Common Response goes on to discuss how the project would enable adaptation to future changes in temperature and precipitation patterns and ensure water supply reliability in the face of increasing hydrological extremes.

Climate Change Analyses in the EIR

Adequacy of Climate Change Analysis in the EIR

Multiple comments asserted that climate change should be analyzed in the EIR or that the climate change analyses presented in the EIR are not adequate.

CEQA analysis is concerned with a project's impact on the existing environment, rather than with the environment's impact on a project or project users.¹ For this reason, Chapter 23, *Air Quality and Greenhouse Gases*, evaluates potential impacts of the project and project alternatives on climate change. More information regarding comments related to greenhouse gas emissions is provided in Common Response 15.

Additionally, when a proposed project risks worsening existing environmental hazards or conditions, CEQA requires an agency to analyze the project's potentially significant exacerbating effects on existing environmental hazards, because such effects are viewed as impacts of the project on existing physical conditions rather than impacts of the environment on the project. For example, CEQA analysis would be required if a project threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed.² Therefore, an analysis of how climate change might impact a project or its users is required under CEQA only if the lead agency determines based on substantial evidence that the project could exacerbate climate change effects³ or it is reasonably foreseeable that the physical or operational elements of a project will change in response to climate change, in which case any potentially significant impacts of those reasonably foreseeable project changes should be evaluated in an EIR.⁴ To determine whether further climate change analysis was required pursuant to CEQA for either of these reasons and for informational purposes, DWR considered three different 2040 climate change and sea level rise scenarios as discussed in Appendix 30A, *CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections*. Furthermore, the EIR includes an entire chapter, Chapter 30, that focuses on how the project could help address impacts from observed and projected climate conditions on water deliveries and how climate change could influence the ability of the project to fulfill its intended purpose. Chapter 30 answers three main questions: how climate change is projected to affect the study area; how the project's impacts on operations and resources in the study area would be affected by climate change; and how might the project affect the resiliency of the study area to climate change. Global and regional climate change trends discussed in Chapter 30 are based on latest available, peer-reviewed sources, including the Fourth National Assessment (NCA4) (U.S. Global Change Research Program 2017, 2018) and California's Fourth Climate Change Assessment (California Governor's Office of Planning and Research et al. 2018). Development of the Fifth National Assessment (NCA5) is currently underway and is anticipated to be published in fall 2023 (U.S. Global Change Research Program n.d.). California's Fifth Climate Change Assessment is also under development and is planned to be released in 2026.

¹ *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 378.

² *Id.* at pp. 388-389.

³ See, e.g., *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473-74 [holding that an EIR was not required to address impacts relating to sea level rise resulting from global climate change on a proposed project where the project itself would not cause sea levels to rise].

⁴ *Cnty. of Butte v. Dep't of Water Res.* (2023) 90 Cal.App.5th 147, 159-171 [upholding DWR's determination that it would be speculative to analyze potential future operations under hypothetical climate change scenarios].

As discussed in Common Response 1, consistent with CEQA requirements, the baseline used to evaluate the environmental impacts of the project alternatives does not include climate change. Chapter 30 and its associated appendices (Appendix 5A, *Modeling Technical Appendix*, and Appendix 30A, *CalSim 3 Results Sensitivity to 2040 Climate Change and Sea Level Projections*) are intended to inform potential conditions under climate change but are not used as a future baseline. Additionally, the EIR includes several appendices that present analyses of project alternatives in future years that reflect environmental conditions affected by climate change. The purpose of these supplemental analyses was to assess whether the impact conclusions presented in the individual resource chapters (Chapters 7 through 32) would change when considered under anticipated hydrological changes as a result of changes in temperature, precipitation, and sea level rise under projected climate change. These longer-term analyses exceed CEQA requirements and were performed to provide information about possible future environmental conditions once conveyance facilities are operational. Because these analyses provide substantial evidence supporting the conclusion that the proposed project and project alternatives will neither exacerbate the future impacts of climate change nor result in reasonably foreseeable potentially significant future project impacts that differ substantially from those analyzed in Chapters 7 through 32 (as discussed in Section 30.4.3, *Resilience and Adaptation Benefits*), no further climate change impact analysis or mitigation measures are required to be included in the EIR pursuant to CEQA. However, DWR considers these topics important and, in the interest of full disclosure, included them in the EIR for the benefit of the public and decision makers. These longer-term analyses are presented in the following appendices.

- Appendix 5B, *Surface Water 2040 Analysis*
- Appendix 6A, *Water Supply 2040 Analysis*
- Appendix 7A, *Flood Protection 2040/2072 Analysis*
- Appendix 8C, *Groundwater 2040 Analysis*
- Appendix 9L, *Water Quality 2040 Analysis*
- Appendix 12C, *Fish and Aquatic Resources 2040 Analysis*
- Appendix 13F, *Terrestrial Biological Resources 2040 Analysis*
- Appendix 15C, *Agricultural Resources 2040 Analysis*
- Appendix 20C, *Delta Conveyance 2040 Traffic Analysis*
- Appendix 22B, *Energy 2040 Analysis*
- Appendix 24E, *Noise and Vibration 2040 Analysis*
- Appendix 26A, *Public Health 2040 Analysis*

Through the inclusion of Chapter 30 and the multiple supporting appendices, climate change considerations have been evaluated in depth and results fully disclosed in the EIR. More information about the approach to analyzing the impact of climate change on individual resources is discussed in Chapter 4, in the sections titled *Baseline Assumptions and Alternative Comparisons* and *Consideration of Seismic Risks and Climate Change on Project Alternatives*.

In addition to the analyses at the 2040 timeframe, the EIR also provides information on potential impacts and benefits of the proposed project under a possible longer-term future scenario by comparing the No Project Alternative with the project at 2070. Although this analysis is not used as a basis for CEQA findings, the 2070 analysis qualitatively discusses the potential for longer-term

operational changes and impacts based on several factors, including climate change and sea level rise. More details on the 2070 analysis are provided in Appendix 4A, *Consideration of 2070 Conditions*.

In summary, the EIR provides sufficient analyses and evidence for the public and decision makers. DWR decision makers will consider all information in the EIR when determining whether to approve the project.

Climate Change Assumptions, Scenarios, and Timeframes

Some comments challenged climate change assumptions used to model future conditions. Other comments challenged the adequacy of the range of climate scenarios modeled. Some comments asserted that the analyses in the EIR did not adequately consider climate change and sea level rise projections. Some comments critiqued the method of downscaling from global climate models.

Please see Common Response 9, *Hydrologic Modeling and Approach*, for a detailed discussion about the use of best available data and tools, specifically the sections describing the CalSim 3 model, modeling assumptions, uncertainty, and modeled representation of baseline and future conditions. As Common Response 9 elaborates, the EIR used the best available hydrologic modeling tools and downscaled climate projection datasets to support the EIR at the time of the analysis. Additionally, readers may refer to Common Response 1 for a discussion about how the DWR used the best available scientific information to produce the analyses presented in the EIR.

Details about how climate change and sea level rise are addressed in hydrological modeling are included in Appendix 5A. Appendix 5A provides an overview of the modeling used in the EIR, including a description of the overall analytical framework, modeling assumptions, and key analytical tools used in the quantitative evaluation of existing conditions, No Project Alternative (2040), proposed project, and project alternatives. It also provides a detailed discussion of the impact of different scenarios of sea level rise on Delta water quality using the SCHISM model. As noted in Appendix 5A, Section F, *Sea Level Rise and Delta Water Quality Modeling*, the simulations were used to understand salinity changes and to analyze the response of water quality under seven sea level rise scenarios based on sea level rise assumptions that range in severity from 1.8 feet to 10.2 feet as well as a base condition with no sea level rise, compared to recent historical conditions. This CEQA analysis appropriately considered these climate change effects and disclosed how the north Delta intakes would perform under the projected future changes.

A more detailed discussion about sea level rise scenarios and assumptions as input into the hydrologic model are presented as part of Common Response 9. Common Response 9 also presents a discussion of how model projections require and assume stationarity (that the statistical parameters of climate are independent through time). The EIR recognizes that climate conditions in California are nonstationary, and that past climate conditions and weather sequences are not good indicators of future (2040) conditions. Additionally, the analysis presented in the EIR assumes that the geometry of the Delta remains unchanged, while recognizing that the Delta levees are vulnerable to the effects of sea level rise. Common Response 10, *Surface Water Quality and Groundwater Resources*, discusses climate change with respect to the DSM2 model and water quality.

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). Some commenters claimed that the choice of the H++ scenario for EIR analysis was inappropriate because it represents the most conservative, risk-averse scenario, which does not

1 represent a reasonably foreseeable future. Projections provided are for the H++ scenario, which is a
2 single scenario for extreme sea level rise, not a probabilistic projection; it does not have an
3 associated likelihood of occurrence but is recommended for consideration in significant, long-term
4 decisions. Please see Chapter 3, *Description of the Proposed Project and Alternatives*, for discussion of
5 the conservative sea level rise assumptions used in modeling for project design.

6 Some comments cited uncertainty related to climate change projections and asserted that the EIR
7 needs to evaluate whether the impacts discussed under the 2040 appendices to individual resource
8 chapters would differ if different climate change scenarios were considered. Recognizing the
9 uncertainty inherent in the prediction of future climate change, the EIR includes Appendix 30A,
10 which summarizes the key findings from a sensitivity analysis performed to analyze project impacts
11 considering different climate change and sea level rise projections at 2040 than what were analyzed
12 in the EIR for the No Project Alternative (2040) and Alternative 5 (2040). The purpose of Appendix
13 30A is to help the public and decision makers understand how the No Project Alternative would
14 differ from existing conditions under different climate change and sea level rise assumptions at
15 2040, compared to those presented in the 2040 appendices (i.e., Appendices 5B, 6A, 7A, 8C, 9L, 12C,
16 13F, 15C, 20C, 22B, 24E, and 26A). Additionally, Appendix 30A discloses whether impacts of the
17 proposed project (Alternative 5) would remain similar or differ under different climate futures at
18 2040. CalSim 3 model simulations were used to understand the sensitivity of SWP and CVP reservoir
19 storage, river flows, Delta exports, salinity, and X2 position to different temperature, precipitation,
20 hydrology, and sea level rise assumptions.

21 The sensitivity analysis presented in Appendix 30A considers two additional climate change and sea
22 level rise scenarios at 2040, apart from the 2040 Central Tendency (CT) climate scenario with 1.8
23 feet of sea level rise, which is analyzed in the 2040 appendices to the EIR resource chapters. The two
24 additional scenarios included a drier 2040 Median climate scenario with 1.8 feet of sea level rise,
25 and a 2040 CT scenario with a smaller 0.5-foot sea level rise. The results of the sensitivity analysis
26 show only small differences in the changes in streamflow, reservoir storage, total Delta exports, and
27 salinity for Alternative 5 at 2040 compared to the No Project Alternative at 2040 under the different
28 climate change and sea level rise scenarios. DWR tested the robustness under really dry conditions
29 (i.e., 2040 Median scenario) using the CalSim 3 results and the 2040 CT. Based on these results, DWR
30 concluded that the climate change analysis contained in the EIR is sufficient and no further analyses
31 (i.e., analyses that go beyond CalSim simulations and perform resource specific modeling) are
32 necessary because any subsequent analysis of project impacts on environmental resources under
33 differing climate change and sea level rise scenarios would be similar to the analyses already
34 contained in the EIR. More details related to the CalSim 3 model and sensitivity analysis are
35 presented in Common Response 9, and detailed results of the sensitivity analysis can be found in
36 Appendix 30A.

37 Some comments asserted that the EIR does not use an appropriate timeframe for climate change
38 analysis or is insufficient in using the 2040 and 2070 timeframes. Analyses in the EIR that are based
39 on hydrological modeling mainly focus on 2040 conditions. As described in Chapter 30 and
40 Appendix 5A, Section B, *Hydrology and Systems Operations Modeling*, Attachment 4, *Climate Change*
41 *Development for Delta Conveyance Project*, the modeled 2040 CT climate change scenario covers a
42 30-year period of climate model data (2026–2055). In addition, the 2040 analyses include a scenario
43 with 1.8 feet of sea level rise (H++ scenario) at the San Francisco Bay tide gauge. The H++ scenario is
44 considered an “extreme sea level rise scenario for the year 2040” by the California Ocean Protection
45 Council (California Natural Resources Agency and Ocean Protection Council 2018) and is not
46 anticipated to be likely, by current climate models, until the 2070–2100 timeframe. This means 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.

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). These analyses are discussed in Appendix 4A to provide readers with an understanding of whether the type and magnitude of impacts disclosed for 2040 may change under a possible 2070 scenario. DWR acknowledges that the set of assumptions used to characterize the 2070 scenario in the EIR (2070 Median scenario) represents only one of the possible 2070 scenarios (given the inherent uncertainty regarding climate change and sea level rise). However, the consideration of 2070 conditions is based on the understanding that the impacts expected under No Project conditions in 2040 would continue to increase in scope and scale by 2070. The 2070 analyses consider future conditions with an anticipated further decrease in reliability of the SWP and CVP deliveries due to sea level rise and climate change. 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.

Future Changes in Temperature, Precipitation, and Salinity

Some comments indicated confusion about or alleged lack of clarity regarding the wet and dry conditions the study area will experience with increased climate change conditions.

As discussed in Chapter 30, climate change impacts on future temperature and precipitation patterns will likely affect existing water management facilities that were designed to capture water in upstream reservoirs and in the Delta, based on historic climate patterns. Historically, winter snowpack accumulation in the mountains has served as additional storage, followed by snowmelt in late spring. Snowpack, rain, and streamflow are key aspects of water supply in California and the state's water system was built to capture snow melt in the late spring, when it would be slowly released to the reservoirs and be available for supply for the rest of the year. This pattern of more stable streamflow has been the basis of historical water and flood management in the Delta. However, with the increase in average and extreme temperatures plus increased variability in precipitation patterns under climate change, this balance is likely to be disrupted.

Average daily maximum temperatures and average number of extreme heat days are projected to increase in the study area by 2100 or earlier. Observed and projected climate trends in the study area also demonstrate that reduced runoff and changes in evapotranspiration (due to higher average and extreme temperatures in the warmer season) may lead to extended dry spells and reduce the amount of water available in channels and reservoirs. Additionally, earlier snowmelt and projected increases in flashy rainstorms and high-flow events during the cool season could result in short periods of high flows in the Delta, which may contribute to the risk of channel overflows and flooding (California Department of Water Resources 2022). In other words, climate models project that the study area will see:

- An increase in rain-on-snow events in the winter months.
- An increase in the frequency and severity of extremes like floods and droughts.
- More frequent heavy rainfall events and flashy rainstorms in between stretches of drier periods.

1 Additionally, if a larger share of precipitation is delivered as rain instead of snow under climate
2 change, reservoirs would not be able to store as much water as they currently do when runoff
3 occurs more evenly in both winter and spring. Given that a portion of reservoir space must be
4 reserved for flood protection, water managers will become limited in their capacity to capture and
5 store excess water from flashy winter storms that can be released later.

6 In this context, the project will allow for adaptation to changing runoff patterns and help ensure
7 water supply reliability in the face of projected climate change by augmenting the ability to capture
8 increased winter flows into the Delta, and high flows from flashy storm events in extended dry
9 periods (California Department of Water Resources 2022). As described in Chapter 3, one of the
10 operational objectives of the project is to take advantage of excess water when it is available during
11 high-flow periods brought on by large precipitation events, while meeting water quality and
12 sensitive species requirements.

13 Some comments asserted that the EIR's description of temperature and precipitation does not align
14 with California's Water Supply Strategy released by Governor Gavin Newsom in August 2022. The
15 Governor's strategy calls on state agencies to prioritize actions that will safeguard California's water
16 resources against the effects of climate change: primarily more extreme, sustained drought
17 conditions, and fewer but more extreme precipitation events (California Natural Resources Agency
18 2022). The Governor's strategy specifically identifies the Delta Conveyance Project as a key project
19 that would improve the flexibility of current water systems to move water throughout the state and
20 a critical element of combating the effects of climate change. Failure to modernize the existing SWP
21 is expected to result in reduced water supply reliability, which poses significant risk to farms,
22 businesses, and tens of millions of California homes. The Governor's strategy specifically states the
23 Delta Conveyance Project is an important project that will modernize the SWP conveyance in the
24 Delta by improving the flexibility of the current system to move water when it is available. For
25 example, DWR estimates that if the Delta Conveyance Project had been operational during the high
26 rain events in January 2023, the project could have captured and moved an additional 228,000 acre-
27 feet of water into the San Luis Reservoir.

28 The project is designed to operate within future hydrological conditions resulting from climate
29 change, and although a number of factors may influence that, the future climate modeling developed
30 for the EIR focuses on sea level rise, and ambient temperature and precipitation-driven changes in
31 hydrology (such as runoff, flow, storage etc.) as they present the most critical threat to the design
32 and operation of the project. A detailed discussion about climate change trends in the study area and
33 associated impacts on the study area is presented in Chapter 30. Additional information on climate
34 change and sea level rise projections at 2040 that were analyzed in the EIR, and associated modeling
35 assumptions and findings are presented in Appendix 30A, *CalSim 3 Results Sensitivity to 2040*
36 *Climate Change and Sea Level Projections*. More information about how climate change and sea level
37 rise can affect surface water conditions and water supply in the study area is available in Chapter 5,
38 *Surface Water*, and Chapter 6, *Water Supply*, respectively.

39 Some comments on the Draft EIR asserted that impacts of project operations will exacerbate the
40 environmental impact of climate change-driven changes in water temperatures and salinity,
41 particularly on fisheries, and assert these impacts are inadequately described. DWR has discussed
42 these impacts in multiple locations in the EIR. Chapter 30 describes the impact of climate change on
43 water temperatures and salinity changes from sea level rise in the study area. Chapter 12, *Fish and*
44 *Aquatic Resources*, discusses how climate change and sea level rise could affect fish and aquatic
45 resources. Appendix 12C compares the No Project Alternative at 2040 to the project alternatives at

2040 using modeling tools and methods appropriate for the evaluation of impacts on fish and aquatic resources, incorporating assumptions regarding changes to hydrology and sea level rise as a result of climate change; this appendix shows that the relative difference between the project alternatives and No Project Alternative at 2040 is generally similar to the difference between the project alternatives and existing conditions at 2020. More details on environmental impacts on water quality from the project alternatives can be found in Chapter 9, *Water Quality*; this chapter is supplemented by Appendix 9L, which provides information regarding projected conditions for the project alternatives at 2040 compared to the No Project Alternative at 2040 and the No Project Alternative at 2040 compared to existing conditions. Common Response 10 also provides detailed responses to comments on future conditions and DSM2 water quality modeling presented in the EIR.

Climate Change and Water Supply Reliability

Some comments expressed concerns regarding how the project will enable reliability in water supply under conditions of climate change and sea level rise, particularly as hydrological extremes like droughts are projected to become more frequent and severe in the future and would have implications for water availability and supply in the study area.

As described in Chapter 30, projected future conditions under climate change, such as higher average temperature and more extreme variability in annual precipitation patterns, is anticipated to further diminish overall water supply and reliability of water delivery. Climate change is already taking a toll on California's water supplies in the form of more frequent and more severe droughts. A warmer atmosphere would modify precipitation and runoff patterns and affect extreme hydrologic events like floods and droughts. It is anticipated that droughts would increase in severity and duration, resulting in periods of critical dryness, further reducing Delta inflows during these dry periods. At the same time, associated increases in the frequency and severity of flashy storms in the cool season could increase high-flow events and flood risk in the Delta. These trends clearly point to the need for alternate methods of water delivery and distribution to effectively respond to changing water flow regimes under future climate change.

In this context, DWR considers capture and conveyance in the Delta as important potential adaptations in protecting the SWP from future climatic change and mitigating system losses due to changing precipitation patterns and seasonal runoff. Having alternative points of diversion in the north Delta would increase resiliency in managing combined effects of sea level rise, including potential impact on Delta morphology, and changes to timing and quantity of seasonal runoff. As water demand and supply challenges continue to increase, the project is designed to enhance resilience to climate change impacts and ensure safe and reliable water deliveries continue far into the future.

As discussed in Chapter 3 and Common Response 3, *Alternatives Development and Description*, the north Delta intakes would augment the ability to capture excess flows, typically in winter and spring months. During drought periods, diversions through the north Delta intakes would not be maximized, though they could be operated if hydrological conditions allow, consistent with the new proposed operating criteria and existing and future regulations. Chapter 2, *Purpose and Project Objectives*, notes that the project aims to work within the existing regulatory framework 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, thus enabling a more resilient and flexible water delivery system even under future climate conditions. The benefits of the project could be realized even in a drought year because a drought does not necessarily mean zero precipitation; it means the

1 window available to capture the water is narrower. As discussed in Chapter 30, the project could
2 make California's water system more resilient by augmenting the ability to capture increased winter
3 flows and high flows from flashy storms to supply water during dry months. The project alternatives
4 provide an alternative diversion point in the north Delta for Delta exports, adding management
5 flexibility and increases in SWP deliveries during long-term average, dry, and critical water years. A
6 detailed description of the modeling assumptions associated with the project alternatives is
7 included in Appendix 5A, and a detailed analysis of the project alternatives under 2040 conditions
8 can be found in Appendix 5B.

9 Additionally, the project is designed to protect freshwater supply against saltwater intrusion from
10 sea level rise and the potential for catastrophic failures in the Delta caused by earthquakes, major
11 flooding, and other disasters that could disrupt the flow of water through the Delta or impact water
12 quality. As discussed in Appendix 5A, Section F, the proposed north Delta intake locations are not
13 vulnerable to sea level rise from a water quality perspective. Furthermore, as described in Chapter
14 3, the facilities are designed to accommodate water level elevation changes corresponding to 10.2
15 feet of sea level rise (at the Golden Gate Bridge) and 200-year flood flows under extreme climate
16 change conditions projected for the end of the century.

17 As discussed in Common Response 8, *Relationship to Other Plans, Projects, Policies, and Programs*,
18 the Delta Conveyance Project would neither involve any new water rights nor harm in-Delta water
19 rights or modify water deliveries to non-SWP and non-CVP water contractors. The goal of
20 modernizing Delta conveyance is to more reliably capture water during and after storm events, and
21 to protect existing supplies from the threats posed by climate change, sea level rise, and
22 earthquakes. Separately, public water agencies throughout California are pursuing local supply
23 resiliency projects such as recycling, groundwater recharge, storage, and conservation to reduce
24 reliance on the Delta to meet future needs. The project is intended to help protect existing supplies
25 consistent with existing water right amounts.

26 In addition, the project would allow continued water deliveries and operational flexibility in the
27 events of catastrophic levee failure from seismic activity, flooding events, or other disasters that
28 could temporarily disrupt water supply or affect water quality. As described in Chapter 7, *Flood*
29 *Protection*, future surface water conditions are expected to change considerably when compared to
30 existing conditions due to sea level rise and a shift in hydrologic patterns as a result of climate
31 change. Within the study area, sea level rise conditions under the No Project Alternative could be
32 expected to increase the duration of high-water conditions in Delta channels, decrease flood
33 protection, and increase flood risk relative to existing conditions. More information on the effects of
34 implementing the No Project Alternative is provided in Common Response 4, *No Project Alternative*
35 *Description and Analysis*. The trend would be further amplified by changing hydrology and storm
36 patterns under climate change. Project impacts were assessed under future conditions that
37 incorporated assumptions regarding changes to hydrology and sea level rise as a result of climate
38 change. The results of the assessment determined the project alternatives would not result in an
39 increase in flood risk or affect flood management in the Delta under future climate conditions. More
40 information on flood conditions at 2040/2072 is provided in Appendix 7A.

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