

Letter	Comment #	Comment	Relation to Final EIR/EIS
City of Brentwood	1	<p>The City of Brentwood has reviewed the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for the California WaterFix project that was released last month for additional public review.</p> <p>The City has three major comments on the Final EIR/EIS. First, the Final EIR/EIS fails to respond in any meaningful way to the City's comments on both the Draft EIR/EIS for the Bay- Delta Conservation Plan and on the Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). Those comments, together with all attachments, are hereby restated and incorporated herein by reference. In those comments, we identified many serious deficiencies in the environmental analysis of the WaterFix project and urged your respective agencies to revise the analysis to use the best available scientific and commercial information, as well as rectifying many unfounded assumptions in the analysis. Unfortunately, your agencies chose not to undertake such revisions, instead opting to continue to advance an analysis that obscures the potential effects of the WaterFix project on the environment and on the City in violation of both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). We join and incorporate by reference the comments on the Final EIR/EIS that are being submitted to you concurrently by the North State Water Alliance, the Tehama-Colusa Canal Authority, the North Delta Water Agency, the Cities of Antioch and Stockton, and the Sacramento Regional Sanitation District, including all of the attachments/exhibits included with those submittals.</p>	<p>This comment is a general request to relook at all of the City's previous comments and those of other commenters to revise the EIR/EIS analyses. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	2	<p>Second, the Final EIR/EIS fails to disclose or analyze the potential impacts of the California WaterFix project on water quality in the Delta. The Council on Environmental Quality Regulations implementing NEPA state, at 40 C.F.R. §1500.1(b) that:</p> <p>NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.</p> <p>Similarly, the CEQA Guidelines state, at 15 Cal.Code Regs. §15003(c) and (d), that the purpose of an "EIR is to inform other governmental agencies and the public generally of the environmental impact of a proposed project" and "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action."</p> <p>As shown in the attached technical report prepared for the City by Exponent, a copy of which is attached herein and incorporated herein by reference, the Final EIR/EIS focused its attention on Alternative 4A and repeatedly concluded that the effects of that alternative on the environment would be "less than significant." But the Final EIR/EIS also acknowledged that the project could be operated to the "Boundary 1" conditions. Exponent's report, using information that was contained in the Final EIR/EIS but never analyzed or brought to the public's attention, demonstrates that the effects of operating the WaterFix project to the Boundary 1 conditions would be significant and unavoidable. The Final EIR/EIS's failure to include these analyses in the voluminous documentation for the WaterFix project and its failure to bring these significant adverse impacts on the environment to the attention of the public are fatal under both NEPA and CEQA.</p>	<p>This comment is a legal opinion that Boundary 1 as presented in the State Board Hearings should have been analyzed as a separate alternative to disclose significant environmental effects. As the EIR/EIS captures the range of effects that would occur under Boundary 1 though evaluation of 18 alternatives and includes supplemental analyses in Appendix 5E of the Final EIR/EIS. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>Despite commenter's expert's difference of opinion on certain assumptions used in the modeling, the modeling and assumptions within the modeling relied upon by the lead agencies is considered appropriate to support the lead agencies' analysis of environmental impacts associated with the Proposed Project.</p>
City of	3	<p>Third, and of most concern to the City, the modeling analysis prepared by MBK Engineers,</p>	<p>This comment asserts, based on MBK's modeling evaluation of the project that</p>

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City of Brentwood	4	<p>For the foregoing reasons, as well as the many other reasons that other parties have included in their comment letters on the Final EIR/EIS, the City urges your agencies to engage fully with the comments that have been submitted on the Draft EIR/EIS for the Bay-Delta Conservation Plan, the RDEIR/SDEIS and the Final EIR/EIS and then recirculate a substantially revised draft EIR/EIS in a format, and with sufficiently accurate scientific information, that will enable members of the public and our local, state and federal elected officials to understand the potential impacts on the environment associated with the WaterFix project. The City would welcome the opportunity to share our insights and information with your agencies in such a process.</p>	<p>This comment is a general request to relook at all of the City's previous comments and those of other commenters to revise the EIR/EIS analyses. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	ATT 1	<p>Technical Comments on WaterFix Final EIR/EIS</p> <p>The City's analysis of the impacts of the FEIR/EIS relies on the City's analyses of the modeling of Alternative 4A (Alternative 4A), the "preferred alternative," other model runs provided by the Department of Water Resources (DWR), and a review of the FEIR/EIS. The City of Brentwood has previously submitted comments on the Draft Recirculated Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS), which are included in the administrative record for the FEIR/FEIS (and included as Attachment 1A), and the City has submitted testimony to the State Water Resources Control Board (State Water Board) as part of the proceedings to consider a petition to change the water rights of DWR and the U.S. Bureau of Reclamation for the California WaterFix Project. The City's testimony to the State Water Board is provided as Attachment 2A and is referenced within these comments. While we appreciate the State's efforts to address comments provided in the RDEIR/SDEIS, many issues brought to the attention of the State were not addressed in the responses to the City's comments or in the Master Responses.</p>	<p>This section provides background on the City of Brentwood and their previous comments. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	ATT 1	<p>Exponent's major comments on the FEIR/EIS can be summarized as follows:</p> <ol style="list-style-type: none"> 1. The FEIR/EIS uses an inappropriate existing conditions model run 2. Operations are an essential component of any project description, and because DWR has not defined the operations of the proposed WaterFix project, DWR has not defined the proposed project 3. The WaterFix Project will result in adverse unmitigated water quality impacts 	<p>This section provides a summary list of comments with no details. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>

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		<p>4. The Adaptive Management and Monitoring Program remains undefined, and it is not possible to ascertain impacts to the City without understanding how the WaterFix project will be operated</p> <p>5. The impacts of the WaterFix Project are not disclosed in the FEIR/EIS</p>	
City of Brentwood	ATT 1	<p>Background In addition to the large volume of documentation produced throughout the BDCP/WaterFix project evolution, a large number of modeling files have been released over the years to support proposed project alternatives. In past comment letters, technical reports, and testimony, Exponent has relied in part on the model files released by DWR in their technical analyses. DWR used the Delta Simulation Model II (DSM2) to simulate hydrodynamics and water quality throughout the Delta for a range of model conditions and operational scenarios. In an effort to clarify further discussions of modeling and model files, Table 1 provides Exponent’s record of DSM2 model files released, and the documents and scenarios they were intended to support. This list is not intended to be comprehensive but reflects the model files Exponent has reviewed.</p> <p>Many of the technical analyses presented in this comment letter rely on the modeling results provided by DWR, which are provided in 15-minutes time-steps. These data are summarized in a variety of ways in our analyses, and are often grouped by specific water year type. Hydrology in the Delta varies from year to year. Water years in the Delta, defined as October through September, are classified as wet, above normal, below normal, dry, or critical. DWR determines the water year type by calculating a water year index number, which accounts for both the hydrology of the current year and the previous year’s index. By this classification system, the water years modeled in DSM2 by DWR fall into the following categories:</p> <ul style="list-style-type: none"> • Critical: 1976, 1977, 1988, 1990, 1991 • Dry: 1981, 1985, 1987, 1989 • Below Normal: 1979 • Above Normal: 1978, 1980 • Wet: 1982, 1983, 1984, 1986 <p>Because there is only one Below Normal water year in the 16-year DSM2 modeled record, Exponent combined results for the Below Normal year with model results for Above Normal water years for the purposes of analyzing the WaterFix model runs; the water year type for water years 1978-1980 is referred to from here forward as “Normal.” In some analyses, data were averaged by month or by water year type by aggregating data from those specific months or water year types and calculating an average. For example, the daily average chloride concentration during March of dry water years was calculated by sorting the DSM2 model results into bins such that the simulated salinity values for each day in March from years 1981, 1985, 1987, and 1989 were grouped and could then be averaged.</p>	This section provides background information only. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.
City of Brentwood	ATT 1	<p>1. The EIR uses an inappropriate existing conditions model run</p> <p>The City’s comments on the RDEIR/SDEIS describe DWR’s use of a baseline that does not include the Fall X2 salinity standard, and the City’s concern with and objection to DWR’s choice of baseline. The City and Exponent have also provided comments on the baselines used in DWR’s analyses in written form and in oral testimony during the State Water Board’s proceedings on the Petition filed by DWR and the U.S. Bureau of Reclamation Requesting Changes in Water Rights for the California WaterFix Project (WaterFix Change Petition Proceedings). We hereby attach and incorporate by reference the technical report (Attachment 2A) submitted in the State Board’s WaterFix Change Petition Proceedings, as well as a transcript of Dr. Paulsen’s direct testimony and cross-examination).</p>	<p>This section describes the commenter’s view that the Existing Conditions scenario was inappropriate. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>Please refer to Final EIR/EIS, Volume 2, Master Response 1 and RDEIR/SDEIS (RECIRC 2512-11) for more information.</p>

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		<p>The FEIR/EIS continues to use both an existing condition (EBC1) and future no-action alternative (NAA) as baseline conditions against which Alternative 4A project conditions are compared. However, the existing condition scenario (EBC1) does not include the Fall X2 requirement, despite the fact that the 2008 USFWS biological opinion (BiOp) requires it. The FEIR/EIS states the reason for this exclusion of Fall X2 as follows: “As of spring 2011, when a lead agency technical team began a new set of complex computer model runs in support of this EIR/EIS, DWR determined that full implementation of the Fall X2 salinity standard as described in the 2008 USFWS BiOp was not certain to occur within a reasonable near-term timeframe because of a recent court decision and reasonably foreseeable near-term hydrological conditions. As of that date, the United States District Court has not yet ruled in litigation filed by various water users over the issue of whether the delta smelt BiOp had failed to sufficiently explain the basis for the specific location requirements of the Fall X2 action, and its implementation was uncertain in the foreseeable future.”</p> <p>However, after the U.S. District Court’s ruling in March 2011 that the BiOp insufficiently explained the basis for Fall X2 location requirements, in March 2014—almost three years before the FEIR/EIS was issued—the Ninth Circuit U.S. Court of Appeals overturned the District Court’s ruling on this point, finding that the BiOp did sufficiently explain the basis of the specific Fall X2 location requirements (<i>San Luis vs. Jewell</i>, Case No. 11-15871). Thus, the pending litigation referred to in the FEIR/EIS has long since been resolved, and the Fall X2 requirement should have been included in the existing condition baseline scenario, together with the other 2008 BiOp requirements that were included in the baseline existing condition. Moreover, a second existing condition baseline model run that includes the Fall X2 requirements (EBC2) was conducted in connection with the Administrative Draft BDCP EIR/EIS and released to the public in 2013. This baseline model run (EBC2) was thus available to DWR at the time the RDEIR/SDEIS and FEIR/EIS were prepared. The EBC2 baseline condition should have been used to evaluate the impacts of Alternative 4A. Thus, the EBC1 existing condition scenario employed as a baseline in the FEIR/EIS is insufficient since it lacks the Fall X2 requirement and does not accurately reflect existing conditions. A more comprehensive discussion of the existing baseline condition and the failure of the EBC1 model scenario to capture actual existing conditions can be found in the City’s comments on the RDEIR/SDEIS.</p>	
City of Brentwood	ATT 1	<p>2. Because DWR has not defined the operations of the proposed WaterFix project, DWR has not properly defined the proposed Project</p> <p>2.1. DWR has stated that it may operate to the Boundary scenarios and that these scenarios should be evaluated to understand the impacts of the proposed WaterFix Project.</p> <p>DWR testified to evaluating “a range call [sic] Boundary 1 to Boundary 2. And the purpose of that is because... this project also includes the collaborative science and adaptive management program and the ability to make adjustments to the initial operating criteria based on science and monitoring... So Boundary 1 and 2 represent what we think at this time, based on those uncertainties, are the range of potential adjustments that may be made.” During cross-examination, DWR stated that it is appropriate to “evaluate the effects of Boundary 1 and the effects of Boundary 2” in evaluating potential injury from the WaterFix flow proposal. Figure 1 shows DWR’s visual representation of how Boundary 1 (B1), Boundary 2 (B2), and some of the proposed project alternatives noted in Table 1 compare in terms of Delta outflow. The B1 scenario was the primary focus of Exponent’s technical analyses presented in testimony during Part 1B of the WaterFix Change Petition Proceedings on behalf of the City, and Exponent determined that the B1 scenario results in adverse water quality impacts to the City.</p>	<p>The Final EIR/EIS adequately describes the proposed project and meets all requirements of NEPA and CEQA. The Final EIR/EIS indeed evaluated effects of Boundary 1 and Boundary 2 on water quality. Please refer to Final EIR/EIS Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Section 5E.5.1.4, Water Quality, for information on effects of Boundary 1 on water quality. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>See Section 4, State Water Board Change Petition Process, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on State Water Resources Control Board hearing materials.</p>

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City of Brentwood	ATT 1	<p>2.2. Water quality impacts are anticipated to be worse than the impacts disclosed in DWR’s FEIR/EIS</p> <p>DWR has modeled the impacts of the WaterFix Project for two time horizons: the “early long term” (ELT, corresponding to 2025 and an anticipated sea level rise of 15 cm) and the “late long term” (LLT, corresponding to 2060 and an anticipated sea level rise of 45 cm). Both scenarios were presented in earlier versions of the EIR/EIS for the project (see Table 1 of these comments). In Appendix 8G of the FEIR/EIS, DWR presents modeled chloride results for Alternatives 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9 as LLT, but presents Alternatives 4A, 2D, and 5A as ELT. The source water fingerprinting results are presented in Appendix 8D of the FEIR/EIS using these same time frames (i.e., fingerprinting results were apparently not conducted for Alternative 4A LLT). The proposed WaterFix Project will not be operational until <i>after</i> 2025, and project operation is anticipated to continue for the indefinite future; thus, it is unclear why DWR chose not to evaluate and present the LLT model results and analysis for Alternative 4A in the FEIR/EIS. The impact determinations made for chloride in Chapter 8 for Alternative 4A are almost entirely based on the ELT, with the exception of broad statements such as, “the effects of Alternative 4A in the LLT in the Delta region, relative to Existing Conditions and the No Action Alternative (LLT), would be expected to be similar to effects in the ELT. With greater climate change and sea level rise, additional outflow may be required at certain times to prevent increases in chloride in the west Delta.</p> <p>It does not appear that DWR modeled the LLT timeframe for the preferred alternative. For this reason, the impacts presented in the FEIR/EIS for Alternative 4A are expected to underestimate actual adverse impacts, and these impacts are not disclosed in the FEIR/EIS.</p>	<p>This section describes the commenter’s view that water quality impacts would be worse than those described in the Final EIR/EIS because the analysis of Alternative 4A uses a 2025 time frame. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS. Please refer to Final EIR/EIS, Volume 2, Master Response 1, Environmental Baselines, under the “Timeframes for Evaluation” header for more information about why 2025 conditions were used for non-HCP alternatives.</p>
City of Brentwood	ATT 1	<p>2.3 The Boundary Scenarios are fundamentally different than the preferred Alternative 4A</p> <p>2.3.1. Boundary 1 results in higher exports compared to Alternative 4A</p> <p>Exponent used DSM2 input files to show that more water will be exported from the Delta under the B1 scenario than scenario Alternative 4A in all water year types. Table 2 compares the modeled volume of water exported from the Delta (from Jones and Banks Pumping Plants and the proposed North Delta Diversions) for Alternative 4A and B1 for each water year type. To generate the values in Table 2, DSM2 output data were averaged for each month of the modeled 16-year period, sorted by water year type, and averaged. During dry water years the Boundary 1 scenario results in an average of 1,046 TAF (1.046 million acre-ft [MAF]) of additional water exported from the Delta. During wet and normal years, Boundary 1 results in 622 TAF and 638 TAF of additional exports, respectively.</p> <p>For individual months, the difference in the amount of water exported from the Delta using Boundary 1 operations relative to Alternative 4A can be much greater than the average values shown in Table 2. Figure 2 shows the modeled monthly average flow rate of water exported from the Delta for the EBC2, NAA, Boundary 1, and Alternative 4A scenarios for water years 1979 and 1985. During April and May of 1979 (a normal water year), Boundary 1 results in an export rate of approximately 8,000 cfs, which is four to five times higher than for scenarios EBC2, NAA, and Alternative 4A. During October and November of 1979, Boundary 1 exports are about 8,000 and 10,000 cfs, respectively, and Alternative 4A exports are approximately 5,200 and 5,900 cfs, respectively. During October through January of water year 1985, Boundary 1 results in an average additional export of 5,925 cfs compared to Alternative 4A.</p>	<p>This section describes the commenter’s view that exports in boundary scenarios are fundamentally different from Alternative 4A. Export effects of Boundary 1 are discussed in Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Section 5E.5.1.1, Water Supply, Final EIR/EIS. This section indicates that effects on total exports would be similar to Alternatives 1A and 3. For more information, please see Impacts for Alternatives 1A and 3, and Appendix 5A, BDCP/California WaterFix Final EIR/EIS Modeling Technical Appendix. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>

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		<p>With the exception of August, Boundary 1 exports are greater than Alternative 4A exported for of 1985. Results for other years are included in Attachment 4A.</p> <p>Thus, DWR's DSM2 results show that the Boundary 1 scenario would result in greater annual exports from the Delta than Alternative 4A for all year types, and as much as four to five times greater export volumes in some months. The variance in total exports between Boundary 1 and Alternative 4A scenarios was not disclosed in the FEIR/EIS, and Exponent's analysis concludes that the Boundary 1 scenario is markedly different from Alternative 4A.</p>	
City of Brentwood	ATT 1	<p>2.3.2. The Boundary 1 scenario will cause higher chloride levels at the City's intake than Alternative 4A</p> <p>The concentration of chloride modeled at the City's intake in Rock Slough at the Contra Costa Canal Pumping Plant #1 (CCPP#1)14in the Boundary 1 scenario is distinctly different than in Alternative 4A. During December of normal water years, for example, the Boundary 1 scenario results in chloride concentrations as much as 135 mg/L higher than the Alternative 4A scenario at the City's intake (Figure 3). During October through January of dry water years, model results show chloride concentrations are approximately 75-130 mg/L higher for the Boundary 1 scenario than Alternative 4A (Figure 4).</p> <p>Differences in salinity are even more substantial between Boundary 1 and Alternative 4A for specific periods in the modeled record. For example, Figure 5 shows the simulated daily average chloride concentrations for the dry water year of 1987. During December through January, the chloride concentration difference between Boundary 1 and Alternative 4A is as high as 220 mg/L. Exponent used DWR's DSM2 model output to show that chloride concentrations at the City's intake in the Boundary 1 scenario are very different from chloride concentrations in Alternative 4A. The FEIR/EIS did not include analyses that could have been used by the City to assess the impacts to the City's operations of the anticipated changes in chloride if Alternative 4A operations evolved to Boundary 1 operations.</p> <p>As discussed in testimony by Chris Ehlers during the WaterFix Change Petition Proceedings, when chloride levels at the City's intake exceed 150 mg/L, the City is unable to comply with Waste Discharge Requirement (WDR) permit limits at its wastewater treatment plant. Exponent converted DSM2 modeled salinity data from 15-minute intervals to daily averages at CCPP#1 and compared these calculated daily averages to the City's 150 mg/L operational threshold for chloride. The number of days that chloride concentrations exceeded 150 mg/L during the 16- year modeled period for Alternative 4A and B1 are shown in Table 3. In all but three years (1978, 1983, and 1984) in the 16-year model period, the salinity threshold is exceeded more often for the Boundary 1 scenario than for Alternative 4A. In 1979 (normal water year), Boundary 1 results in 145 additional days the 150 mg/L threshold is exceeded (a 479% increase), and during 1987 (dry water year), Boundary 1 results in 150 additional days above the threshold (a 1,582% increase). For eight of the sixteen modeled years, Boundary 1 results in more than 50 additional days when chloride exceeds the 150 mg/L threshold compared to Alternative 4A. Over the entire 16-year modeled record, Boundary 1 exceeds the 150 mg/L chloride threshold 787 additional days (2.16 years) compared to Alternative 4A.</p>	<p>This section describes the commenter's view that chloride levels at Brentwood's intakes in boundary scenarios are fundamentally different from Alternative 4A. Chloride effects of Boundary 1 are discussed in Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Section 5E.5.1.4, Water Quality, Final EIR/EIS. This section indicates that Boundary 1 water quality objective exceedances would occur more often than the no action alternative, but the modeling has limitations associated with its time step and other necessary key assumptions made, and does not account for real-time operations. As a result, the impacts on chloride would be less than significant, consistent with Alternative 4A. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>As described in Section 5.2.3.2 of Chapter 5, Water Supply, in the Final EIR/EIS, changes to water supply are not environmental impacts because they would not, by themselves, create a physical change in the environment. Changes to water supply, however, could be considered as part of economic or social changes that may indirectly lead to a physical change in the environment. Therefore, as required under CEQA, any potential physical environmental impacts indirectly caused by changes to water supply are appropriately addressed in the relevant resource chapters in the Final EIR/EIS. The potential impacts related to changes in salinity in the Delta are described in Chapter 8, Water Quality of the Final EIR/EIS. The potential impacts to community water supplies are discussed in Chapter 20 of the Final EIR/EIS.</p> <p>The City's 150 mg/L threshold for chloride is an operational preference rather than a regulatory standard. The state's adopted water quality objective for protection of the municipal and domestic supply beneficial use for the Delta is the state's drinking water maximum contaminant level, which is 250 mg/L recommended, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.</p>
City of Brentwood	ATT 1	2.3.3. The composition of water at the City's intake is different for the Boundary 1 Scenario than for the Alternative 4A Scenario	This comment describes the commenter's findings in their analysis of source water at their intake under various model scenarios, including Boundary 1 as

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		<p>Exponent conducted source water fingerprinting to identify the relative amounts of water from various sources at the City’s intake using the DSM2 and DWR’s DSM2 input files. Water within the Delta originates from many water sources, including the Sacramento River, the San Joaquin River, a group of streams that flow into the Delta from the (the Eastside Streams), inflow from Martinez, inflow from the Yolo bypass, and agricultural return flows. As noted in the FEIR/EIS, “Water quality in the Delta at any given location and time is primarily the result of the sources of water to that location.”¹⁸ The Sacramento River and Eastside Streams, for example, have salinity levels of about 100 mg/L (measured as total dissolved solids [TDS]), while salinity is “elevated in the San Joaquin River inflows as a result of irrigated agricultural drainage on southern San Joaquin Valley soils of marine origin that are naturally high in salts, and from salts in Delta waters that are used for irrigation and returned back to the Delta.” For example, the salinity of the San Joaquin River varied seasonally in 2015 from 48 to 776 mg/L TDS (average 343 mg/L TDS). The San Joaquin River water is typically higher in salinity, bromide, and other chemicals than water from other freshwater sources to the Delta. The salinity of water within the Delta is determined by the source fractions at any given location; water quality will decline as the fraction of San Joaquin River water and/or agricultural return flow increases, and as the fraction of Sacramento River water decreases. Source water fingerprinting was performed to show the source water fraction at the City’s intake for various operational scenarios. Figures 6 and 7 show the average source water fractions at the City’s intake for the Boundary 1, Boundary 2, and Alternative 4A scenarios for dry and normal water years, respectively. Each figure shows the source fraction of a different source of water at the City’s intake: the Sacramento River (top left), the San Joaquin River (bottom left), inflow from Martinez (top right), and agricultural return flows (bottom right). During dry water years, modeling shows that the Sacramento River source water fraction will vary between Boundary 1 and Boundary 2 scenarios (orange and yellow lines, respectively) by as much as 55% in February, about 50% in March, and about 30% in April. The source fraction of Sacramento River water for Alternative 4A, shown in red, generally falls in between Boundary 1 and Boundary 2. Reductions in the fraction of Sacramento River are replaced primarily by San Joaquin River water (bottom left panel of Figure 6) and, to a lesser degree, agricultural return flows (lower right panel of Figure 6). During February and March of dry years, modeling shows that the San Joaquin River source water fraction will vary from 0-5% for Boundary 1, to as much as 48% for Boundary 2, with Alternative 4A falling between the two.</p> <p>During normal water years, as shown in Figure 7, the fraction of water from the San Joaquin River water is typically higher than during dry water years. While overall trends in source water fractions appear similar during normal water years, large differences between the operational scenarios exist for specific time periods. During February of normal water years, for example, the Sacramento River comprises 55% of the water at the City’s intake under Alternative 4A, but only 22% under the Boundary 2 scenario. Because the composition of water at the City’s intake is significantly different under the Alternative 4A scenario than under either the Boundary 1 or Boundary 2 scenarios, and because the composition of water directly determines the quality of water at the City’s intake, the FEIR/EIS should have presented this information in a detailed, quantitative manner, and should have discussed this information within the body of the FEIR/EIS.</p>	<p>described in Final EIR/EIS. Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Boundary 1 and Boundary 2 were run for “the State Water Board during the water rights petition process as a means to represent a potential range of operations that could occur as a result of the proposed Adaptive Management Program, and the conditions of any approvals obtained as a result of the ongoing regulatory review of U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Wildlife, and State Water Board.” Boundary 1 is not meant to be the initial starting operations of Alternative 4A. This boundary may be operated only if and when the proposed Adaptive Management Program allows it with future scientific evidence. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	ATT 1	2.3.4. Alternative 4A will have an adverse effect on water quality at the City’s intake by changing the volumetric source fractions	This comment provides a source fraction figure from the EIR/EIS and narratively describes the changes shown in the graph. This comment does not raise any substantive new environmental information or analysis that was not previously

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>DWR did present limited source water fingerprinting for Alternative 4A and for the baseline scenarios (the no action alternative [NAA] and DWR's chosen existing condition scenario, EBC1) within Chapter 8, Appendix 8D of the FEIR/EIS. As noted above, DWR did not present source water fingerprinting for the Boundary 1 and Boundary 2 scenarios within the FEIR/EIS, and DWR did not present fingerprinting results for the correct existing condition scenario (EBC2). The volumetric source fingerprinting performed by DWR shows the changes in source water that are anticipated to occur at the City's intake will change with regard to the EBC1 and NAA scenarios. Figure 8 shows DWR's fingerprinting results presented as a 16-year (1976-1991) average <i>change</i> in monthly source volume at the City's intake; this figure is copied directly from the FEIR/EIS. The yellow bars above the x-axis indicate an <i>increase</i> in San Joaquin River water, and the green bars below the x-axis indicate a <i>decrease</i> in Sacramento River water. On average, the fraction of Sacramento River at the City's intake will decrease every month for Alternative 4A compared to existing conditions (top panel) or the NAA scenario (bottom panel) and be replaced with San Joaquin River water. During March for example, the fraction of San Joaquin River water will increase 20% and the fraction of Sacramento River water will decrease by 20% for the Alternative 4A scenario compared to EBC1. (As detailed in Section 1, the EBC1 scenario is not representative of existing conditions because it does not include operations to meet Fall X2 requirements; as a result, salinity is generally higher in the EBC1 scenario than in the existing conditions EBC2 scenario. Thus, the impacts of Alternative 4A will be even greater than those shown in the top panel of Figure 8.) Fingerprinting for Alternative 4A was conducted by DWR only for the early-long term time frame (2025), while it was performed for the late long term time frame for proposed operational scenarios 1–9. Effects on water quality at the City's intake in the late long term are anticipated to be more significant than effects in the early long term.</p> <p>The change in source water fraction for Alternative 4A compared to the NAA scenario shows the same trend, but to a slightly lesser degree; high quality Sacramento River water is replaced at the City's intake with lower quality San Joaquin River water. During a typical November for example, the fraction of Sacramento River water will be reduced by 18% and the fraction of San Joaquin River water will increase by 17%.</p>	<p>addressed in the Final EIR/EIS. For more information about the use of baselines in the analysis, please refer to Final EIR/EIS, Volume 2, Master Response 1 (Environmental Baselines) and Commenter Letter RECIRC 2512-11. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	ATT 1	<p>2.3.5. The WaterFix may export not only more water from the Delta, but more high-quality Sacramento River water, causing adverse changes to the source of water at the City's intake</p> <p>Exponent's testimony in the State Water Board's WaterFix Water Rights Proceeding demonstrated that not only will the proposed WaterFix project (Boundary 1 and H3 scenarios) export more water from the Delta than is currently exported, these operations scenarios will export significantly more <i>Sacramento River water</i> from the Delta than is currently exported. Because the new NDD intakes are located on the Sacramento River in the northern part of the Delta, water exported from the new NDD intakes will consist almost entirely of Sacramento River water. In contrast, water exported from the South Delta pumping locations consists of water from several sources, including the Sacramento River, the San Joaquin River, eastside streams, and agricultural return flows; the relative fractions of these sources varies from year to year and season to season.</p> <p>The fraction of Sacramento River water at the City's intake in most months of most year types for operational scenario B1 is less than both the existing condition (EBC2) and NAA scenarios—</p>	<p>This comment describes export rates and water quality under the proposed project. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>As described in Section 5.2.3.2 of Chapter 5, Water Supply, in the Final EIR/EIS, changes to water supply are not environmental impacts because they would not, by themselves, create a physical change in the environment. Changes to water supply, however, could be considered as part of economic or social changes that may indirectly lead to a physical change in the environment. Therefore, as required under CEQA, any potential physical environmental impacts indirectly caused by changes to water supply are appropriately addressed in the relevant resource chapters in the Final EIR/EIS. The potential impacts related to changes in salinity in the Delta are described in Chapter 8, Water Quality of the Final EIR/EIS. The potential impacts to community water supplies are discussed in Chapter 20 of the Final EIR/EIS.</p>

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>i.e., less Sacramento River water is expected to be present at the City’s intake with implementation of the WaterFix Project than is present now, or than would be present in the future if the WaterFix project is not built. The fraction of Sacramento River water is generally higher for the EBC2 scenario than for the NAA scenario. As the fraction of Sacramento River water declines, the fraction of San Joaquin River increases. For example, during February of normal water years, the fraction of Sacramento River water is 40% less for Scenario B1 than for existing conditions, while the fraction of San Joaquin River water is nearly 30% greater. During March of wet water years, the San Joaquin River fraction at the City’s intake is nearly 80% in Scenario B1, while under existing conditions it comprises only 30%. During dry and critical years the differences are subtler.</p> <p>DWR acknowledges the improvement in water quality that will result from the Project at their export locations, stating “Chloride concentrations would be reduced in water exported from the Delta to the CVP/SWP Export Service Areas...” Thus, the WaterFix will result in the export of Sacramento River-enriched water from the Delta, and leave in-Delta legal water users, such as the City, to make do with a more variable-quality water supply.</p>	
City of Brentwood	ATT 1	<p>3. The WaterFix Project will result in adverse water quality impacts</p> <p>3.1. Water quality modeling results presented as long-term averages should not be used to evaluate compliance with water quality standards, and do not show short-term variability that is important for drinking water operators to understand</p> <p>Throughout the FEIR/EIS, DWR presents water quality information as long-term averages (e.g., as monthly averages, or as averages calculated for each month and then again over the entire 16-year model period). Municipal and industrial water purveyors such as the City operate intake facilities and manage water treatment operations to meet consumer demand on short timeframes (e.g., hourly); long-term average model results do not provide the information the City needs to assess the impacts of the WaterFix project on the City’s drinking water operations. Modeling results of chloride concentrations for all proposed alternatives are presented in Chapter 8, Appendix 8G of the FEIR/EIS, and are presented as long-term monthly averages over the 16-year period, and as “drought years,” defined by DWR as the years 1987-1991. In contrast, modeling results from the Boundary conditions are presented in an appendix of the FEIR/EIS, and are also presented as a 16-year averages calculated for each month (e.g., the January average salinity is calculated by averaging the data in two ways – first, by calculating the average salinity for each January in the 16-year simulation period, and second, by averaging the average salinity values for all 16 Januarys to obtain the long-term average salinity expected in January).</p> <p>Averaging data to monthly time steps across 16 years results in a loss of information. As discussed further in Section 3.2, a water quality standard of 250 mg/L chloride applied at CCP#1 each day for municipal and industrial (M&I) beneficial uses is defined in Water Rights Decision 1641 (D-1641). Figure 9 shows daily average chloride concentrations simulated by DWR for WY 1978 and WY 1979, and shows that the 250 mg/L threshold is exceeded from early October 1977 through early January 1978 for Scenarios NAA and B1, and from late December 1978 through the end of February 1979 for the B1 scenario. The existing condition (EBC2) scenario exceeds the 250 mg/L chloride threshold for only a few days in early January 1977. Figure 9 also shows the 16-year monthly average chloride concentrations calculated by DWR as bars.</p>	<p>The methodology for the chloride compliance assessment is described in Chapter 8, Water Quality, Section 8.3.1.7, Constituent-specific Considerations, Chloride, p. 8-168 and 8-169, Final EIR/EIS. Compliance with chloride objectives was evaluated on a daily time-step using the EC-chloride relationship output. The results of this analysis were presented in Appendix 8G, Chloride, Table CI-63, Table CI-64 and Table CI-82. Compliance with the 250 mg/L chloride was also assessed by individual monthly averages using output from the mass-balance relationship, results of which are presented in Table CI-81. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>Clearly, model results averaged first by month and then a 16-year period cannot be used to evaluate compliance with a water quality standard that is expressed in terms of <i>daily</i> chloride concentrations. In the case of water years 1977 and 1978, chloride concentrations would exceed the 250 mg/L threshold for a total of 153 days in the Boundary 1 scenario, but these exceedances cannot be determined by reviewing the 16-year monthly chloride concentrations presented in the FEIR/EIS by DWR. Thus, the FEIR/EIS fails to disclose information critical to evaluating compliance with water quality criteria, and information critical to the City's intake operations.</p>	
City of Brentwood	ATT 1	<p>3.2. WaterFix operations will result in additional exceedances of water quality objectives for municipal and beneficial uses</p> <p>Compliance with water quality objectives for municipal and industrial beneficial uses as defined by D-1641 for the 250 mg/L threshold was evaluated by DWR in the FEIR/EIS through the use of long-term averages, despite the fact that D-1641 water quality objectives are defined in terms of <i>daily</i> average salinity. Table 4 describes the water quality objectives for municipal and industrial beneficial from D-1641.</p> <p>Exponent evaluated water quality compliance with D-1641 for several proposed operational scenarios as part of the WaterFix Change Petition Proceedings; this analysis is included as Section 7 of Attachment 2A. Exponent evaluated water quality objective compliance for Boundary 1, NAA, and existing conditions (EBC2) scenarios using DSM2 output provided by DWR, because the impacts of the Boundary 1 scenario were not adequately addressed in the FEIR/EIS. The results are summarized as follows:</p> <ul style="list-style-type: none"> • In addition to effects of climate change, WaterFix operations will result in additional exceedances of water quality objectives. • During dry and normal water years, Boundary 1 results in an average of 27 and 39 days per year, respectively, of additional exceedances of the 250 mg/L threshold at CCPP#1 compared to existing conditions (EBC2), and 19 and 17 days of additional exceedances compared to NAA. • Water quality objectives for the 150 mg/L threshold at CCPP#1 are exceeded during two of the five critical water years in the 16-year model period for the Boundary 1 and NAA scenarios, and for one of the five years for EBC2 • During many years, the 150 mg/L D-1641 water quality objective for chloride is met for project scenarios, but the number of days this threshold is exceeded increases markedly. For example, during 1979 (a normal water year), the Boundary 1 scenario meets the 150 mg/L chloride objective of D-1641, but causes an additional 160 days that chloride exceeds the 150 mg/L compared to EBC2. Thus, in water year 1979, the City will be able to use water at its intake for 160 fewer days under the Boundary 1 scenario than under existing conditions, even though water quality objectives are met. <p>Although DWR has stated that “[s]ub-monthly (e.g. weekly or daily) reporting of model results is inappropriate for all models and the results should be presented on a monthly basis,” D-1641 water quality objectives are expressed as daily averages. DWR’s assessment of compliance with D-1641, as presented in Appendix 5E, is inadequate because long-term averages do not and cannot capture the daily fluctuations in water quality observed across the Delta.</p>	<p>The methodology for the chloride compliance assessment is described in Chapter 8, Water Quality, Section 8.3.1.7, Constituent-specific Considerations, Chloride, p. 8-168 and 8-169, Final EIR/EIS. Compliance with chloride objectives was evaluated on a daily time-step using the EC-chloride relationship output. The results of this analysis were presented in Appendix 8G, Chloride, Table CI-63, Table CI-64 and Table CI-82. Compliance with the 250 mg/L chloride was also assessed by individual monthly averages using output from the mass-balance relationship, results of which are presented in Table CI-81. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>
City of Brentwood	ATT 1	3.3. The WaterFix Project will degrade water quality at Brentwood’s intake	This section describes the commenter’s view that the Existing Conditions scenario was inappropriate. This comment does not raise any substantive new

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>3.3.1. Chloride concentrations will increase at the City's intake</p> <p>Exponent used DSM2 to show that the Boundary 1 scenario results in higher chloride at the City's intake than Alternative 4A, as discussed in Section 2.2.2 of these comments. In addition, Exponent's analyses show that the Boundary 1 scenario results in adverse effects at the City's intake when compared to baseline salinity in the Delta – both the EBC2 and NAA model runs. The FEIR/EIS did not contain sufficient information to arrive at these conclusions. DSM2 results show that salinity modeled at CCPP#1 (i.e. the City's intake) for the Boundary 1 scenario will be higher than salinity for the existing condition (EBC2) model scenario. Exponent used the EBC2 scenario to characterize water quality at CCPP#1 for the 16-year modeled record (1976-1991) under current conditions; water quality simulated for the EBC2 scenario was compared to simulated water quality for the B1 and NAA scenarios. Tables 5 and 6 provide the number of days, calculated from DSM2 results, that daily average water quality for various hydrologic year types is predicted to be <i>above</i> the chloride thresholds of 150 mg/L and 250 mg/L. Under the existing conditions scenario (EBC2), salinity is above the 150 and 250 mg/L chloride thresholds 33% and 7% of the time for all year types, respectively. The B1 scenario results in 27 and 39 additional days above the 250 mg/L chloride threshold for dry and normal years compared to the EBC2 scenario, equivalent to 142% and 122% increases, respectively. When compared with the NAA scenario, the B1 scenario results in 19 and 17 additional days above the 250 mg/L chloride threshold for dry and normal years, equivalent to increases of 70% and 31%, respectively. Thus the impacts of the Project are significant and are not due to climate change or sea-level rise alone. The impact of sea-level rise can be estimated by comparing the NAA to the EBC2, and the impact of the Boundary 1 scenario is greater than either of these. WaterFix operations to the Boundary 1 scenario will cause adverse impacts to water quality at the City's intake regardless of sea-level rise or other climate change effects; however, this information is not disclosed in the FEIR/EIS.</p>	<p>environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>Please refer to Final EIR/EIS, Volume 2 Master Response 1 (Environmental Baselines) and Comment Letter RECIRC 2512-11 for more information.</p> <p>This section describes the commenter's view that chloride levels at Brentwood's intakes in boundary scenarios are fundamentally different from Alternative 4A. Chloride effects of Boundary 1 are discussed in Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Section 5E.5.1.4, Water Quality, Final EIR/EIS. This section indicates that Boundary 1 water quality objective exceedances would occur more often than the no action alternative, but the modeling has limitations associated with its time step and other necessary key assumptions made, and does not account for real-time operations. As a result, the impacts on chloride would be less than significant, consistent with Alternative 4A. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p> <p>As described in Section 5.2.3.2 of Chapter 5, Water Supply, in the Final EIR/EIS, changes to water supply are not environmental impacts because they would not, by themselves, create a physical change in the environment. Changes to water supply, however, could be considered as part of economic or social changes that may indirectly lead to a physical change in the environment. Therefore, as required under CEQA, any potential physical environmental impacts indirectly caused by changes to water supply are appropriately addressed in the relevant resource chapters in the Final EIR/EIS. The potential impacts related to changes in salinity in the Delta are described in Chapter 8, Water Quality of the Final EIR/EIS. The potential impacts to community water supplies are discussed in Chapter 20 of the Final EIR/EIS.</p> <p>The City's 150 mg/L threshold for chloride is an operational preference rather than a regulatory standard. The state's adopted water quality objective for protection of the municipal and domestic supply beneficial use for the Delta is the state's drinking water maximum contaminant level, which is 250 mg/L recommended, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.</p>
City of Brentwood	ATT 1	<p>4. The Adaptive Management and Monitoring Program remains undefined, and it is not possible to ascertain impacts to the City without understanding how the WaterFix project will be operated</p> <p>The Adaptive Management and Monitoring Program (AMMP) remains undefined in the FEIR/EIS, which offers only a broad description of program objectives and the program's conceptual framework. In addition, DWR states in the FEIR/EIS that "detailed monitoring and research plans will be developed that identify specific metrics and protocols" (emphasis added). In a September 2016 document describing the AMMP, DWR states that "many actions [of the current BiOps] do not contain measureable objectives needed for the design and planning of an adaptive management program."</p> <p>The descriptions of the AMMP throughout the FEIR/EIS are similarly ambiguous, such that</p>	<p>This section describes the commenter's view that the Adaptive Management and Monitoring Program is undefined. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS. For more information about adaptive management, please refer to the Final EIR/EIS, Volume 2, Master Response #33, Adaptive Management and Monitoring.</p> <p>Attachment 6A to this comment letter is the draft adaptive management framework, which describes concepts to develop an adaptive management program for the CWF joint ESA Biological Opinion and 2081(b) Incidental Take Permit, and the CVP/SWP 2008/2009 BiOps and CESA authorizations. See Section 5, Endangered Species Compliance, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on the BiOp and</p>

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>changes in project operations over time, and the criteria or decision points that will be used to adjust project operations over time, are wholly unclear. For example, at p. 3-283 of the FEIR, DWR states that “Under the current BiOps and future operations under California WaterFix, a “real-time operations” (RTO) mechanism will allow for adjustments of water operations, within established conditions... to benefit covered fish species” (emphasis added). In the RDEIR/SDEIS, the BA, and the FEIR/EIS, discussion of the AMMP indicates that adjustments in project operations will be made to protect fish; we have found no indication in these documents that the AMMP will be operated to protect water quality for municipal and industrial beneficial uses.</p> <p>In addition, the proposed WaterFix operations that will serve as a starting point for the AMMP are loosely defined, and “adjustments of water operations” or boundaries of “established conditions,” as quoted above, remain largely undefined. In short, the impacts of the WaterFix project on water quality in Delta cannot be determined, and there are no metrics, standards, or boundaries in place that would limit impacts to municipal and industrial beneficial uses or provide means for mitigating adverse water quality impacts that DWR’s modeling indicates will occur as a result of the proposed WaterFix project. Even worse, DWR appears to indicate that the AMMP may also serve as a means to change WaterFix operations beyond permitted limits:</p> <p>“The collaborative science effort is expected to inform operational decisions within the ranges established by the biological opinion and 2081b permit for the proposed project. However, if new science suggests that operational changes may be appropriate that fall outside of the operational ranges evaluated in the biological opinion and authorized by the 2081b permit, the appropriate agencies will determine, within their respective authorities, whether those changes should be implemented.”</p> <p>DWR has not, to our knowledge, indicated who the “appropriate agencies” might be and what are or will be the limits of their “respective authorities.” DWR has not indicated, to our knowledge, the “new science” (or even the type of “new science”) that may influence the “appropriate agencies” to change operations beyond permit limits. In addition, it is unclear whether the Boundary scenarios evaluated by DWR for the WaterFix Change Petition Proceedings represent “bookends” for proposed operations, or whether future operations may fall outside of the range represented by Boundary 1 and Boundary 2.</p> <p>Adding to the confusion surrounding the AMMP, DWR states that “the adaptive management and monitoring program is directly related to several key components of the BDCP” (FEIR p. 3-26), but fails to identify which “key components” are referenced. Exponent has commented on past BDCP documentation regarding the AMMP; full details of our prior comments can be found in Attachment 2A, Section 5c.</p> <p>In contrast, the requirements of an adaptive management program have been studied and defined on multiple occasions. In February 2009, the Independent Science Advisors issued a report entitled “Bay Delta Conservation Plan Independent Science Advisors’ Report on Adaptive Management.” The report summarized the Independent Science Advisors’ “recommended framework for incorporating adaptive management into the planning, design, and implementation of the BDCP.” The science advisors recommended “more extensive and explicit use of models to formalize knowledge about the system and to select, design, and predict outcomes of conservation measures”; the advisors also recommended that “greater attention be given to the learning value of actions, and to establishing a formal process by</p>	2081(b) process.

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>which new knowledge is used to alter actions or revise goals or objectives.” The report proposed a formal framework, reproduced below as Figure 10, and noted that:</p> <p>“The weakest aspect of most adaptive management plans is in the sequence of steps required to link the knowledge gained from implementation and other sources to decisions about whether to continue, modify, or stop actions, refine objectives, or alter monitoring. This step must be much more fully developed than was evident in the BDCP documents we reviewed. Responsibility for this step should be assigned to a highly skilled agent (person, team, office) having the right mix of policy and technical expertise. This investment is critical to making adaptive management effectively support the BDCP.”</p> <p>The Delta Plan issued in 2013 also included an appendix entitled “Adaptive Management and the Delta Plan.” This document described adaptive management, as defined in the Delta Reform Act, as “a framework and flexible decision-making process for ongoing knowledge acquisition, monitoring, and evaluation leading to continuous improvements in management planning and implementation of a project to achieve specified objectives (Water Code section 85052).” The document identified a “three-phase and nine-step” adaptive management framework; the nine-step adaptive management framework is reproduced as Figure 11 below.</p> <p>The framework in Figure 11 was also included in a document entitled, “Improving adaptive management in the Sacramento-San Joaquin Delta.” This 2016 report defined adaptive management as a “science-based, structured approach to environmental management,” and provided eight major recommendations. Among them were recommendations to assemble an appropriate mix of “experts, agency leaders, resource managers, practitioners, scientists, stakeholders, and regulators” to develop a coordinating team; to support adaptive management with funding that is dependable and flexible; to design monitoring protocols; to integrate science and regulations to enhance flexibility; and to develop a framework for setting decision points or thresholds that will trigger a management response.</p> <p>An example of an adaptive management program that could serve as a model, with one significant adjustment, for the WaterFix Project is the Water Operations Management Team (WOMT). The WOMT and its proceedings also provide an example of the level of detail that should be included in describing an adaptive management program and the criteria that are considered and used in the decision-making process. The WOMT was developed under the CALFED Bay-Delta Program collaborative agreements and resulting ROD to contribute to and advance adaptive water management in the Delta. The WOMT consists of managers of Reclamation, FWS, NMFS, DFG, DWR, and the U.S. Environmental Protection Agency (EPA), who meet frequently to discuss CVP/SWP operations and fishery issues. The WOMT makes decisions about project operations in open meetings, the results of which are documented and publicly available. Included in these summaries are descriptions of the criteria or triggers that are used to make decisions about project operations; examples of these criteria are Delta Cross-Channel operations; salvage triggers / catch indices at specific locations in the system; estimates of fish distributions at specific Delta locations; and flow criteria at specific locations in the Delta, such as Rio Vista.</p> <p>Despite multiple recommendations for adaptive management specific to the Delta, and despite existing models of adaptive management that have been applied within the Delta, the FEIR/EIS provided almost no detail on the AMMP proposed by DWR, and fails to include the details and standards for adaptive management for the Delta that have been described</p>	

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>consistently by the scientific community since at least 2009. Yet changes in project operations have significant potential to harm water quality and M&I beneficial uses within the Delta. Without a clearly structured, well-defined adaptive management proposal, the thresholds or decision criteria that would result in changes to operations, the process that would be used to change operations, and the impacts of those changed operations cannot be determined.</p> <p>The FEIR/EIS should have provided additional detail on the proposed AMMP that will be used to adaptively manage project operations. Information that should be provided includes, but is not limited to, the goals and objectives of the AMMP; decision criteria and a description of the type(s) of information that will be considered to implement changes in operations; logistical details regarding who will participate, when they will meet, and how members of the public or water users can participate in the process; details of the monitoring, data management, data sharing, performance metrics, and decision-making process; and procedures to be implemented when disputes or disagreements occur and cannot be readily resolved. The major adjustment to the WOMT approach that is required for the proposed WaterFix project is to include measures or triggers based on the protection of water quality for M&I use, and the formal inclusion of representatives of M&I drinking water intakes within the Delta in the decision-making process.</p>	
City of Brentwood	ATT 1	<p>5. The impacts of the WaterFix Project are not disclosed in the FEIR/EIS</p> <p>The WaterFix project as presented in the FEIR/EIS poses multiple “Potentially Significant Impacts” as defined by CEQA. Water quality modeling performed by DWR has clearly shown adverse impacts that “violate water quality standards” and “otherwise substantially degrade water quality.” In addition, the increases in chloride concentrations resulting from the project may “require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.” Not only does the WaterFix project show adverse water quality effects, these effects were not adequately disclosed.</p> <p>The Boundary 1 and Boundary 2 scenarios, to our knowledge, are not discussed in detail in the body of the FEIR/EIS, and do not appear to have been used in DWR’s determination that the proposed WaterFix project would have “less than significant/not adverse” impacts on chloride at CCPP#1 in Rock Slough – the same location as the City’s intake. In contrast, the other proposed project alternatives—including Alternatives 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, 9, 4A, 2D, and 5A—were discussed explicitly in the FEIR/EIS. The full severity of the impacts of the Boundary 1 scenario in particular were not disclosed in the FEIR/EIS, and were discovered through analyses conducted by Exponent as described in these comments.</p> <p>The preferred alternative, Alternative 4A, is the basis for the FEIR/EIS’s determination that the impacts of the Project will be “less than significant/not adverse.” However, DWR has disclosed substantial water quality impacts associated with the other proposed alternatives, including impacts that are “significant and unavoidable (any mitigation not sufficient to render impact less than significant).” DWR has also disclosed that the Project may operate to the Boundary 1 and Boundary 2 scenarios (as discussed in Section 2.1) as the project evolves and the AMMP is implemented. DWR states in the FEIR/EIS that, “As shown in Appendix 5E, the operation of the future conveyance facility under a possible adaptive management range represented by Boundary 1 and Boundary 2 will be consistent with the impacts discussed for the range of alternatives considered in this document” and that “Boundary 1 and Boundary 2 also encompass the full range of impacts found in the analysis prepared for H1 and H2 (as well as</p>	<p>All impacts of the proposed project have been sufficiently disclosed to meet NEPA and CEQA requirements.</p> <p>This section describes the commenter’s view that chloride levels at Brentwood’s intakes in boundary scenarios are fundamentally different from Alternative 4A. Chloride effects of Boundary 1 are discussed in Appendix 5E, Supplemental Modeling Related to the State Water Resources Control Board, Section 5E.5.1.4, Water Quality, Final EIR/EIS. This section indicates that Boundary 1 water quality objective exceedances would occur more often than the no action alternative, but the modeling has limitations associated with its time step and other necessary key assumptions made, and does not account for real-time operations. As a result, the impacts on chloride would be less than significant, consistent with Alternative 4A. This comment does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/EIS.</p>

Letter	Comment #	Comment	Relation to Final EIR/EIS
		<p>H3 and H4) and considered potential impacts of the WaterFix project.</p> <p>Appendix 5E contains an arguably more specific reference to the impacts associated with the boundary scenarios: “Consistent with the goals of this analysis, the nature and severity of the impacts generally fall within the range of impacts disclosed under Alternatives 1A and 3 for Boundary 1, Alternative 4H3, Alternative 4H3+, and Alternative 8 for Boundary 2, and Alternative 4H4 and Alternative 8 for Scenario 2.”</p> <p>Based on this assertion, Exponent reviewed the CEQA and NEPA impact conclusions of Alternative 1A, Alternative 3, and Alternative 4 (H1 and H2), which DWR asserts would demonstrate similar impacts to the Boundary 1 scenario. DWR discloses that Alternative 1A “would result in increased water quality degradation and frequency of exceedance of the 150 mg/L objective at Contra Costa Pumping Plant #1 and Antioch, the 250 mg/L municipal and industrial objective at interior and western Delta locations on a monthly average chloride basis... Additionally, the predicted changes relative to the No Action Alternative indicate that implementation of CM1 and CM4 under Alternative 1A would contribute substantially to the adverse water quality effects (i.e., impacts are not wholly attributable to the effects of climate change/sea level rise).” In addition, “Relative to Existing Conditions, Alternative 1A would result in substantially increased chloride concentrations in the Delta such that frequency of exceedances of the 150 mg/L Bay-Delta WQCP objective would approximately double...Additionally, further long-term degradation would occur at Antioch, Mallard Slough, and Contra Costa Canal at Pumping Plant #1 locations when chloride concentrations would be near, or exceed, the objectives, thus increasing the risk of exceeding objectives.” The NEPA effects and CEQA conclusions reached for Alternative 4 (H1-H4) are similar, noting that “[a]ll of the Alternative 4 H1-H4 Scenarios would result in increased water quality degradation with respect to the 250 mg/L municipal and industrial objective at western Delta locations on a monthly basis” and that “[t]he predicted chloride increases constitute an adverse effect on water quality.”</p> <p>Thus, although DWR’s conclusion is that impacts to water quality as a result of the preferred alternative (Alternative 4A) will be “less than significant/not adverse,” DWR has disclosed within the FEIR/EIS that it may operate to scenarios that will produce “substantially increased chloride” and “long-term degradation” at the City’s intake location, and that “predicted chloride increases constitute an adverse effect on water quality.” In fact, DWR has characterized these impacts as “significant and unavoidable (any mitigation not sufficient to render impact less than significant).”</p> <p>DWR seeks flexibility through the AMMP to operate to the boundary scenarios, as well as within the range of the eighteen (18) scenarios for which DWR discloses salinity impacts in the Delta that are “significant and unavoidable (any mitigation not sufficient to render impact less than significant).” Exponent’s analysis of DWR’s model results confirms DWR’s conclusions that its own modeling indicates that the project will cause significant adverse impacts to water quality, including at Pumping Plant #1, the City’s primary intake location. Exponent’s analysis demonstrates that the Boundary 1 operations will result in the loss of the City’s ability to use water at its intake for significant periods of time.</p> <p>In sum, DWR’s conclusion that the water quality impacts of the project will be “less than significant/not adverse” is not credible and is contradicted by its own analyses, which have</p>	

Letter	Comment #	Comment	Relation to Final EIR/EIS
		found “significant and unavoidable” impacts that cannot be mitigated and that DWR expects to occur within its planned operating range. The FEIR/EIS presents an optimistic yet unrealistic perspective of water quality impacts anticipated from the WaterFix project. Significant and adverse water quality effects resulting from WaterFix operations are not disclosed in the FEIR/EIS.	
City of Brentwood	ATT 2	Attachment 1A - BDCP/California WaterFix RDEIR/SDEIS Comment Package submitted by the City	This attachment was received during a previous comment period and does not raise any substantive new environmental issues that were not previously addressed in Volume 2, response to comment letter 2512, of the Final EIR/S.
City of Brentwood	ATT 3	Attachment 1B - BDCP Draft EIR Comments submitted by the City	This attachment was received during a previous comment period and does not raise any substantive new environmental issues that were not previously addressed in Volume 2, response to comment letter 1509 and comment letter 1512, of the Final EIR/S.
City of Brentwood	ATT 4	Attachment 2A - Exponent (2016). Report on the Effects of the Proposed California WaterFix Project on Water Quality at the City of Brentwood. Exhibit Brentwood-102 of the WaterFix Change Petition Proceedings. August 30, 2016.	This attachment is a report on water quality supporting Dr. Paulsen's testimony for the hearing proceedings regarding petition filed by the Department of Water Resources and U.S. Bureau of Reclamation requesting change in point of diversion for the California WaterFix. See Section 4, State Water Board Change Petition Process, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on State Water Recourses Control Board hearing materials.
City of Brentwood	ATT 5	Attachment 2B - Transcript of Dr. Paulsen's direct testimony and cross-examination during the WaterFix Change Petition Proceedings. December 15, 2016.	This attachment is a transcript of Dr. Paulsen's direct testimony for the hearing proceedings regarding petition filed by the Department of Water Resources and U.S. Bureau of Reclamation requesting change in point of diversion for the California WaterFix. See Section 4, State Water Board Change Petition Process, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on State Water Recourses Control Board hearing materials.
City of Brentwood	ATT 6	Attachment 3 - Transcript of Jennifer Pierre's direct testimony and crossexamination during the WaterFix Change Petition Proceedings. July 29, 2016.	This attachment is a transcript of Jennifer Pierre's testimony for the hearing proceedings regarding petition filed by the Department of Water Resources and U.S. Bureau of Reclamation requesting change in point of diversion for the California WaterFix. See Section 4, State Water Board Change Petition Process, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on State Water Recourses Control Board hearing materials.

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City of Brentwood	ATT 7	Attachment 4A - Monthly average exports from the Delta modeled for EBC2, NAA, Boundary 1, and Alternative 4A scenarios from 1976 to 1991	This attachment is monthly average export modeling scenarios. This attachment does not raise any substantive new environmental issues that were not previously addressed in the Final EIR/EIS.
City of Brentwood	ATT 8	Attachment 4B - Daily average chloride concentrations at the City's intake for EBC2, NAA, Boundary 1, and Alternative 4A scenarios from 1976 to 1991	This attachment presents modeling results for chloride in a manner inconsistent with the modeling and assessment methods in Chapter 8 and supporting appendices. The approach and rationale for the chloride assessment periods has been addressed in the Final EIR/EIS in both Chapter 8 and in responses to comments on the Draft EIR/EIS and RDEIR/SDEIS. Further, EBC2 is not the appropriate existing conditions modeling run, which also has been addressed in the Final EIR/EIS in responses to comments. This attachment does not raise any substantive new environmental issues that were not previously addressed in the Final EIR/EIS.
City of Brentwood	ATT 9	Attachment 4C - Source water fingerprints at the City's intake for the Boundary scenarios and Alternative 4A for critical, dry, normal, and wet water year types	This attachment is water source modeling. This attachment does not raise any substantive new environmental issues that were not previously addressed in the Final EIR/EIS.
City of Brentwood	ATT 10	Attachment 5 - Written testimony of Chris Ehlers in the WaterFix Change Petition Proceedings	This attachment is written testimony of Chris Ehlers for the hearing proceedings regarding petition filed by the Department of Water Resources and U.S. Bureau of Reclamation requesting change in point of diversion for the California WaterFix. See Section 4, State Water Board Change Petition Process, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on State Water Resources Control Board hearing materials.
City of Brentwood	ATT 11	Attachment 6A - DWR (2016). Adaptive Management Framework (Draft)	This draft adaptive management framework describes concepts to develop an adaptive management program for the CWF joint ESA Biological Opinion and 2081(b) Incidental Take Permit, and the CVP/SWP 2008/2009 BiOps and CESA authorizations. See Section 5, Endangered Species Compliance, Developments after Publication of the Proposed Final Environmental Impact Report, for discussion on the BiOp and 2081(b) process.

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City of Brentwood	ATT 12	Attachment 6B - Independent Science Advisors (2009). Bay Delta Conservation Plan Independent Science Advisors' Report on Adaptive Management	This attachment is a report that was included as a working draft in the BDCP and does not raise any substantive new environmental information or analysis.
City of Brentwood	ATT 13	Attachment 6C - Delta Stewardship Council (2013). The Delta Plan, Appendix C: Adaptive Management and the Delta	This attachment is a document by the Delta Stewardship Council titled; Improving Adaptive Management in the Sacramento-San Joaquin Delta, and does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/S.
City of Brentwood	ATT 14	Attachment 6D - Delta Independent Science Board (2016). Improving Adaptive Management in the Sacramento-San Joaquin Delta	This attachment is a report by the Delta Independent Science Board titled; Improving Adaptive Management in the Sacramento-San Joaquin Delta, and does not raise any substantive new environmental information or analysis that was not previously addressed in the Final EIR/S.