NORTH STATE WATER ALLIANCE
UNIFIED FUTURE

January 30, 2017

DELIVERED VIA E-MAIL (CALWATERFIX@WATER.CA.GOV AND INFO@CALIFORNIAWATERFIX.COM) AND U.S. MAIL

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Re: Comments on Final Environmental Impact Report/Environmental Impact Statement for the Bay-Delta Conservation Plan/California WaterFix

Dear Ms. White and Mr. Yee:

The North State Water Alliance (Alliance) provides comments today on the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) for California WaterFix project, including detailed supporting legal and technical analyses.
As you know, the Alliance, which came together to promote responsible statewide water solutions that protect the economy, environment and quality of life for the north state and for all Californians, remains committed to help the Brown Administration implement a comprehensive Water Action Plan that ensures more reliable water supplies for California; the restoration of important species and habitat; and a more resilient, sustainably managed water resources system (water supply, water quality, flood protection, and environment) that can better withstand inevitable and unforeseen pressures in the coming decades.

We are disappointed that the state and federal administrations, in preparing the Final EIR/EIS have failed to address our comments and concerns on the Draft EIR/EIS for the Bay-Delta Conservation Plan dated July 28, 2014 and on the Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS) dated October 30, 2015 (both of which, together with all attachments, are hereby incorporated 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. The Alliance was not alone in identifying problems with the draft documents; specific extensive technical comments were submitted by numerous other parties who would be directly affected by the project's construction and operations. None of the changes necessary to correct the most serious deficiencies were made. The Final EIR/EIS, therefore, is fatally deficient and fails to meet

the standards established under either the National Environmental Policy Act (NEPA) or the California Environmental Quality Act (CEQA).

Specifically, and as detailed in the attached comments:

- The Final EIR/EIS Fails as an Informational Document. As we have stated in our previous comments, the environmental document is so poorly organized and so voluminous (approximately 70,000 pages in total for the Final EIR/EIS) that it is unreasonable for your agencies to expect any member of the public – or even any expert reviewer – to be able to find relevant information to evaluate the environmental impacts of the WaterFix project without excessive effort. Consequently, the Final EIR/EIS fails the most basic requirement of an environmental document: providing meaningful information to the public. *See* 40 C.F.R. §1500.1(b), 14 Cal.Code Regs. §15003(b), (d) and (e).

- The Final EIR/EIS Lacks an Accurate, Stable and Finite Project Description. In order for there to be an adequate analysis of the potential effects of the WaterFix project on the environment, there must be an accurate, stable, finite description of that project. Otherwise, there is no subject for the analysis and all questions can be deflected by stating that the project will be "adaptively managed" without ever providing any standards for such management. This is precisely how the Final EIR/EIS responds to many comments and it defeats the purpose of both NEPA and CEQA.

- The Final EIR/EIS Contains Significant New Information. Under both NEPA and CEQA, an agency must give the public an opportunity to review and comment when significant new information is added to an environmental document. In the case of the Final EIR/EIS, there are approximately 42,000 pages of new material, or about 10 linear feet (printed double-sided). In many cases (such as revised impact sections that can run well over 1,000 pages for each resource, not including figures), the new material or revisions are not specifically identified, and entire resource sections were completely reorganized and rewritten with no indication of what was deleted or added. More importantly, the hydrologic modeling (which is the heart of the entire project operations impacts analysis) has been revised and new modeling has been performed. The public must have a full opportunity to review and comment on the revised modeling as well as the remainder of the new information contained in the Final EIR/EIS.

- The Final EIR/EIS Does Not Adequately Analyze the Potential Impacts of the Project. Despite the many specific technical comments that the Alliance and other parties provided on the two draft environmental documents, the Final EIR/EIS fails to adequately analyze the potential impacts of the project.

    - Example: MBK Engineers has identified an error in the Final EIR/EIS model that significantly overestimates the quantity of water that will be stored in North of Delta reservoirs with the WaterFix project. The modeling does not consider the additional export capacity made available with the North Delta Diversion (NDD) (i.e., the tunnels). Specifically, the export estimates used in the model to calculate south-of-Delta contract

allocations with the WaterFix project are equal to those in the No Action Alternative. This artificially and unrealistically limits the modeled ability of the WaterFix project to increase Central Valley Project (CVP) and State Water Project (SWP) south-of-Delta allocations through use of the NDD. The ability to convey water through the Delta has restricted CVP south-of-Delta allocations in approximately two out of every three years since the addition of Old and Middle River requirements were established in 2008. Therefore, this assumption tends to artificially and incorrectly keep modeled storage in north-of-Delta CVP and SWP reservoirs (i.e., Whiskeytown, Shasta, Oroville and Folsom) higher than would be the case without the modeling error.

- Example: Expert fisheries biologist Dave Vogel, who submitted detailed comments on the Draft EIR/EIS and Recirculated Draft EIR/EIS, has commented that the locations chosen for the North Delta intakes are not as beneficial to salmon as the Draft EIR/EIS and Recirculated EIR/EIS present them to be. He specifically noted that the locations are not on sufficiently curved portions of the Sacramento River, meaning that there would not be adequate sweeping velocity across the fish screens to prevent salmon from becoming impinged. Instead of considering this information and adjusting the conclusions in the Final EIR/EIS or changing the location of the intakes, the lead agencies relied on not-yet-conducted studies that they claim would support their assertions. Studies that do not currently exist cannot refute the information presented in Mr. Vogel's comments.

- Example: After reviewing the final EIR/EIS's responses to his previous comments concerning Delta pelagic fish, Robert Latour, Ph.D., found that the final EIR/EIS reflects at least two significant scientific problems. First, the final EIR/EIS does not adequately account for the uncertainty inherent in the data and analyses on which the final EIR/EIS relies to conclude, among other things, that specific numbers of longfin smelt will be generated with certain levels of Delta flows. Second, the final EIR/EIS takes an internally inconsistent approach to using scientific models by rejecting detailed lifecycle models because they do not address some biological variables, but relying entirely on a simple statistical model that correlates streamflows to numbers of fish in its analysis of the California WaterFix's effects on longfin smelt.

In summary, after spending reportedly more than $200 million and after providing hundreds of thousands of pages of information to the public, your respective agencies have still failed to fulfill their fundamental obligation in proposing this project: to simply, clearly and directly describe for the public the full scope of the project's impacts on the environment. The Final EIR/EIS does not serve that purpose. The Alliance therefore urges that your agencies pause, consider the comments that the Alliance and others have made on the Final EIR/EIS, and then recirculate a substantially revised draft EIR/EIS in a format, and with sufficiently accurate scientific information, that members of the public and our state and federal elected officials can fully understand the potential impacts of the California WaterFix project.

Very truly yours,

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President
Northern California Water Association

John Woodling
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cc: (via U.S. Mail w/o encls.)

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North State Water Alliance (NSWA) Comments on
Bay Delta Conservation Plan/California WaterFix
Final Environmental Impact Report/Environmental Impact Statement
January 30, 2017

These comments on the Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS or FEIR/EIS) for the Bay Delta Conservation Plan/California WaterFix project (Project) are submitted on behalf of the North State Water Alliance (NSWA) and the parties listed on Exhibit A attached hereto. The commenting parties incorporate herein by reference all comment letters previously submitted in connection with the Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) and Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) for the Project. See Exhibit B for a list of all incorporated comment letters. As noted below, many of those comments have not been adequately responded to and the Final EIR/EIS is flawed in the ways described in those comment letters.

In addition, the commenting parties incorporate evidence submitted to the State Water Resources Control Board in connection with the water right change petition filed by the Department of Water Resources (DWR) and the United States Bureau of Reclamation (Reclamation) (collectively, the Proponents). See Exhibit C for a list of all incorporated evidence. DWR and Reclamation have stated that future operations of the proposed project will be "guided by the outcome" of the SWRCB proceedings. Final EIR/EIS, Vol. II, 1-262 (Master Response 28). As a result, the evidence submitted to the SWRCB regarding injury to legal users of water resulting from the Project is relevant to future operations of the project and the associated environmental impacts. For example, the SWRCB evidence reveals impacts to water supplies that have not been disclosed or adequately analyzed in the draft, revised draft, or final environmental documents.

I. The Final EIR/EIS Fails to Adequately Disclose Effects of the Proposed Project and Inform the Public.

A. The Final EIR/EIS Inadequately Analyzes Project Impacts to Water Supplies.

1. The EIR Must Analyze the Project's Potential Impacts on Existing Water Supplies

"[I]n preparing an EIR, the agency must consider and resolve every fair argument that can be made about the possible significant environmental effects of a project, irrespective of whether an established threshold of significance has been met with respect to any given effect." *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1109 (2004). NEPA imposes a similar standard, requiring the agency to take a "hard look" at all of the project's potentially significant environmental effects. *See California ex rel. Imperial County Air Pollution Control Dist. v. U.S. Dept. of the Interior*, 767 F.3d 781, 798 (9th Cir. 2014); *Northern Plains Resource Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011). Consequently, when a project will cause changes in streamflow or water supply, CEQA requires the lead agency to analyze the potential environmental effects of those changes. *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th at 1109; *Santiago County Water Dist. v. County of Orange*, 118 Cal. App. 3d 818, 831 (1981) [EIR failed to provide adequate information about the project's impacts on water supplies

where it was "silent on the effect of that delivery [to the proposed project] on water service elsewhere in the Water District's jurisdiction."].

Water supply impacts constitute physical impacts on the environment. *See* Pub. Res. Code § 21060.5 [defining "environment" to include water conditions "which exist within the area which will be affected by a proposed project."] Thus, when a project causes changes in the delivery of water, the environmental impacts of those changes must be evaluated. *Central Delta Water Agency v. State Water Resources Control Bd.*, 124 Cal. App. 4th 245, 271 (2004); *see also Voices for Rural Living v. El Dorado Irrig. Dist.*, 209 Cal. App. 4th 1096, 1112 (2012) [where combined effects of climate change, increased future demands and project will reduce water supplies available to district and exacerbate the severity or environmental effects of future drought conditions, the lead agency must analyze those potential environmental impacts]; *Abatti v. Imperial Irrig. Dist.*, 205 Cal. App. 4th 650, 679-80 (2012) [upholding district's determination that no additional CEQA review was needed for revisions to a plan to distribute water in times of shortage; prior CEQA documentation sufficiently analyzed the environmental impacts associated with the preference for municipal and industrial users over agricultural operations]; *Gray v. County of Madera*, 167 Cal. App. 4th 1099, 1116 (2008) [project's potential to reduce the water supply available to others was a "potentially significant problem" that required effective mitigation]; *Planning and Conservation League v. Dept. of Water Resources*, 83 Cal. App. 4th 892, 908, 913 (2000) [when DWR proposed to enter into an agreement to change the way in which it allocates water amongst its contractors in times of shortage, it was required under CEQA to analyze the potential environmental impacts of the proposed change; "So long as [the disputed contract provision] can be plausibly construed in a manner that would result in significant environmental consequences, its elimination should be considered and discussed in an EIR."]. This scope of analysis is consistent with CEQA's mandate that the "project" be defined broadly to encompass "the whole of an action, which has a potential for resulting in either a direct or a reasonably foreseeable indirect physical change in the environment." *Planning and Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 235 (2009); State CEQA Guidelines, 14 C.C.R. § 15378(a), (c). Likewise, NEPA requires the lead federal agency to evaluate the project's direct and indirect effects, including all reasonably foreseeable effects of the project. 40 C.F.R., § 1508.8; Reclamation's NEPA Handbook, February 2012, p. 8-14 to 8-15, 8-17 to 8-18.

Typically, agencies evaluate water supply impacts by conducting hydrological modeling to determine what the water supplies would be with and without the project. *See, e.g., Dry Creek Citizens Coalition v. County of Tulare*, 70 Cal. App. 4th 20, 32-33(1999) [when mining project proposed diversion structures, lead agency properly conducting hydrological study and modeling to determine changes to streamflow would not constitute a significant impact]; *Planning and Conservation League v. Dept. of Water Resources*, 83 Cal. App. 4th 892, 919 (2000) [faulting DWR for ignoring "repeated requests . . . to provide forecasts based on simulation models. . .", i.e., DWRSIM, CALSIM I, CALSIM II].

As revised, the California WaterFix project proposes to construct two tunnels with a combined capacity of 9000 cfs. These new facilities will be used to divert water from the North Delta and deliver it to Central Valley Project (CVP) and State Water Project (SWP) contractors south-of-Delta. The project does not contemplate storage of water, and it does not generate any additional water supplies for either the SWP or the CVP. Rather, what the project will do is move more water from some areas, thereby potentially reducing water supplies available to some users, in order to allow the SWP and the CVP to deliver more water south-of-Delta. *See* RDEIR/SDEIS, pp. 4.3.1-4, 5-8 [California WaterFix project will change operations and increase exports, but does not

propose development of any new water rights]. The environmental impacts of these changes in water supply must be evaluated.[1] *See, e.g., Planning and Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 221, 222 (2009) [DWR's EIR acknowledged that proposed changes to the criteria under which the State Water Project allocates water to its contractors could have environmental effects, including "upstream effects," and analyzed these impacts].

Although the Proponents have declined to provide an operations plan to show how the proposed new facilities will actually be operated, they have performed hydrological modeling based on sets of possible operating criteria. Thus, the lead agencies have implicitly acknowledged that CEQA requires them to analyze the water supply impacts of the proposed project – though, as shown below, they have not adequately performed that analysis.

2. All of the Experts Agree That Proponents' Revised Model Scenarios Fail to Analyze the Project's Water Supply Impacts in Dry Year Conditions.

In two related ways, the Final EIR/EIS explicitly admits that the Proponents' hydrologic modeling does not adequately depict how the California WaterFix will affect water supplies in dry conditions – which, of course, is when all water users are most concerned about water supply impacts. First, the FEIR/EIS – repeating Proponents' lead hydrologic witness's sworn testimony in the SWRCB's water-right hearing – explicitly admits that Proponents' modeling is not accurate in very dry "stressed" conditions. Second, the FEIR/EIS attempts to dismiss this fundamental problem by claiming that it is not reasonably foreseeable to project how the CVP and the SWP would operate in future droughts. In other words, the FEIR/EIS explicitly has abdicated any effort to analyze how the California WaterFix would affect water supplies in future droughts. These two issues are fundamental problems that prevent the FEIR/EIS from adequately analyzing the project's water supply impacts. The FEIR/EIS therefore violates both CEQA and NEPA.

a. By The FEIR/EIS's Own Admission, the Hydrologic Analysis of the Project's Environmental Documents Fails To Reliably Depict How the California WaterFix Will Impact Water Supplies in Dry Conditions.

To evaluate the impacts of this specific project, the Proponents made changes to the standard hydrologic model, CALSIM II (as set forth in FEIR/EIS, pp. 5-50, l. 4 to 5-51, l. 9), even though CALSIM II is generally accepted as reliable by water modeling experts working in California. In these comments, the hydrological model scenarios used by the Proponents for this project will be referred to as "Proponents' Revised Models."

As the Proponents admit, Proponents' Revised Models are not able to predict results accurately for dry year conditions. For example, the FEIR/EIS's Master Response 30 – entitled "Modeling Approach and Availability of Newer Versions of the Models" – readily acknowledges that the Proponents' Revised Models do not accurately forecast water supply impacts for dry year conditions:

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[1] Indeed, as discussed below in Section I.A.5 and shown in the MBK Report, when realistic and reasonably foreseeable operating criteria are used in the hydrologic modeling, the model results reveal significant impacts to storage, river flows, water deliveries and Delta hydrodynamics.

> When system wide storage levels are at or near dead pool, also described as stressed water supply conditions, the . . . model results should only be an indicator of stressed water supply conditions and should not necessarily be understood to reflect actually what would occur in the future under a given scenario.

FEIR/EIS, p. 1:269, lines 3-6; see also FEIR/EIS, p. 1:351, line 38, to p. 1-352, line 4 (same discussion).

This portion of the FEIR/EIS repeats, essentially word for word, the testimony that DWR's lead modeling consultant Armin Munevar presented during the SWRCB's hearing on DWR's and Reclamation's water-right change petition for California Water. Mr. Munevar's written testimony states:

> When system wide storage levels are at or near dead pool, also described as stressed water supply conditions, the . . . model results should only be an indicator of stressed water supply conditions and should not necessarily be understood to reflect actually what would occur in the future under a given scenario.

Exhibit DWR-71, p. 12, lines 15-18 (attached in materials included as Exhibit C).

Although the Proponents have prepared five separate modeling runs to evaluate the impacts of the proposed project as the Proponents have revised the project description, all of the Proponents' Revised Models are infected with this fundamental problem. Contrary to the statements in the FEIR/EIS (*see, e.g.*, FEIR/EIS, Vol. II, pp. 1-268 to 1-269, Master Response 30), this is not a matter of dispute amongst experts. As shown above, all of the experts who have considered the matter – including Proponents' own experts – concur that Proponents' Revised Models do not reliably predict the project's water supply impacts in "stressed conditions," such as those that may occur in dry and critically dry years – which, of course, is exactly when water users are most concerned about their water supplies. Thus, while the Proponents have done a lot of modeling work, none of it is accurate or reliable enough to support an analysis of the potential water supply impacts of the proposed project, especially during dry or critically dry water years.[2] The available CALSIM II operations models were designed to

[2] Representatives of some of the Proponents have noted the sheer volume of the environmental documents for this project in statements to the media and in other public fora. For example, when the FEIR/EIS was released, Governor Brown claimed, "This project has been subjected to 10 years of detailed analysis and more environmental review than any other project in the history of the world." "90,000-Page Environmental Report on Delta Tunnels Released," Courthouse News, December 22, 2015; "Governor Brown Issues Statement on Release of Final Environmental Reports for California WaterFix," Office of Governor Edmund G. Brown, Jr., December 22, 2015 (attached as Exhibit G). Statements such as these imply that so much paper has been generated on the environmental analysis of this project that it "must be" sufficient to support the project. Yet a substantial amount of this much-vaunted documentation consists of pages of model output data from Proponents' repeated, but similarly flawed, model runs. The *volume* of the environmental analysis is not relevant to determining its *adequacy*; an EIR/EIS satisfies CEQA and NEPA not by virtue of its size, or the number of supporting technical analyses, but whether it presents sufficiently reliable evidence and analysis in a manner that actually informs the public and decisionmakers of the project's environmental impacts. *See, e.g.,* State CEQA Guidelines, 14 C.C.R. § 15003(g) ["The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind."].

evaluate drought operations and have been successfully used in the past to analyze drought scenarios. See MBK Engineers, Comments on the Final California WaterFix Environmental Impact Report/Statement (January 30, 2017) (the "MBK Report" attached as Exhibit D), at 8-9; *see also Planning and Conservation League v. Dept. of Water Resources*, 83 Cal. App. 4th 892, 919 (2000) [noting DWR's ability "to provide [future water supply] forecasts based on simulation models. . ."]; . In contrast, Proponents' Revised Models are clearly inadequate and cannot be used to forecast or evaluate the project's full spectrum of possible impacts. As such, they do not constitute substantial evidence of the project's potential water supply impacts. *East Sacramento Partnership for a Livable City v. City of Sacramento*, 5 Cal. App. 5th 281, 299 (2016); *Town of Atherton v. California High-Speed Rail Authority*, 228 Cal. App. 4th 314, 349 (2014); *State Water Resources Control Bd. Cases*, 136 Cal. App. 4th 674, 795 (2006); *see* 40 C.F.R., § 1500.1, subd. (b); *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011); *Lands Council v. Forester of Region One of the United States Forest Serv.*, 395 F.3d 1019, 1031-1032 (9th Cir. 2005) [vacating agency's decision under NEPA based on flawed modeling].

b. The FEIR/EIS Explicitly Abdicates Any Effort to Analyze How the California WaterFix Will Impact Water Supplies In Future Droughts.

In the responses to comments, the FEIR/EIS attempts to gloss over the glaring hole in its analysis that results from the admission that the Proponents' Revised Modeling is not reliable for very dry conditions by claiming that it would be "impossible" for DWR and Reclamation to attempt to determine what impacts implementation of California WaterFix might have on other water users and interests in a future drought. FEIR/EIS, Vol. II, Master Response 47, pp. 1-351 to 1-357. This statement, standing alone, demonstrates that there is no substantial evidence to support the FEIR/EIS's conclusion that implementation of California WaterFix will not have any significant impact on other water supplies or streamflows: if the lead agencies have a duty to determine the dry year impacts, and they claim they simply are not able to perform that analysis, they have no basis on which to conclude that there will be no impacts.

Master Response 47 explains the lead agencies' position as follows:

> [I]t is not reasonably foreseeable how the various agencies will respond to future droughts, with or without the proposed project, because each drought is different in scope, location and severity, the regulatory setting is likely to be different, and new or altered infrastructure and improved scientific knowledge will all inform future responses to drought.

FEIR/EIS, Vol. II, p. 1:351, lines 18-22; see also FEIR/EIS, Vol. II, p. 1-357, lines 5-10.

However, Master Response 47 itself belies the claim that it is not possible to predict how the CVP and the SWP would operate in future droughts. Master Response 47 describes how, in 1977, the State Water Resources Control Board modified the then-existing Bay-Delta water quality standards to allow the SWP to conserve upstream water storage and allowed for temporary measures in the Delta to protect water quality. FEIR/EIS, p. 1-353, lines 5-13. Master Response 47 also describes how, in the 1987-1992

Despite the size of the record, the Proponents' EIR/EIS fails to satisfy CEQA and NEPA because it is based is based on a flawed model that admittedly cannot reliably predict dry year conditions, which led to a failure to accurately evaluate the project's potentially significant water supply impacts.

drought, DWR installed temporary measures in the Delta to protect water quality and also arranged for water transfers. FEIR/EIS, p. 1-354, lines 12-18. Finally, Master Response 47 generally describes how DWR and Reclamation, along with other agencies, managed CVP and SWP operations during the drought year of 2014. FEIR/EIS, pp. 1-355 to 1-356.

Moreover, in both 2014 and 2015, DWR and Reclamation sought, and obtained from the SWRCB, temporary urgency change orders that modified certain Bay-Delta water quality standards in their water-right permits. *See* SWRCB orders concerning CVP and SWP water-right permits dated January 31, 2014; February 7, 2014; February 28, 2014; March 18, 2014; April 9, 2014; April 11, 2014; April 18, 2014; September 24, 2014; October 7, 2014; February 3, 2015; March 5, 2015; April 6, 2015; July 3, 2015; and December 15, 2015 (attached as Exhibit K). This historical data provides the lead agencies with sufficient information to make reasonable assumptions about how California WaterFix would operate during future drought conditions. Droughts are a reasonably foreseeable fact of life in California, and agencies must evaluate the potential impacts of a project during future drought conditions. *Voices for Rural Living v. El Dorado Irrig. Dist.*, 209 Cal. App. 4th 1096, 1111-12 (2012). Although the precise details of future droughts may be difficult to forecast, the lead agencies cannot simply ignore the reasonably foreseeable possibility that droughts will occur. Rather, they must use their best efforts to evaluate how the California WaterFix would affect other water users and streamflow-dependent environmental resources in severely dry years and droughts. "When an agency preparing an EIR is obliged to examine future events that are difficult to forecast, the agency 'must use its best efforts to find out and disclose all that it reasonably can.'" *Planning and Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 242 (2009); State CEQA Guidelines, 14 C.C.R. § 15144. Here, as discussed above in Section I.A.2, computer models of CVP and SWP operations are available and developed precisely to address how the two Projects could operate through drought periods. *See also* MBK Report, at 8-9. If Proponents' Revised Models are unable to predict reliably what would happen in dry periods, the Proponents should have used one of the other readily available models to perform this key piece of analysis.

Because it fails to make any attempt to use models that reliably predict dry year results or to provide such an analysis, the FEIR/EIS is fatally deficient. Indeed, the FEIR/EIS seems to be repeating the same mistakes that proved fatal to the EIR in *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344 (2001). In *Keep Jets Over the Bay*, the EIR simply stated that the public health impact of the Toxic Air Contaminant emissions was "unknown." *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344, 1367 (2001). Commenters claimed that there were means of calculating these impacts, but the lead agency, in its responses to comments, simply stated that its experts disagreed and refused to undertake the analysis. The Court rejected the lead agency's claims and held that the lead agency was required to make a meaningful attempt to quantify the amount of emissions from normal operations and to determine whether these emissions will result in any significant health impacts. *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344, 1371 (2001). It was important for the lead agency to undertake this new analysis and determine the potential significance of the impacts not only to fulfill CEQA's public disclosure functions, but also because the EIR must identify and evaluate feasible mitigation measures to minimize or avoid the project's significant environmental effects. *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344, 1371 (2001).

Here, like DEIR/EIS and the RDEIR/SDEIS, the FEIR/EIS admits that Proponents' Revised Models fail to provide reliable forecasts of what impacts will occur in dry years. Collectively, none of the Proponents' environmental documents provide reliable analysis of what the Project's potential impacts will be on dry year water supplies. After acknowledging the flaw in the Proponents' Revised Models, the lead agencies simply abdicate their obligations under CEQA and NEPA to analyze these potentially significant environmental effects. This is untenable, particularly since severely dry years and droughts are the very situations in which it would most matter how the California WaterFix will affect other water users and the environment. Absent the required analysis of the project's impacts on water supplies in droughts, the FEIR/EIS is fatally flawed under both CEQA and NEPA.

3. Since the Project Will Cause Changes in Water Supplies, the Significance of the Environmental Impacts Associated with Those Changes Must Be Analyzed

Even if all the environmental documents produced for this project – the initial DEIR/EIS, the RDEIR/SDEIS, and the Final EIR/EIS – are considered collectively, they do not contain adequate analysis of the significance of the project's potential water supply impacts, for two reasons. First, the FEIR/EIS does not contain *any* analysis of the impacts associated with the revised project description, even though the range of operations was substantially enlarged after the analysis undertaken in the RDEIR/SDEIS. Second, while each of the environmental documents for this project has included modeling that purports to show the project's potential effects on water supplies and deliveries,[3] the FEIR/EIS, RDEIR/SDEIS and DEIR/EIS have all incorrectly stated that these do not constitute "physical environmental impacts" – and, consequently, the environmental documents have neglected to analyze the significance of these impacts.

First, the FEIR/EIS fails to analyze the potential environmental impacts of the revised project description. After the release of the DEIR/SDEIS, the project changed in several significant ways. Habitat restoration and conservation benefits were removed, leaving just the construction and operation of massive new water diversion and conveyance facilities that will divert water further upstream and convey it to State Water Project and Central Valley Project contractors south-of-Delta. This change was described in the RDEIR/SDEIS.

After the release of the RDEIR/SDEIS, the scope of the proposed project's operations changed again, with the range of operations increasing from the Alternative 4A scenario described in the RDEIR/SDEIS to now operating between Boundaries 1 and 2. See FEIR/EIS p. 5-167 ("Future conveyance facilities operational changes may also be

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[3] As discussed in Section I.A.5, below, the commenters and their experts have concluded that the Proponents' Revised Models are clearly inadequate because the Proponents' Revised Models themselves are flawed. Nevertheless, as discussed in this Section, even if the results obtained from Proponents' Revised Models are the only data considered, these data reveal that the Project will have potentially significant impacts on dry year water supplies. And, as shown in Section I.A.5, the Proponents' Revised Models contain errors and inappropriate assumptions regarding the operations of the CVP and SWP, and consequently, the results of the Proponents' Revised Models do not accurately forecast the likely impacts of the project. The MBK Report shows that, had the lead agencies corrected these flaws, the project's potentially significant water supply impacts would be far greater than shown in the results of the Proponents' Revised Modeling. The MBK Report therefore constitutes substantial evidence of potentially significant impacts to upstream water supplies that the environmental documents must consider and resolve.

made as a result of adaptive management to respond to advances in science and understanding of how operations affect species. Conveyance facilities would be operated under an adaptive management range represented by Boundary 1 and Boundary 2.")

The Boundary 1 and Boundary 2 scenarios represent a significantly different range of operations than the preferred alternative identified in the RDEIR/SDEIS (Alternative 4A). According to DWR testimony in the hearings on the California WaterFix being conducted by the State Water Resources Control Board, Boundary 1 would represent an *increase* in total average annual exports of approximately 1.2 million acre-feet (MAF) relative to the No Action Alternative, and Boundary 2 would represent a *reduction* in total average annual exports of approximately 1.1 MAF relative to the No Action Alternative, representing a differential spread of approximately 2.3 MAF/year on average.[4] Alternative 4A exports would fall between the B1 and B2 numbers. The FEIR/EIS did not explain or analyze impacts of the Project as DWR now states it will operate (*i.e.*, under much wider range of operations than considered in the DEIR/EIS or RDEIR/SDEIS). The potential project impacts to upstream reservoir operations and water supply cannot be understood without a distinct evaluation of each alternative, including impacts of Boundary 1 and Boundary 2 separately from those of Alternative 4A. Because it does not include this analysis, the FEIR/EIS does not disclose the full range of impacts of the project to upstream water supplies.

By substantially increasing diversions from the Sacramento River north of the Delta, these new facilities have the potential to cause changes in streamflow and reservoir release patterns. If more water is diverted upstream of the Delta, supplemental flow will be needed to meet flow-dependent Delta water quality standards and also to protect fish. It is reasonable to assume these replacement flows will have to come from increased releases of stored water in upstream reservoirs. Changes in the volume of water available in the reservoirs necessarily affect the available water supplies of water users who divert from those reservoirs or between those reservoirs and the Delta. As set forth in Section I.A.1., above, the effects and significance of the project's potential changes to upstream water supplies must be analyzed.

Second, the environmental documents for this project violate both CEQA and NEPA because they fail to recognize water supply impacts as a physical impact on the environment which must be evaluated. Instead, they merely include modeling results, without analysis of the significance of the changes that the project will cause to the water supplies available to upstream users.

"[I]n preparing an EIR, the agency must consider *and resolve* every fair argument that can be made about the possible significant environmental effects of a project, irrespective of whether an established threshold of significance has been met with respect to any given effect." *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1109 (2004), emphasis added. Thus, an EIR that fails to analyze the significance of the project's potential environmental impact on water supplies per se is invalid. *See Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1111 (2004). The lead agency does not fulfill its CEQA obligation by the EIR's mere reference to the results of studies; rather, the EIR must analyze the information that has been disclosed and reach a conclusion about its

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[4] Exhibit C, WaterFix Water Rights Hearing, Exhibit DWR-71, Written Testimony of Armin Munevar. May 31, 2016, p. 18, lines 16–23.

significance. *East Sacramento Partnership for a Livable City v. City of Sacramento*, 5 Cal. App. 5th 281, 303 (2016).

Likewise, NEPA compels Reclamation to evaluate and determine the significance of a project's potential changes to water use. *California ex. rel. Imperial Cty. Air Pollution Control Dist. v. United States DOI*, 767 F.3d 781, 798 (9th Cir. 2014) [holding NEPA requires a "hard look" at a project's impacts]; *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011); Reclamation's NEPA Handbook, February 2012, pp. 4-11 to 4-12, 8-14 to 8-15, 8-17 to 8-18.

The initial Draft EIR/EIS contains just two sentences to explain the agencies' reasoning:

> For each alternative, descriptions of changes in Delta outflow and upstream SWP/CVP reservoir storage are presented to provide a basis for understanding of the changes in SWP/CVP exports and deliveries. However, no specific environmental consequences/impact assessment results are presented for changes in Delta outflow and SWP/CVP upstream reservoir storage in this chapter because the environmental effects of these changes under CEQA and NEPA are not considered as water supply effects or impacts.

Draft EIR/EIS, p. 5-46, ll. 26 – 31. This claim is neither factually accurate nor legally supportable. As shown above in Section I.A.1. and the authorities cited therein, changes in the amount of water delivered to a location do constitute physical changes to the environment. *See also* Pub. Res. Code § 21060.5 ["'Environment' means the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water . . . "]. This is precisely why proposed water transfers, changes in water allocation plans, and even the CALFED project which was this project's predecessor have required environmental analysis of the projects' likely impacts on water supplies.

Regrettably, the legal errors of failing to identify water supply impacts as a physical impact on the environment and analyze the significance of those impacts were carried through all the environmental documents produced for this project, from the DEIR/EIS, to the RDEIR/SDEIS, to the FEIR/EIS. New alternatives, including Alternative 4-H3, were introduced several years after the release of the initial EIR/EIS, so the only analysis of these alternatives appears in the RDEIR/SDEIS. Like the DEIR/EIS, though, the RDEIR/SDEIS fails to analyze the significance of the project's potential impacts on water supplies. The RDEIR/SDEIS' explanation of this decision is limited to one cryptic sentence:

> As indicated in Section 5.3.2, Determination of Effects, of the Draft EIR/EIS, NEPA adverse effect and CEQA significant impact conclusions *are not provided* for the impacts discussed in this water supply sections.

RDEIR/SDEIS, p. 4.3.1-1, ll. 12 – 14 (emphasis added). Thus, the RDEIR/SDEIS merely includes the results of Proponents' Revised Models, without analyzing them or reaching any conclusions about the significance of the water supply impacts those model runs revealed. The RDEIR/SDEIS presents the "changes in May and September reservoir storage under Alternative 4A (ELT) as compared to the No Action Alternative (ELT) and Existing Conditions" in "Figures 4.3.1-4 through 4.3.1-10 and Tables B.1-1 through B.1-3 in Appendix B of this RDEIR/SDEIS for Trinity Lake, Shasta Lake, Lake Oroville, and Folsom Lake" and states that "SWP and CVP San Luis Reservoir storages are presented in Figures 4.3.1-15 11 through 4.3.1-14 for completeness." However, the RDEIR/SDEIS

contains no text explaining the meaning of any of these figures, nor is there any analysis of the significance of the changes. This omission is particularly puzzling since the RDEIR/SDEIS notes, without explanation, that average annual end of September storage in all four identified reservoirs – Trinity, Shasta, Oroville, and Folsom – will decrease under the project as compared to existing conditions. RDEIR/SDEIS, pp. 4.3.1-2 – 4.3.1-3. The volume of water in storage at the end of September is a key factor in determining water managers' ability to manage supplies through a dry year; it reflects "banked" supplies that can be drawn upon in the following year if the intervening winter were to be dry.[5]

The RDEIR/SDEIS approach of referring the reader to various charts and figures without providing text to explain what those charts and figures mean does not satisfy the fundamental requirements of CEQA or NEPA. "The data in an EIR must not only be sufficient in quantity, it must be presented in a manner calculated to adequately inform the public and decision makers, who may or may not be previously familiar with the details of the project. Information 'scattered here and there in EIR appendices,' or a report 'buried in an appendix' is not a substitute for 'a good faith reasoned analysis. . . .'" *Habitat and Watershed Caretakers v. City of Santa Cruz*, 213 Cal. App. 4th 1277, 1306 (2013), citing *Vineyard*, 40 Cal. 4th at 442; *see also* 40 C.F.R., § 1502.8 [requiring the EIS to be organized and written so it is readily understandable]; *Oregon Environmental Council v. Kunzman*, 817 F.2d 484, 493-95 (9th Cir. 1987); *California ex rel. Lockyer v. United States Forest Serv.*, 465 F. Supp. 2d 917, 923 (N.D. Cal. 2006). The information contained in this RDEIR/SDEIS is presented in such a piecemeal manner that it is difficult even for engineers and other water managers and professionals to understand.

Even if the RDEIR/SDEIS' heavy reliance on figures in lieu of analysis were permissible, though, these environmental documents would be fatally defective because they fail to analyze or even include any text disclosing the project's potentially significant dry year impacts – and the sparse text that is included in the RDEIR/SDEIS obfuscates these impacts and misleads the reader. For example, the RDEIR/SDEIS states that, "Under Alternative 4A, average annual total CVP deliveries as compared to Existing Conditions, [*sic*] would increase by up to 3%. . ." (RDEIR/SDEIS p. 4.3.1-5, ll. 6 - 7.) The RDEIR/SDEIS further claims that "average annual CVP north of Delta M&I deliveries would remain similar or increase under Alternative 4A as compared to the conditions without the project." (RDEIR/SDEIS p. 4.3.1-6, ll. 31 - 32.) But, as noted above, the RDEIR/SDEIS also notes that, under the project, end of September storage in all reservoirs will *decrease* as compared to existing conditions. Water managers and other experts recognize that this effect presents a potential problem for future dry year water supplies – even though the RDEIR/SDEIS does not say it. Thus, although the text of the RDEIR/SDEIS claims that there will be no impact to CVP water supplies as a result of the project, that conclusion is based on *average* deliveries and does not take account of potential impacts in dry years, when the water is most needed. Since drought is a normal part of the water cycle in California, CEQA requires agencies to determine what a project's water supply impacts will be in dry years. *Voices for Rural Living v. El Dorado Irrig. Dist.*, 209 Cal. App. 4th 1096, 1112 (2012); Water Code §§ 10910 [for projects subject to CEQA, water agencies must assess whether projects have secure water supplies during single and multiple dry year conditions], 10631(c) [urban water

[5] As was demonstrated during the severe drought conditions of 2013 - 15, California normally receives nearly all of its annual precipitation in about 12 – 17 storms that arrive between October and March. When the winter storms are not frequent enough, not cold enough, or do not contain sufficient precipitation to create a sizable snowpack, drought conditions usually arise.

management plans must describe water supply availability in multiple dry years], 10632 [urban water management plan must include water shortage contingency plan].

Careful review of the RDEIR/SDEIS Figures confirms that the project will have dry year water supply impacts that have not been disclosed in the RDEIR/SDEIS analysis. For example, Figure 4.3.1-10 shows the results of Proponents' Revised Modeling for end of September storage for Folsom Reservoir under Existing Conditions (dashed orange line), the No Action Alternative (dashed black line), Alternative 4 H3 (solid green line) and Alternative 4 H4 (solid grey line). The vertical graph marks the end of September storage volume in Folsom Reservoir in thousands of acre-feet. The values shown range from less than 100,000 acre-feet (the "dead pool" level at which releases from the reservoir downstream are physically impossible) to over 650,000 acre-feet. The Exceedance Probability at the bottom of the graph shows how frequently those conditions are expected to occur. When a point is graphed at 90% exceedance, that means there is a 90% chance that conditions will be wetter than shown at that point. In other words, a 90% exceedance point shows the conditions that the model anticipates would occur in the *driest* 10% of years.

It should also be noted that Proponents' Revised Modeling includes, and Figure 4.3.1-10 reflects, the use of two separate baselines. The dashed orange line, Existing Conditions, reflects the results that the model predicts if the existing pre-project conditions were carried forward into the future. This is the type of baseline normally used for determining a project's environmental impacts under CEQA. State CEQA Guidelines, 14 C.C.R. § 15125. In the No Action Alternative, the Proponents' Revised Modeling incorporates assumptions about climate change, future sea level rise, and increases in North-of-Delta demands for water. The Proponents claim that the No Action Alternative is the appropriate baseline to determine the project's potential impacts; the commenters dispute this because their experts indicate that the changes incorporated into Proponents' Revised Models render their results unreliable. *See* Section I.A.5, below. For purposes of this issue, however, the differences between the models are irrelevant because both Proponents' Revised Models and the corrected CALSIM II modeling undertaken by commenters' experts at MBK Engineers reveal that this project results in potentially significant water supply impacts.

In the bottom left corner of the graph, the green line showing the modeling results of Alternative 4 H3 goes flat – indicating that the reservoir has hit deadpool storage levels, at about 90,000 acre-feet – at about 93% exceedance. This means that, in the with-project conditions, Folsom Reservoir will be drawn down to deadpool storage, with no "water in the bank" at the end of September, in about the driest 7% of years. Without the project, under the orange dashed Existing Conditions line, Folsom Reservoir would hit deadpool storage at about 97%, meaning that this dire situation would only occur in about the driest 3% of years. These data points show that the project will about *double* the number of future years that Folsom Reservoir will be at deadpool in future dry conditions. This is, obviously, a significant water supply impact for those who rely on that reservoir to meet their water needs.

The data from Figure 4.3.1-10 also show that in years between about 85 and 89% exceedance – in other words, in those years that are drier than about 85 – 89% of all years – there is a significant divergence between what happens in the No Action Alternative (the black dashed line) and the proposed project (which, as the RDEIR/SDEIS, was represented by Alternative 4 H3's green line and Alternative 4 H4's grey line) as compared to the Existing Conditions (the dashed orange line). In those years, the Existing Conditions dashed orange line appears to show about 100,000 – 110,000 acre-feet more water in Folsom Reservoir at the end of September than would occur under

Alternative 4 H3, and about 50,000 acre-feet more water than would occur under the No Action Alternative. Thus, in these years, which are in the top 15% of driest conditions, Figure 4.3.1-10 reveals that the project would reduce available water supplies in Folsom Reservoir by 50,000 acre-feet or more. As set forth below, the commenters believe Proponents' Revised Modeling significantly understates the actual water supply impacts of the proposed project, because it conflates the impacts of climate change, increased north of Delta demands, and the proposed project. Nevertheless, even Proponents' Revised Modeling shows that the project would reduce end of September storage – and thus, curtail available water supplies – in Folsom Reservoir at certain dry conditions by about 15% as compared to the No Action Alternative, or by about 30% as compared to Existing Conditions. The RDEIR/SDEIS neither acknowledges nor analyzes the significance of this potential impact, or any of the other water supply impacts that water professionals can discern by evaluating the figures.

Thus, the California WaterFix environmental documents suffer from the same fatal flaw as the EIR that was invalidated in *East Sacramento Partnership for a Livable City*: collectively, the DEIR/EIS, RDEIR/SDEIS, and FEIR/EIS merely cite to the results of the Proponents' Revised Modeling – but *none* of these documents analyzes the *significance* of the *impacts* disclosed by those modeling results. *East Sacramento Partnership for a Livable City v. City of Sacramento*, 5 Cal. App. 5th 281, 301-303 (2016). This violates the fundamental precept that environmental documents should be understandable to the lay reader; an EIR/EIS should not require a reader to translate and interpret the meaning of their figures and graphs. Lacking this information, the environmental documents are fatally flawed under both CEQA and NEPA.

4. The Project's Cumulative Impacts on Water Supply Must Also Be Analyzed

CEQA requires lead agencies to answer two questions to determine whether a project will have cumulative impacts. First, the agency must determine whether the effects of the proposed project, in combination with other projects, would be cumulatively considerable. If so, the agency must then evaluate whether the project's incremental contribution is cumulatively considerable. *Communities for a Better Environment v. California Resources Agency*, 103 Cal. App. 4th 98, 120 (2002), disapproved on other grounds in *Berkeley Hillside Preservation v. City of Berkeley*, 60 Cal. 4th 1086, 1109 n. 3 (2015). When the project's incremental effect is cumulatively considerable, the EIR must discuss the project's cumulative impacts. *San Francisco Baykeeper v. State Lands Comm'n*, 242 Cal. App. 4th 202, 222 (2015). On the other hand, if the cumulative impact is insignificant or if the project's incremental contribution to the impact is not cumulatively considerable, the EIR need not conduct a full cumulative impacts analysis, but it must include a brief explanation of the basis for the agency's conclusions. *San Francisco Baykeeper v. State Lands Comm'n*, 242 Cal. App. 4th 202, 222 (2015). NEPA also requires analysis of a project's contribution to cumulative impacts. *See* 40 C.F.R., § 1508.7; *Lands Council v. Forester of Region One of the United States Forest Serv.*, 395 F.3d 1019, 1027 (9th Cir. 2005).

Here, neither the RDEIR/SDEIS nor the FEIR/EIS includes the required analysis of the project's cumulative impacts to water supplies. The RDEIR/SDEIS simply does not evaluate whether the project's incremental contribution to water supply impacts is cumulatively considerable. As shown in the example set forth above in Section I.A.3, in years that are in the 10 – 15% driest range, the No Action Alternative will reduce end of September water supplies in Folsom Reservoir by about 50,000 acre-feet as compared to existing conditions, and the project will further reduce them by about 50,000 acre-

feet *more*. RDEIR/SDEIS, Figure 4.3.1.-10. In other words, even under Proponents' Revised Modeling, the impacts of the project will *double* the impacts that are anticipated to occur as a result of climate change, sea level rise, and increased demand north-of-Delta. In combination, the cumulative, with-project conditions are expected to reduce available Folsom Reservoir end-of-September stored water supplies from about 350,000 acre-feet to about 250,000 acre-feet. RDEIR/SDEIS, Figure 4.3.1.-10. Yet without acknowledging these data from the Figure, the RDEIR/SEIS offhandedly dismisses these impacts with a statement that "This decrease primarily would occur due to sea level rise, climate change, and increased north of Delta demands." RDEIR/SDEIS, p. 4.3.1-3, ll. 19 – 20. This statement is inconsistent with the RDEIR/SDEIS's own data, which show that, in the driest range of years when effects would be most severe, Project-related effects on Folsom Reservoir, for example, will be at least as large as those caused by all other non-Project factors together.

The cumulative impacts analysis of Alternative 4 is also discussed separately in Chapter 5 of the RDEIR/SDEIS. However, the cumulative impacts analysis indicates that it does not address the topic of the project's cumulative impacts on water supplies;[6] rather, for an analysis of the "effects of changes to SWP/CVP export or deliveries. . . such as the need to develop future water supplies" it refers the reader back to the impact analyses "throughout this RDEIR/SDEIS and in the Draft EIR/EIS." RDEIR/SDEIS, p. 5-9, ll. 28 – 37. Thus, neither the cumulative impacts analysis in Section 5 nor the water supply analysis in Section 4.3.1 of the RDEIR/SDEIS includes any evaluation of whether the project's incremental contribution to water supply impacts is cumulatively considerable. In fact, those words do not even appear in the text. The FEIR/EIS makes no attempt to fill in the missing analyses. This clearly does not meet CEQA's mandate.

Even assuming, *arguendo*, that the future with-project reductions in water supply are caused "primarily" by sea level rise, climate change, and increased north-of-Delta demand, the environmental documents must still analyze the project's incremental contribution to those impacts and determine whether it is cumulatively considerable. The data in the Figures of the RDEIR/SDEIS show that, in wetter years, the project's potential cumulative impacts on water supplies may be less, as demonstrated by the smaller variations between the No Action Alternative and the Alternative 4 H3 and Alternative 4 H4 graphs. Yet the RDEIR/SDEIS must still analyze the project's incremental contribution to those impacts. Under both CEQA and NEPA, a project's cumulative environmental impact cannot be deemed insignificant merely because its individual contribution to an existing environmental problem is relatively small. *San Francisco Baykeeper v. State Lands Comm'n*, 242 Cal. App. 4th 202, 223 (2015), citing *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 718-21 (1990); *Kern v. United States BLM*, 284 F.3d 1062, 1075 (9th Cir. 2002). To the contrary, "the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." *San Francisco Baykeeper v. State Lands Comm'n*, 242 Cal. App. 4th 202, 222 (2015); *Communities for a Better Environment v. California Resources Agency*, 103 Cal. App. 4th 98, 120 (2002).

As disclosed in the RDEIR/SDEIS, the results obtained using Proponents' Revised Modeling appear to show that climate change and other factors will curtail future water supplies as compared to Existing Conditions. For example, on Figure 4.3.1-10, from 30%

[6] The cumulative impacts analysis repeats the incorrect claims that changes in the amount of water delivered do not constitute physical environmental impacts of the project that must be analyzed under CEQA. RDEIR/SDEIS, p. 5-9, ll. 28 -33. This claim misstates the applicable law, as set forth above in Section I.A.1.

exceedance to about 70% exceedance, the dashed orange line showing Existing Conditions generally runs 100,000 acre-feet or more higher than the No Action Alternative. This means that, in many years, end of September storage in Folsom would be significantly higher under Existing Conditions, and the impacts of climate change, sea level rise, and increased north-of-Delta demand as calculated under Proponents' Revised Models substantially reduce available water supplies. The fact that these other factors account for some of the water supply loss shown in the results of Proponents' Revised Modeling does not excuse the lead agencies' failure to analyze the additional incremental effects of the project itself. Even in those years where the other factors may be "primarily" responsible for the reductions in water supply, the environmental documents must analyze the cumulative contribution of this project. In fact, the more that these other factors curtail future water supplies, the more important it is for the environmental documents to take a hard look at the additional reductions caused by the project, even if they are small amounts in some years.

5. By Relying on Faulty and Inadequate Modeling for Its Sole Analysis of the Project's Water Supply Impacts, the Final EIR/EIS Understates Those Impacts and Fails to Fulfill the Disclosure Obligations Imposed by CEQA and NEPA

The CALSIM II model has been considered by prior courts, and it has been deemed to be a generally reliable model for predicting the potential water supply impacts of a proposed project. *See, e.g., Planning and Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 248-49 (2009). It is true that minor variations in the results may be obtained when the hydrological models are revised, and these modeling variations will not invalidate an EIR's water supply analysis, as long as the EIR "adequately discusses the reliability" of the water supplies, pre- and post-project conditions, future conditions, and operations. *Planning and Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 245 (2009).

Here, though, as indicated in Section I.A.3, above, Proponents' Revised Models do not adequately discuss the reliability of the water supplies under pre- and post-project conditions, future conditions, and operations. For this reason, it was necessary for the commenters' expert hydrologists to re-run the hydrologic modeling using the standard CALSIM II models. *Gray v. County of Madera*, 167 Cal. App. 4th 1099, 1115 (2008) [additional testing – or modeling – is required if the initial testing is insufficient]; *In Re State Water Resources Control Bd. cases*, 136 Cal. App. 4th 674, 796 (2006) [hydrologic modeling that includes unreasonable assumptions may be found "clearly inadequate or unsupported"]; *see also Laurel Heights Improvement Assn. v. Regents of University of California* ("*Laurel Heights I*"), 47 Cal. 3d 376, 409 n. 12 (1988) [CEQA does not require that the studies are irrefutable, but the lead agency cannot "uncritically rely on every study or analysis presented by a project proponent in support of its position"].

As noted in the MBK Report, the Proponents' Revised Modeling of the FEIR/EIS suffers from several fatal defects. Perhaps most significantly, the Proponents' Revised Modeling is inconsistent with the project description set out in the environmental documents. This alone render the results obtained under the Proponents' Revised Modeling invalid, as they do not analyze the features of the proposed project.

Furthermore, the Proponents' Revised Modeling for the FEIR/EIS contains at least three operational assumptions that are inappropriate and skew the results of the modeling. First, the Proponents' Revised Modeling for the FEIR/EIS does not consider the effects that would result from the additional conveyance capacity that the project facilities would add. If the tunnels are built, presumably they will be used for their

intended purpose of conveying water south-of-Delta. To present a valid forecast of future with-project conditions, then, the hydrologic modeling of the project should include this increased conveyance capacity.

Second, the Proponents' Revised Modeling for the FEIR/EIS includes artificial limits on the use of the tunnels to convey water south-of-Delta for the CVP. In the Proponents' Revised Modeling for the FEIR/EIS, the use of the North Delta Diversion – i.e., the tunnels – is limited to the remaining amount of permitted capacity at the *existing* South Delta Diversion (SDD), even if the water is being conveyed through the *new* North Delta Diversion. This incorrect assumption artificially and inappropriately inflates the modeling results for storage in upstream CVP reservoirs under the Preferred Alternative as compared to the respective No Action Alternatives.

Third, contrary to statements in the Final EIR/EIS that upstream operating criteria will not change under the project (*see, e.g.*, Final EIR/EIS, Master Response 25, p. 1-248, lines 34-35), Proponents' Revised Modeling for the Final EIR/EIS actually does change the criteria for balancing reservoirs north and south of the Delta. These changes are made in a manner that causes operations under the Preferred Alternative to release less upstream water for storage south of the Delta during summer months, which causes the modeled results for north-of-Delta upstream reservoir storage to be held artificially higher under the Preferred Alternative as compared to the No Action Alternative.

Finally, the Proponents acknowledge that none of the Proponents' Revised Modeling addresses how the proposed project may impact the environment in severe drought conditions. This is a very serious deficiency, because project impacts are almost always greater during drought periods; some impacts may occur *only* during dry conditions.

Any one of these flaws would render the Proponents' Revised Modeling of the Final EIR/EIS fatally defective. In combination, the errors are compounded, and the results cannot be considered reliable. In short, this modeling, like the rest of the modeling runs included in the Proponents' Revised Modeling, is clearly inaccurate and unsupported. Consequently, as set forth in the MBK Report, it does not constitute substantial evidence upon which the lead agencies can base their conclusions about the project's environmental impacts.

"The dispute in this regard goes beyond a disagreement of qualified experts over the reasoned conclusions as to what the data reveals. The EIR failed to acknowledge the opinions of responsible agencies and experts who cast substantial doubt on the adequacy of the EIR's analysis of this subject. The conclusory and evasive nature of the response to comments is pervasive, with the EIR failing to support its many conclusory statements by scientific or objective data. These violations of CEQA constitute an abuse of discretion." *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344, 1355 (2001).

The environmental documents are also defective because they have failed to address the issues related to the boundary analysis and the numerous other errors in the Proponents' Revised Modeling that the commenters and their experts have repeatedly raised. As set forth in the MBK Report, the commenters and their experts have previously informed the lead agencies that the boundary analysis does not, as boundary analysis usually does, evaluate a range of potential operations of the Central Valley Project and the State Water Project with the project, and the additional capacity to convey water across the Delta that it would provide. Because the boundary analysis

that the lead agencies performed does not consider this additional capacity or the flexibility in operations that it would provide, the boundary analysis fails to meet its purported purpose of evaluating a range of project operations under the with-project conditions. While commenters and their experts have previously raised these issues with the lead agencies, the FEIR/EIS fails to correct this deficiency. Likewise, the FEIR/EIS does not correct any of the other modeling deficiencies that the commenters previously raised. *See* MBK Report, at 9-10 ("Modeling Issues Not Addressed in FEIR/S")

Where, as here, "comments from responsible experts disclose new or conflicting data or opinions that cause concern that the agency may not have fully evaluated the project and its alternatives, these comments may not simply be ignored." *Berkeley Keep Jets Over the Bay v. Board of Port Comm'rs of the City of Oakland*, 91 Cal. App. 4th 1344, 1367 (2001). Thus, when responsible experts have noted that the modeling that includes unreasonable assumptions that may render it "clearly inadequate or unsupported," as stated in *In Re State Water Resources Control Bd. cases*, 136 Cal. App. 4th 674, 796 (2006), those comments must be addressed. Since the lead agencies have failed to meet this standard, the Final EIR/EIS is fatally defective.

B. The Final EIR/EIS Inadequately Analyzes Project Impacts to Fish Species.

1. The Final EIR/EIS's Statistically-Based Analysis Is Inadequate to Analyze Project Impacts on Pelagic Fish.

Robert Latour, Ph.D., provided comments on the Draft EIR/EIS and the Recirculated EIR/EIS. Based on his extensive review of the data underlying CDFW's fall midwater trawl, Dr. Latour has published a peer-reviewed scientific paper that used standard catch-per-unit-of-effort analysis to assess the statistical relationship between pelagic fish abundance in the Delta and a number of environmental variables, including streamflows. (Latour, R.J., *Estuaries and Coasts* (2016) 39: 233. doi:10.1007/s12237-015-9968-9.) In light of the very short time provided to review the Final EIR/EIS, Dr. Latour has focused his review of the Final EIR/EIS on its response to his previous comments and the new mitigation measure concerning Alternative 4A's effect on longfin smelt, namely Mitigation Measure AQUA-22d. See Robert J. Latour, Comments on the Final California WaterFix Environmental Impact Report/Statement (EIR/EIS) (January 26, 2017) (attached as Exhibit E.) In his review, Dr. Latour identified at least two significant scientific problems. His attached technical memorandum discusses these problems in detail. The problems are summarized as follows. First, the Final EIR/EIS does not adequately account for the uncertainty inherent in the data and analyses on which the Final EIR/EIS relies to conclude, among other things, that specific numbers of longfin smelt will be generated with certain levels of Delta flows. Second, the Final EIR/EIS takes an internally inconsistent approach to using scientific models by rejecting detailed lifecycle models because they do not address some biological variables, but relying entirely on a simple statistical model that correlates streamflows to numbers of fish in its analysis of the California WaterFix's effects on longfin smelt.

2. The Final EIR/EIS's Analysis of Project Impacts on Salmon Contains Numerous Inadequacies.

Fisheries biologist Dave Vogel, who provided comments on the Draft EIR/EIS and Recirculated EIR/EIS, reviewed the Final EIR/EIS as set forth in his attached comments. Mr. Vogel's review concluded that the Project will have adverse impacts on anadromous salmon species in the Sacramento River Basin that are not disclosed or are downplayed in the Final EIR/EIS. See Dave Vogel, Comments on the Bay Delta Conservation Plan/California WaterFix Final Environmental Impact Report/Environmental Impact

Statement (January 25, 2017) (attached as Exhibit F). Due to the very constrained comment period on the Final EIR/EIS, Mr. Vogel's review focused on the responses to his previously submitted comments, which provided a significant amount of additional information and studies on salmon and predatory fish in the Sacramento River and numerous detailed comments that demonstrated problems with the EIR/EIS's conclusions about the siting of the North Delta intakes, sweeping velocities, predation, and comparisons to the Glenn Colusa Irrigation District (GCID) fish screens. At a minimum, the following errors or unsubstantiated conclusions remain in the Final EIR/EIS:

- The Final EIR/EIS has not included the best available science to reach its conclusions. Instead, it has ignored relevant scientific evidence and studies specifically recommended by Mr. Vogel in previously submitted comments.

- The Final EIR/EIS's continued conclusion that the siting of the North Delta intakes will not significantly harm salmon is based on unsupported assumptions that the future design of Project fish screens will reduce or prevent salmon impingement or predation. This is largely based on erroneous conclusions that the location for the intakes is beneficial to salmon, when in fact the sites chosen are merely the least bad for salmon out of a limited set of bad locations along the Sacramento River.

- The Final EIR/EIS continues to include low sweeping velocities across the fish screens, which increases salmon exposure time to both the fish screens themselves (thus increasing impingement risk) and to predatory fish hiding near the screens. In fact, it appears that the Final EIR/EIS has misinterpreted the California Department of Fish and Wildlife's (CDFW) criteria for sweeping velocities to require *not more than* two times the allowable approach velocity, when it actually requires *at least* two times the allowable approach velocities.

- The Final EIR/EIS continues to state that the North Delta intakes and fish screen design will control predatory fish, when it will actually create refuges for predatory fish that will adversely affect salmon.

The Final EIR/EIS concludes that the Project would result in lower salmon mortality than the GCID fish screen project, yet data shows that greater numbers of predatory fish occur in stretches of the Sacramento River closer to the North Delta intakes than occur near the GCID screens.

C. The Final EIR/EIS Improperly Defers Analysis of Impacts of Intakes and Fish Screens.

The Final EIR/EIS for the California WaterFix project improperly defers analysis of the impacts of the North Delta intakes and fish screens on fish, particularly the predation of salmon. Specifically, the Final EIR/EIS and responses to comments repeatedly assert that the final design of the intakes and their fish screens have not yet been developed and will be developed based on a series of future studies the lead agencies promise to conduct. (See DEIR/S Ltr # 1597, Response to Comment149.) However, the failure to provide more certain design information for the intakes and the fish screens prevents full disclosure and analysis of the impacts that these structures may have on the environment. The failure to adequately study these impacts is especially egregious given the EIR's assertion that impacts to salmonids would be minimal.

"While proper tiering of environmental review allows an agency to defer analysis of certain details of later phases of long-term linked or complex projects until those phases are up for approval, CEQA's demand for meaningful information is not satisfied by simply stating information will be provided in the future." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 431 [internal quotes omitted].) There is no indication in the Final EIR/EIS that the final design for the North Delta intakes and fish screens will be subject to later environmental review, thus the deferral of this analysis cannot be considered "proper tiering." Moreover, the intakes themselves are an integral part of the project that would be approved alongside the certification of the Final EIR/EIS for California WaterFix. The elements of the project that are presently being approved should be fully analyzed for their impacts on the environment, particularly sensitive species like salmon. Without critical details about sweeping velocities across the intakes and fish screens, there is insufficient evidence to support the EIR's conclusions about whether salmon will be significantly impacted by the project, particularly in regard to predation by other fish species and impingement.

D. The Environmental Documents Are So Difficult to Navigate That It Is Often Unclear Exactly What Has Been Disclosed.

Instead of providing a user-friendly, understandable analysis of the potential effects of the California WaterFix, the Final EIR/EIS furthers the unorganized, scattered and unreadable nature of the previous environmental documents issued for the Project. One "purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment." Pub. Res. § 21061. The California Supreme Court has long declared that an environmental impact report "protects not only the environment but also informed self-government." (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392); *see also Oregon Envtl. Council v. Kuzman* (9th Cir. 1987) 817 F.2d 484, 494.) Combining over 30,000 pages of the 2014 initial draft with certain new material in the 2015 recirculated draft document and unspecified additional new information into this Final EIR/EIS (for a cumulative total of more than 113,000 pages) makes the task of informed self-government unwieldy and ineffective.

The Final EIR/EIS contains approximately 7,200 pages more than the DEIR/DEIS, and over 12,000 pages of responses to comments. The Final EIR/EIS explains that it "contains the full contents of the revised Draft EIR/EIS and appropriate portions of the RDEIR/SDEIS, with necessary corrections and updates." (Final EIR/EIS, Comments and Responses to Comments, at 1-321 (Master Response 38).) However, there is no specificity about what exactly are the "appropriate portions" or "necessary corrections and updates." The brief summary of revisions incorporated into the Final EIR/EIS does not include a description of <u>all</u> changes nor does the document provide a redline of changes made in the Final EIR/EIS. (Compare Final EIR/EIS, ES-8 with FEIR/EIS Appendices 17F, 24B (examples of new information in the Final EIR/EIS that was not identified in the description of new information).) There is no "road map" or "user guide" to provide the public an opportunity to understand the changes made in the Final EIR/EIS or how those changes affect the analysis of the potential impacts of the Project.

Take, for example, the process by which a commenter must locate the response to a particular comment. First, the commenter reads a news article about the availability of the Final EIR/EIS on or around Friday, December 22 (see e.g. "Final EIR/EIS for California Water Fix now available online," *available at*

https://mavensnotebook.com/2016/12/22/final-eireis-for-the-california-water-fix-now-available-online/) Of course, being the day before the Christmas holiday weekend, many people were traveling and preparing for time with family and friends. Second, likely during the following week of December 26, the commenter must locate the online version of the Final EIR/EIS and reads that Volume II contains responses to comments. A description of Volume II explains that the responses are organized into parts, including indices of master responses, responses to comments on the DEIR/DEIS and responses to comments on the RDEIR/SDEIS. Third, the commenter must access the "Index of 2013 Draft EIR-EIS Commenters" and/or the "Index of 2015 RDEIR-SDEIS Commenters" and locate the number assigned to the commenter's letter. The indices contain lists of commenters by First Name, Last Name, and Organization Name, but there is no apparent, logical order (e.g., alphabetical, etc.) by which the letters are listed in the index. Fourth, the commenter must download the appropriate file containing the commenter's letter number and scroll through pages and pages of responses to locate the applicable number. Finally, the commenter reads a response to its comment, only to find that it is referred to numerous other places for the response. Sometimes the commenter is sent to as many as four or five different places to locate a response, including master responses and responses to other commenter's letters. The task of simply locating the pertinent response can itself take several hours, all during a holiday week before the start of the New Year.

The commenting parties acknowledge that the scope of the Project is massive and the task of analyzing the potential effects is enormous and complex. This however is all the more reason to make straightforward and clear responses to comments and to allow sufficient time for the public to digest and understand the information contained in the Final EIR/EIS. Instead, the Department of Water Resources has compounded the complexity of the Final EIR/EIS by attempting to artificially impose a deadline by which "any person may submit to DWR any grounds for noncompliance with CEQA, consistent with CEQA Section 21177(a)." (*See* 81 Fed. Reg. 96486; Bay Delta Conservation Plan, Final EIR/EIS, available at http://baydeltaconservationplan.com/FinalEIREIS.aspx.) The date of that deadline requires reference to yet another notice in the Federal Register posted by the U.S. Environmental Protection Agency on December 27, 2016. (81 Fed. Reg. 96451.) That notice indicates that the review period ends on January 30, 2017, less than 6 weeks after the Final EIR/EIS became available to the public. Compared to the 32 week comment period for the DEIR/DEIS and 16 weeks for the RDEIR/SDEIS, a truncated comment period on the Final EIR/EIS is unreasonable especially considering that the Final EIR/EIS is longer than the RDEIR/SDEIS, contains much new information, and there appears to be no plan for a public hearing regarding the Final EIR/EIS. Although the NSWA has endeavored to provide these comments within the period stated by DWR, the complexity and unwieldiness of the Project and the Final EIR/EIS demand additional time for public review and analysis in order for the document to attain the goals of informed self-government and transparency.

II. The Project Proponents Have Failed to Adopt Feasible Mitigation Measures to Lessen or Avoid the Project's Potentially Significant Environmental Impacts

As shown above in Sections I.A.2, the project will have potentially significant water supply impacts in dry years, and the Final EIR/EIS fails to adequately analyze impacts to fish species. When a project will cause potentially significant environmental impacts, the EIR must propose and describe mitigation measures to minimize or avoid those effects. *East Sacramento Partnership for a Livable City v. City of Sacramento*, 5 Cal. App. 5th 281, 303 (2016), citing Pub. Res. Code §§ 21002.1(a), 21100(b)(3); State CEQA Guidelines, 14 C.C.R. § 15126.4(a)(1); *Gray v. County of Madera*, 167 Cal. App. 4th 1099, 1116 (2008) [project's potential to reduce the water supply available to others

was a "potentially significant problem," requiring mitigation measures to "present a viable solution that can effectively replace the decline in the water available to the neighboring residents"]. To comply with NEPA, an EIS also must incorporate discussion of appropriate mitigation measures. 40 C.F.R., §§ 1502.14(f), 1502.16(h); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-52 (1989). CEQA goes a bit further and actually requires the lead agency to adopt all feasible mitigation measures to avoid or reduce the project's potential environmental impacts: "It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental impacts of such projects. . . ." *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 565 (1990).

Here, as shown above, the FEIR/EIS does not identify all of the project's potentially significant impacts, and consequently the FEIR/EIS also fails to include any mitigation to address these impacts. For example, with respect to water supply, the hearing officers for the hearing that the State Water Resources Control Board is conducting to consider amending the water rights permits to authorize this project urged the lead agencies to propose terms and conditions that would protect other existing legal users of water from injury resulting from the project. February 11, 2016 California WaterFix Project Pre-Conference Ruling, pp. 6, 7; *see also* March 4, 2016 Revised Hearing Schedule, Revised Notices of Intent to Appear, Electronic Service and Submissions, and Other Procedural Issues Concerning the California WaterFix Water Right Change Petition, p. 2 (attached as Exhibit J). The lead agencies declined this invitation. May 16, 2016 Status Report Regarding Hearing on California Waterfix Water Rights Change Petition, pp. 1-2. However, as the commenters have repeatedly noted, there are feasible mitigation measures that could be imposed to avoid or minimize the project's dry year water supply impacts.

The lead agencies seem to be taking the position that they can identify the impacts of the operations of these proposed facilities, and mitigate them as appropriate, at some future time after the facilities are built. Master Response 33 (FEIS/EIR, Vol. II, pp. 1-294 to 1-297); see Mitigation and Monitoring Plan AQUA-22d (FEIS/EIR, pp. 2-18 to 2-19) [future determination of Delta outflow for longfin smelt]. Incongruously, though, they are seeking project-level approval to construct the new tunnel facilities. Master Response 2 (FEIS/EIR, Vol. II, pp. 1-17 to 1-24. The scope of their environmental analysis, therefore, must also reflect project-level consideration of the project's potential impacts and the measures necessary to mitigate them. While deferral of the specifics of mitigation is permissible when the lead agency commits itself to mitigation and articulates the specific performance criteria that the mitigation will meet, *Sacramento Old City Assn. v. City Council*, 229 Cal. App. 3d 1011, 1028-29 (1991), the lead agencies have not met this standard in this instance. Rather, they have not committed themselves to any specific performance standard that would mitigate the project's potentially significant impacts on dry year water supplies, and thus they have failed to meet their obligations under both CEQA and NEPA. *Cf. Gray v. County of Madera*, 167 Cal. App. 4th 1099, 1119 (2008); *S. Fork Band Council of W. Shoshone v. United States DOI*, 588 F.3d 718, 727 (9th Cir. 2009) [holding failure to discuss effectiveness of mitigation proposed in EIS violated NEPA].

III. The Final EIR/EIS Lacks an Accurate, Stable and Finite Project Description Because It Relies on Uncertainties of Science and Project Permitting.

A finite project description is the "*sine qua non* of an informative and legally sufficient EIR." (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193.) In contrast, a "curtailed, enigmatic or unstable project description draws a red herring

across the path of public input." (*County of Inyo,* 71 Cal.App.3d at 197-98.) A project description that does not provide the necessary detail is a fundamental flaw that precludes the public and decisionmakers from being adequately informed regarding a project's impacts. (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 672.) Such a flaw is fatal because it cuts the heart out of the EIR process: if the EIR does not provide a clear, accurate, and stable description of the project, public agencies and members of the public simply cannot weigh the purported benefits of the project against its environmental cost, or properly evaluate project alternatives or measures to mitigate any adverse environmental impacts. (*Id.* at 654-655.)

The Final EIR/EIS relies on uncertainties of adaptive management and future permitting to mask the lack of an accurate and stable project description. For example, certain responses contemplate "long-term changes in initial operations criteria to address uncertainties" regarding outflow requirements and other "conveyance facilities operational changes" resulting from the adaptive management program. See RDEIR/SDEIS Response 2623-20. In other places, the Final EIR/EIS admits that potential injury to water users and other beneficial uses will be reflected in as yet undefined terms and conditions imposed by the State Water Resources Control Board. (RDEIR/SDEIS Response 2623-31.)

The spring Delta outflow requirements that will apply provides one good illustration of this problem, which has persisted throughout the environmental review process for this project. The applicable spring Delta outflows have been in flux throughout the entire course of environmental review for California WaterFix. The DEIR/EIS proposed a scientific "decision tree" process to determine – later – spring outflows for the then-proposed project, Alternative 4. DEIR/EIS, pp. 3-3, lines 28-37; 3-202 to 3-209. In the RDEIR/SDEIS, with the shift to Alternative 4A – which involved removing of tens of thousands of acres of in-Delta habitat restoration from the project – spring outflows would be not determined by a decision tree, but rather would be assumed initially to be at some point still within the decision tree's bounds, with later adaptive management. RDEIR/SDEIS, p. 4.1-9; RDEIR/SDEIS, Appendix B, pp. B-1 to B-2. The FEIR/EIS contains, as part of a revised description of Alternative 4A, the statement that the project would maintain average March-May Delta outflows generated under currently applicable biological opinions through limitations on total Delta exports, subject to change based on permitting under the California Endangered Species Act (CESA) by the California Department of Fish and Wildlife (CDFW). FEIR/EIS, pp. 3-44, 3-47; see also FEIR/EIS, p. 11-3211 (Mitigation Measure AQUA-22d).

As recently as January 25, 2017, statements by CDFW in the California WaterFix Aquatic Science Peer Review 2B Materials meeting concerning CDFW's CESA permitting demonstrated how uncertain the California WaterFix's potential impacts on upstream water supplies remain. Specifically, in a document entitled "Proposed Longfin Smelt Spring Outflow Methods for California WaterFix," CDFW stated the following:

> The following discussion provides an explanation of the multiple approaches CDFW considered to develop minimum Delta outflow criteria for operations of CWF [California WaterFix]. The approaches differ from what was submitted as part of the 2081(b) Application in that this approach would require the CVP/SWP to operate to achieve a minimum Delta outflow, rather than to operate to an operational criteria that may result in achieving a minimum Delta outflow.

Id., January 25, 2017, attached as Exhibit I and available for download as CDFW's "Proposed Approach to Establishing Longfin Smelt Outflow Criteria" on the webpage for

"CA WaterFix Aquatic Science Peer Review 2B Materials," accessed January 30, 2017 at http://www.westcoast.fisheries.noaa.gov/central_valley/WaterFix/WaterFixPeerReview2BMaterials.html.

In other words, as a result of the project, CDFW is contemplating imposing a spring Delta outflow requirement on the full coordinated operations of the CVP and the SWP, rather than what is set forth in the FEIR/EIS, which identifies such a requirement as being met *only* by limitations on Delta exports. CDFW's proposed change to the California WaterFix's spring Delta outflow requirements apparently could be incorporated into the project description under the FEIR/EIS. FEIR/EIS, p. 3-44. Those requirements then would apply to the CVP and the SWP generally and would impact the water supplies of all water users who rely on CVP and SWP operations because CDFW's proposal could compel the CVP and the SWP to release more water from reservoir storage in order to meet the California WaterFix's Delta-outflow requirements. The FEIR/EIS, however, contains no analysis at all of these possible water-supply impacts.

Despite years of process and reams of paper, the project's environmental review has failed to provide meaningful information about how the California WaterFix may affect water supplies. The lack of a stable project description has prevented water users from understanding the project and resulted in an inadequate analysis of the project's water supply impacts, causing the California WaterFix environmental documents to fail in their essential purpose.[7]

Likewise, the quantity and timing of water diverted at the North Delta Diversion, as well as how the CVP and SWP would be operated if the Project were to be approved, are critical to understanding the Project's environmental effects. North State Water Alliance members and others objected to the lack of detail about these essential elements of the Project. However, nothing in the Final EIR/EIS provides further certainty or clarity about these issues or the proposed adaptive management program.

The changes to the Project that could result from the uncertainties of adaptive management and future permitting go to the heart of the project description and must be part of a proper evaluation of potential impacts and mitigation. Moreover, the extent of the potential changes resulting from such uncertainty is not within the impacts disclosed by the Boundary 1 and Boundary 2 scenarios presented in the State Water Resources Control Board proceeding for all of the reasons stated in Evaluation of California Water Fix Boundary Analysis Modeling, MBK Engineers (August 31, 2016). See MBK Report, at 5-6.

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[7] Indeed, at this time, it still is not clear if the Project will even be able to proceed. To date, the lead agencies still have not developed a viable plan to cover the costs of the Project. *See* Secretary of the Interior Order No. 3343, January 3, 2017, p. 7 (directing Reclamation to "continue to work with DWR and other appropriate entities on a range of strategies and options to appropriately split the costs of CWF between the SWP and CVP water users and to determine an appropriate role for the Federal Government in participating in CWF given the projected public benefits") (attached as Exhibit H). Thus, there is still great uncertainty about whether the Project, and its required mitigation, is financially feasible. *Cf. Federation of Hillside & Canyon Associations v. City of Los Angeles*, 83 Cal. App. 4th 1252, 1260 – 61 (2000).

IV. The EIR/EIS Includes Voluminous Amounts of Significant New Information, And The Public Has Been Deprived of the Opportunity For Meaningful Comment On This Information.

When a lead agency adds "significant new information" to an EIR after review by other agencies and the public, but before it certifies the EIR, the lead agency "must pursue an additional round of consultation" and recirculate the revised document. (*Vineyard*, 40 Cal.4th at 447, citing Pub. Res. Code § 21092.1; *see also* Cal. Code Regs. tit. 14 ("CEQA Guidelines"), § 15088.5(a).) Recirculation is required because the revised document must "be subjected to the same critical evaluation that occurs in the draft stage...so that the public is not denied an opportunity to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom." *Save Our Peninsula,* 87 Cal.App.4th at 131 (internal quotations omitted). New information is "significant" within the meaning of CEQA if, as a result of the information, "the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a *substantial* adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect." *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1129-1130 (*Laurel Heights II*).

Public and agency review is a "fundamental requirement" of both CEQA and NEPA, and failure to provide adequate public review of the significant new information included in the FEIR/EIS "eviscerate[s]... the strongest assurance of the adequacy of the EIR." *Sutter Sensible Planning, Inc. v. Board of Supervisors* (1981) 122 Cal.App.3d 813; see also *Natural Resources Defense Council, Inc. v. Morton* (1972) 337 F. Supp. 170, 172. Under both CEQA and NEPA, a lead agency must assure that the public and other agencies have a meaningful opportunity to evaluate new information and the validity of conclusions that are drawn from it. *See, e.g., Goleta Valley II*, 52 Cal.3d at 563-564; CEQA Guidelines § 15088.5(a); *see also Wildearth Guardians v. Montana Snowmobile Ass'n*, 790 F.3d 920, 927 (9th Cir. 2015). Where significant new information has been revealed that might impact an agency's evaluation of a project, additional public environmental review is necessary. *See* Cal. Pub. Res. Code § 21092.1; *Spring Valley Lake Association v. City of Victorville* (2016) 248 Cal. App. 4th 91, 108; 40 C.F.R. § 1502.9(c); *Marsh v. Or. Natural Res. Council,* 490 U.S. 360, 372 (1989).

Here, the FEIR/EIS was released three days before Christmas; set for a 30-day review period that spanned multiple federal holidays; exceeds 70,000 pages of material, including eighteen new substantive appendices or sub-appendices; applies entirely new modeling data related to the project's impacts; includes entirely rewritten resource impact chapters that are thousands of pages long[8], with no use of redline or strikeout to identify the specific changes that were made; and, with the exception of a cursory two-page summary, fails to provide any information as to what materials have been added or altered in the final document. These flaws obfuscate public review and deprive the public of any meaningful opportunity to comment upon the changes reflected in the final document. See *Laurel Heights II,* 6 Cal.4th at 1129-1130.

Even in the face of these exasperating circumstances, the commenters identified changes to the document that go far beyond clarifying or amplifying the information contained in prior drafts, and therefore mandate recirculation and additional public review. In a most telling example (of which there are many), the Final EIR/EIS admits

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[8] For example, Chapter 11, Fisheries and Aquatic Resources, is 4,202 pages long, not including figures, which are located in separate files.

that the hydrologic modeling in the Final EIR/EIS was updated to include the proposed project (Alternative 4A) and that scenario is an "impact analysis starting point." (Final EIR/EIS, at ES-8, line 20-24.) This new modeling alone requires recirculation because the public has been deprived of a meaningful opportunity to comment upon the *substantial* adverse environmental effects of the project. In particular, responses to comments in the Final EIR/EIS indicate that the Proponents' Revised Models modified the CALSIM II standard San Luis Reservoir rule curve in a manner that alters upstream operations. See RDEIR/SDEIS Response #102 to Letter 2654; *see also* MBK Report, at 4-6. Such modification demands meaningful opportunity to comment by the public and those whose water supplies would be impacted by those modifications.

Notwithstanding these fundamental changes, the lead agencies suggest that no recirculation of the document is necessary because, for example, "it is legally permissible to confirm conclusions found in a Draft EIR through new modeling conducted in connection with the preparation of a Final EIR," See Response to DEIR/EIS 1597-2, citing *San Francisco Baykeeper v. California State Lands Comm.* (2015) 242 Cal.App.4th 202 and *Beverly Hills Unified School Dist. v. Los Angeles County Metropolitan Transportation Authority* (2015) 241 Cal. App.4th 627. However, the new information contained in the Final EIR/EIS is nothing like that in *Baykeeper* (in which additional modeling confirmed the State Land Commissions' prior conclusions regarding the impact of sand mining on local erosion) or *Beverly Hills Unified School District* (in which new seismic studies justified the Transportation Authority's decision to reject one alternative tunnel path in favor of another, also studied in the Draft EIR).

The most recent law on this question, *Spring Valley Lake Association v. City of Victorville*, addresses facts that are directly analogous to the current circumstances. In *Spring Valley Lake Association*, the City redesigned a stormwater management plan associated with the Tamarisk Marketplace Project, and explained in the EIR that the associated hydrology and water quality analysis was "globally amended to reflect current designs, information, and analysis presented" in two hydrology reports. *Spring Valley Lake Association v. City of Victorville* (2016) 248 Cal. App. 4th 91, 108. The City provided no redline of the changes to that section, but instead "replaced 26 pages of the EIR's text with 350 pages of technical reports and the bald assurance the new design is an environmentally superior alternative for addressing the project's hydrology and water quality impacts." *Id.* This approach, which was soundly rejected by the appellate court, deprived the public of a meaningful opportunity to comment on the changes. Recirculation was required. *Id.* at 109.

Alternative 4A was first introduced in the 2015 RDEIR/SDEIS. The comment period for that document closed on October 30, 2015. However, the modeling data reflecting the Project's actual operations under Alternative 4A was not released to the public until February 3, 2016, a full four months after the opportunity for public comment had closed. The Final EIR explains that "hydrologic modeling was updated to include conditions under Alternative 4A...this modeling translated into updated discussion in [Chapters 5, 6, 8, 11] and other chapters dependent on hydrodynamic changes." FEIR/EIS, p. ES-8. In support of these changes, the Final EIR includes ten new appendices, and more than 1000 pages of new analysis and information. And, as previously noted, the project changed again in the summer of 2016 when the Proponents disclosed, in the WaterFix hearing before the State Water Resources Control Board, that in fact future with-project operations could range between Boundary 1 and Boundary 2. No meaningful analysis of the impacts of operating under these conditions was provided; instead, model data for those substantially expanded project operations were simply dumped into an appendix of the Final EIR/EIS. Neither NEPA nor CEQA can countenance this sort of eleventh hour information dump: meaningful review and

comment is required. See *Marsh,* 490 U.S. 360, 378. Here, as in *Spring Valley Lake Association*, the "breadth, complexity, and purpose" of the revisions deprived the public of a meaningful opportunity to comment, and therefore recirculation is mandatory.

V. Responses to Comments Are Not Responsive and Fail to Address in Detail the Reasons Why Specific Comments Were Not Accepted.

CEQA and NEPA require not only effective public notice, but public participation in the evaluation of the environmental consequences of a proposed action. Accordingly, a thoughtful and meaningful response to public comment is an integral part of the EIR and EIS. (40 C.F.R. § 1510(a); *State of Cal. v. Block* (9th Cir. 1982) 690 F.2d 753, 773; CEQA Guidelines, § 15003(a); *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.) An agency's responses to comments must "address in detail . . . [the] reasons why specific comments and suggestions were not accepted." (CEQA Guidelines § 15088(c); *see also* 40 C.F.R. § 1503.4.) CEQA and NEPA require a lead agency to confront the significant environmental issues raised in comments, and do not allow these issues to be "swept under the rug." (See *City of Irvine v. County of Orange* (2015) 238 Cal.App.4th 526, 553.) Cursory responses are not sufficient: the agency must "make available to the public high quality information, including accurate scientific analysis, expert agency comments and public scrutiny, before decisions are made and actions are taken." (*Center for Biological Diversity v. U.S. Forest Service* (9th Cir. 2003) 349 F.3d 1157, 1167; *see* 40 C.F.R. § 1500.1(b), CEQA Guidelines § 15132(d); *see also People v. County of Kern* (1974) 39 Cal. App.3d 830, 841-842.)

For example, responses in the Final EIR/EIS to comments requesting more definition of the source, quantity and timing of the water needed to meeting Delta outflow objectives did not provide any such detail. (See Response to RDEIR/SDEIS 2623-31.) Although the response specifies that the Final EIR/EIS has been modified to "not include acquisition of water related to spring outflow criteria," it only generally refers to the RDEIR/SDEIS and the Biological Assessment for the analysis of potential sources of water for additional spring outflow, both of which include acquisitions of water as a potential source to supply the required outflow. RDEIR/SDEIS, at p. 4.1-6 (Section 4.1.2.2); California WaterFix Biological Assessment, at p. 3-83 (Section 3.3.1). Both documents also generally imply that spring outflow criteria will be met generally by CVP/SWP operations without any specificity as to how. These responses fail to provide the necessary detail about why the request for specificity about a crucial operational aspect of the Project was not accepted. *Cf. In Re Bay-Delta Programmatic EIR Coordinated Proceedings*, 43 Cal.4th 1143, 1173 (2008) [where project will require additional sources of water, it must identify potential sources and analyze the associated environmental impacts at a level appropriate for the level of environmental review].

In other responses, the Final EIR/EIS fails entirely to address the issue identified in the comment. For example, responses to comments about groundwater impacts due to increased reliance on groundwater *north* of the Delta were based on analysis and mitigation of impacts to groundwater *in* the Delta during construction. (*See e.g.* Response to RDEIR/SDEIS 2627-3.) Prior to certifying the Final EIR/EIS, the lead agencies must provide adequate responses to the actual issues raised in the comments.

Moreover, many of the comments made by fisheries biology expert Dave Vogel about the lack of detail provided for the design of the North Delta intakes and fish screens (and the associated impacts that poor design may have on salmon) were responded to by promising that all concerns would be addressed by a later series of studies. (DEIR/S Ltr # 1597, Response to Comments 150–175.) These responses ignored

the several substantive issues that Mr. Vogel identified in his review of Alternatives 4 and 4A.

For example, Mr. Vogel expressed concerns that the Draft EIR misrepresented data from studies conducted on Glenn Colusa Irrigation District's (GCID) fish screens. In this comment, Mr. Vogel provided citations for numerous studies related to GCID's fish screens that were not consulted in preparation of the Draft EIR/EIS as additional evidence for the lead agencies' review. (See DEIR/S Ltr # 1597, Response to Comment 197.) The response does not acknowledge the additional studies and materials recommended by Mr. Vogel. This is not only an inadequate response to a comment that raises specific and technical information that should have been discussed in environmental analyses in the Final EIR/EIS, it also fails to support the determination to reject the consideration of these studies with substantial evidence.

Mr. Vogel identified other important technical concerns, such as the dangers of low sweeping velocity on salmon in regard to impingement and predation and the design of fish screens that provide hiding spaces for predatory fish. Rather than addressing these comments with detail to match, the lead agencies responded in a non-specific and general fashion. Mr. Vogel also commented that the locations chosen for the North Delta diversion intakes are not as beneficial to salmon as the Draft EIR/EIS and Recirculated EIR/EIS present them to be. (See DEIR/S Ltr # 1597, Response to Comment 147, 156, 160;RDEIR/SDEIS Ltr # 2623, Response to Comment 45.) Specifically, he noted that the locations are not on sufficiently curved portions of the Sacramento River or in areas with higher gradients, and thus would not have adequate sweeping velocity to prevent salmon from becoming impinged on the screens. (See DEIR/S Ltr # 1597, Response to Comment 156, 160, 164, RDEIR/SDEIS Ltr # 2623, Response to Comment 45.) Instead of considering the information presented in the comments and adjusting the language in the Final EIR/EIS or adjusting the location of the intakes, the lead agencies state that studies will be conducted at some time in the future. Studies that do not currently exist cannot refute the information presented in Mr. Vogel's comments that the location of the intakes is not appropriate to protect salmon, even though the EIR claims they are.

The responses to these expert comments are inadequate and violate CEQA. (*City of Irvine v. County of Orange* (2015) 283 Cal.App.4th 526, 551 [noting that "nonspecific and general" responses are inadequate].) The detailed comments, and the additional information provided in them, required specific and detailed responses. The failure to provide adequate responses to comments contributed to the lead agencies' failure to adequately evaluate and disclose significant impacts of the Project and constitutes prejudicial error.

VI. Conclusion

Like the DEIR/DEIS and the RDEIR/SDEIS, the Final EIR/EIS fails to provide sufficient meaningful information about the Project's adverse effects and omits consideration of many impacts of concern to residents of the Sacramento Valley. Rather, the Final EIR/EIS continues to provide an overly optimistic assessment of Project effects on water supply, water quality, fish and wildlife that is not based on the best available science. The Final EIR/EIS relies on flawed technical studies and incomplete data and omits essential information, violating CEQA and NEPA requirements that it actually inform the public and decision makers about the Cal WaterFix Project's potential environmental impacts.

Due to the fundamental changes in the Project since publication of the DEIR/DEIS and RDEIR/SDEIS, the significant changes needed to the underlying technical studies and analyses, and the extensive comment and criticism of these documents, the Final EIR/EIS does not satisfy CEQA and NEPA's informational mandate. The state and federal lead agencies must substantively and meaningfully address the numerous concerns and criticisms raised in comments on the DEIR/DEIS, RDEIR/SDEIS and the Final EIR/EIS.

EXHIBITS

Exhibit A:	List of Commenting Parties
Exhibit B:	List of Previous Comment Letters
Exhibit C:	List of State Water Resources Control Board Evidence
Exhibit D:	MBK Engineers, Comments on the Final California WaterFix Environmental Impact Report/Statement (January 30, 3017)
Exhibit E:	Robert J. Latour, Comments on the Final California WaterFix Environmental Impact Report/Statement (EIR/EIS) (January 26, 2017)
Exhibit F:	Dave Vogel, Comments on the Bay Delta Conservation Plan/California WaterFix Final Environmental Impact Report/Environmental Impact Statement (January 25, 2017)
Exhibit G:	"90,000-Page Environmental Report on Delta Tunnels Released," Courthouse News, December 22, 2015; "Governor Brown Issues Statement on Release of Final Environmental Reports for California WaterFix," Office of Governor Edmund G. Brown, Jr., December 22, 2015.
Exhibit H:	Secretary of the Interior Order No. 3343, January 3, 2017.
Exhibit I:	Proposed Longfin Smelt Spring Outflow Methods for California WaterFix
Exhibit J:	February 11, 2016 California WaterFix Project Pre-Conference Ruling, March 4, 2016 Revised Hearing Schedule, Revised Notices of Intent to Appear, Electronic Service and Submissions, and Other Procedural Issues Concerning the California WaterFix Water Right Change Petition, and May 16, 2016 Status Report Regarding Hearing on California Waterfix Water Rights Change Petition
Exhibit K:	SWRCB orders concerning CVP and SWP water-right permits dated January 31, 2014; February 7, 2014; February 28, 2014; March 18, 2014; April 9, 2014; April 11, 2014; April 18, 2014; September 24, 2014; October 7, 2014; February 3, 2015; March 5, 2015; April 6, 2015; July 3, 2015; and December 15, 2015.

Exhibit A

List of Commenting Parties
California WaterFix Final EIR/EIS

Anderson-Cottonwood Irrigation District
Biggs-West Gridley Water District
Brannan-Andrus Levee Maintenance District
Browns Valley Irrigation District
Butte Water District
Carter Mutual Water Company
El Dorado County Water Agency
El Dorado Irrigation District
El Dorado Water & Power Authority
City of Brentwood
City of Folsom
Glenn-Colusa Irrigation District
Glenn Valley Water District
Howald Farms, Inc.
Maxwell Irrigation District
Meridian Farms Water Company
Myers-Marsh Mutual Water District
Natomas Central Mutual Water Company
Nevada Irrigation District
North Delta Water Agency
Northern California Water Association
Pacific Realty Associates, LP (M&T Chico Ranch)
Paradise Irrigation District
Pelger Mutual Water Company
Pleasant-Grove Verona Mutual Water Co.
Placer County Water Agency
Plumas Mutual Water Company
Princeton Codora Glenn Irrigation District
Provident Irrigation District
Reclamation District 105
Reclamation District 108
Reclamation District 317
Reclamation District 407
Reclamation District 551
Reclamation District 563
Reclamation District 999
Reclamation District 1004
Reclamation District 2060
Reclamation District 2067
Reclamation District 2068
Reclamation District 2098

Regional Water Authority
Henry D. Richter, et al.
Richvale Irrigation District
River Gardens Farms
City of Roseville
City of Sacramento
Sacramento County Water Agency
Sacramento Municipal Utility District
Sacramento Suburban Water District
San Juan Water District
South Feather Water and Power Agency
South Sutter Water District
South Yuba Water District
Sutter Extension Water District
Sutter Mutual Water Company
Tehama-Colusa Canal Authority
Western Canal Water District
Windswept Land and Livestock Company
Yolo County Flood Control & Water Conservation District
Yuba County Water Agency

Exhibit B

List of Previous Comment Letters
California WaterFix Final EIR/EIS

1. North State Water Alliance (NSWA) Comments on Draft Bay Delta Conservation Plan, EIR/EIS, and Implementing Agreement, July 28, 2014.

2. North State Water Alliance (NSWA) Comments on Cal WaterFix and RDEIR/SDEIS, October 30, 2015.

3. City of Sacramento Comments on BDCP and Draft EIR/EIS, July 22, 2014

4. City of Sacramento Comments on California WaterFix and RDEIR/SDEIS, October 29, 2015

5. El Dorado Water and Power Authority (EDWPA) Comments on the Draft Bay-Delta Conservation Plan and EIR/EIS, July 29, 2014

6. Sacramento Municipal Utility District (SMUD) Comments on Draft Environmental Impact Statement and Environmental Impact Report for the Bay Delta Conservation Plan, July 29, 2014

7. Sacramento Municipal Utility District (SMUD) Comments on Bay Delta Conservation plan/WaterFix Partially Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement, October 30, 2015

Exhibit C

List of State Water Resources Control Board Evidence
California WaterFix Final EIR/EIS

Electronic copies of all evidence are contained on the enclosed CDs.

Sacramento Valley Water Users		
1	Draft January 2016 Biological Assessment for the California WaterFix	1-SVWU-1 (folder)
2	Monthly Probability of Exceedance - Storage at Shasta Reservoir	2-svwu_2.pdf
3	Testimony of Walter Bourez	3-svwu_100.pdf
4	Statement of Qualifications for Walter Bourez	4-svwu_101.pdf
5	MBK Report on Review of Bay Delta Conservation Program Modeling, June 20, 2014	5-svwu_102.pdf
6	MBK Technical Comments on the Bay Delta Conservation Plan/California Water Fix Partially Recirculated Draft EIR/Supplemental Draft EIS, October 28, 2015	6-svwu_103.pdf
7	MBK Technical Comments on Coordinated Long-Term Operation of the Central Valley Project and State Water Project Draft Environmental Impact Statement, September 29, 2015	7-svwu_104.pdf
8	Testimony of Dan Easton	8-svwu_105.pdf
9	Statement of Qualifications for Dan Easton	9-svwu_106.pdf
10	MBK California WaterFix Modeling Review, August 30, 2016	10-svwu_107.pdf
11	MBK Technical Memorandum with example 2-year injury	11-svwu_108.pdf
12	MBK Technical Memorandum regarding B1, H3, and H4 scenarios	12-svwu_109.pdf
13	Walter Bourez Powerpoint Presentation	13-svwu_110.pdf
14	SVWU Opening Statement	14-svwu_opening_statement
15	Excerpt from Hearing Transcript Vol. 4, Part 1A: SVWU Cross	15-

	of Overview Panel.	svwu_overview_cross.pdf
16	Excerpt from Hearing Transcript Vol. 5, Part 1A: SVWU Re-Cross of Overview Panel.	16-svwu_overview_recross.pdf
17	Excerpt from Hearing Transcript Vol. 6, Part 1A: SVWU Cross of Engineering Panel.	17-svwu_engineering_cross.pdf
18	Excerpt from Hearing Transcript Vol. 8, Part 1A: SVWU Cross of Operations Panel.	18-svwu_operations_cross.pdf
19	Excerpt from Hearing Transcript Vol. 13, Part 1A: SVWU Cross of Modeling Panel 1.	19-svwu_modeling_cross1.pdf
20	Excerpt from Hearing Transcript Vol. 14, Part 1A: SVWU Cross of Modeling Panel 2.	20-svwu_modeling_cross2.pdf
21	Excerpt from Hearing Transcript Vol. 17, Part 1A: SVWU Cross of Water Rights Panel.	21-svwu_wtr rts_cross.pdf
22	Excerpt from Hearing Transcript Vol. 20, Part 1B: SVWU Direct Testimony	22-svwu__direct_10-20.pdf
23	Excerpt from Hearing Transcript Vol. 20, Part 1B: Cross Examination of SVWU 1	23-svwu_cross_10-20.pdf
24	Excerpt from Hearing Transcript Vol. 21, Part 1B: Cross Examination of SVWU 2	24-svwu_cross_10-21.pdf
25	Excerpt from Hearing Transcript Vol. 21, Part 1B: Re-Direct of SVWU	25-svwu_re_direct_10-21.pdf
26	Excerpt from Hearing Transcript Vol. 21, Part 1B: Re-Cross of SVWU	26-svwu_recross_10-21.pdf
Sacramento Valley Group		
1	Sacramento Valley Group Protest	1-svg_protest.pdf
2	Testimony of Marc Van Camp	2-svg_01_001.pdf
3	Statement of Qualifications of Marc Van Camp	3-svg_01_002.pdf
4	Settlement Contract between the United States and Carter Mutual Water Company, 14-06-200-2401A-R-1, March 31, 2005.	4-svg_02_028.pdf

5	Settlement Contract between the United States and Howald Farms, Inc, 14-06-200-1042A-R-1, March 18, 2005.	5-svg_03_001.pdf
6	Settlement Contract between the United States and Maxwell Irrigation District, 14-06-200-6078A-R-1, March 4, 2005.	6-svg_04_056.pdf
7	Settlement Contract between the United States and Meridian Farms Water Company 14-06-200-838A-R-1, February 28, 2005.	7-svg_05_013.pdf
8	Settlement Contract between the United States and Natomas Central Mutual Water Company, 14-06-200-885A-R-1, May 10, 2005.	8-svg_06_059.pdf
9	Settlement Contract between the United States and Oji Brothers Farm, Inc., 14-06-200-3753A-R-1, March 4, 2005.	9-svg_07_022.pdf
10	Settlement Contract between the United States and Oji Family Partnership, 4-06-200-2427A-R-1, March 4, 2005.	10-svg_08_017.pdf
11	Settlement Contract between the United States and Pelger Mutual Water Company, 14-06-200-2073A-R-1, February 28, 2005.	11-svg_09_019.pdf
12	Settlement Contract between the United States and Pleasant-Grove Verona Mutual Water Company, 14-06-200-5520A-R-1, February 28, 2005.	12-svg_10_097.pdf
13	Settlement Contract between the United States and Princeton Codora-Glenn Irrigation District, 14-06-200-849A-R-1, March 4, 2005.	13-svg_11_031.pdf
14	Settlement Contract between the United States and Provident Irrigation District, 14-06-200-856A-R-1, March 4, 2005.	14-svg_12_049.pdf
15	Settlement Contract between the United States and Reclamation District 108, 14-06-200-876A-R-1, February 28, 2005.	15-svg_13_079.pdf
16	Settlement Contract between the United States and Henry D. Richter, et al., 14-06-200-4362A-R-1, March 9, 2005.	16-svg_14_023.pdf
17	Settlement Contract between the United States and River Garden Farms Company, 14-06-200-878A-R-1, February 28, 2005.	17-svg_15_036.pdf

18	Settlement Contract between the United States and Sutter Mutual Water Company, 14-06-200-815A-R-1, March 2, 2005.	18-svg_16_104.pdf
19	Settlement Contract between the United States and Tisdale Irrigation and Drainage Company, 14-06-200-2781A-R-1, April 4, 2005.	19-svg_17_015.pdf
20	Settlement Contract between the United States and Windswept Land and Livestock Company, 14-06-200-2045A-R-1, April 7, 2006.	20-svg_18_008.pdf
21	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2010)	21-svg_19_001.pdf
22	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2011)	22-svg_19_002.pdf
23	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2012)	23-svg_19_003.pdf
24	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2013)	24-svg_19_004.pdf
25	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2014)	25-svg_19_005.pdf
26	Reclamation Report of Monthly Sacramento River Deliveries (Long-Term Contracts) Table 28 (2015)	26-svg_19_006.pdf
27	Agreement between Department of Water Resources and the Joint Water Districts Board on Diversion of Water from the Feather River, May 27, 1969	27-svg_20_072.pdf
28	Joint Water Districts Board Hydrology Report, 2015	28-svg_20_073.pdf
29	Long-Term Renewal Contract between the United States and El Dorado Irrigation District Providing for Project Water Service from the American River Division, 14-06-1357A-LTR1, February 28, 2006.	29-svg_22_180.pdf
30	Draft Long-Term Renewal Contract between the United States and Sacramento Municipal Utility District Providing for Project Water Service from the American River Division, 14-06-200-5198A-LTR1, October 18, 2012	30-svg_23_062.pdf

31	Interim Renewal Contract between the United States and Sacramento Municipal Utility District Providing for Project Water Service from the American River Division, 14-06-200-5198A-IR2	31-svg_23_063.pdf
32	American River Contractors, CVP Deliveries, 2002-2014	32-svg_24_001.pdf
33	Bay-Delta Settlement Agreement with SSWD and DWR	33-svg_25_037.pdf
34	Excerpt from Hearing Transcript Vol. 21, Part 1B: SVG Direct Testimony	34-svg__direct_10-21.pdf
35	Excerpt from Hearing Transcript Vol. 21, Part 1B: Cross Examination of SVG	35-svg_cross_10-21.pdf
Placer County Water Agency		
1	Testimony of Einar Maisch	pcwa_20.pdf
Glenn-Colusa Irrigation District		
1	Testimony of Thaddeus Bettner	gcid_2.pdf
Biggs-West Gridley Water District		
1	Testimony of Eugene Massa	bwgwd_1.pdf
Joint Water Districts		
1	Testimony of Donnie Stinnett on Behalf of Richvale Irrigation District, Butte Water District, Sutter Extension Water District and Biggs-West Gridley Water District	MLF-40.pdf
City of Sacramento		
1	Written Testimony of James Peifer	citysac-1.pdf
2	Statement of Qualifications of James Peifer	citysac-2.pdf
3	PowerPoint Overview of James Peifer Testimony	citysac-3.pdf
4	Written Testimony of Brett Ewart	citysac-4.pdf
5	Statement of Qualifications of Brett Ewart	citysac-5.pdf
6	Statement of Qualifications of Pravani Vandeyar	citysac-7.pdf

7	Statement of Qualifications of Bonny L. Starr	citysac-9.pdf
8	PowerPoint Overview of Bonny L. Starr Testimony	citysac-10.pdf
9	Pre-1914 Appropriative Right (Statement S014834)	citysac-11.pdf
10	Appropriative Permit No. 992	citysac-12.pdf
11	Appropriative Permit No. 11358	citysac-13.pdf
12	Appropriative Permit No. 11361	citysac-14.pdf
13	Appropriative Permit No. 11359	citysac-15.pdf
14	Appropriative Permit No. 11360	citysac-16.pdf
15	Operating Contract dated June 28, 1957 between Bureau of Reclamation and the City of Sacramento	citysac-17.pdf
16	Map of the City of Sacramento's Places of Use	citysac-18.pdf
17	Carollo Report entitled *Evaluation of Pump Intakes for Drought Conditions,* dated January 2016	citysac-22.pdf
18	CBEC Memorandum entitled *Sacramento River Low Flow Modeling at SRWTP Intake,* dated February 12, 2016	citysac-23.pdf
19	CBEC Memorandum entitled *American River Low Flow Modeling at EAFWTP Intake,* dated February 15, 2016	citysac-24.pdf
Department of Water Resources		
1	Project Overview PowerPoint errata corrected	dwr_1e corrected.pdf
2	Engineering PowerPoint errata	dwr_2e.pdf
3	Water Rights PowerPoint	dwr_3.pdf
4	Operations PowerPoint errata	dwr_4e.pdf
5	Modeling PowerPoint errata	dwr_5e.pdf
6	Written Testimony- Jennifer Pierre	dwr_51.pdf
7	Written Testimony - Maureen Sergent	dwr_53.pdf
8	Written Testimony- John Bednarski	dwr_57.pdf
9	Written Testimony- John Leahigh	dwr_61.pdf
10	Written Testimony - Parviz Nader-Tehrani	dwr_66.pdf
11	Written Testimony- Armin Munévar	dwr_71.pdf
12	Alternatives Comparison	dwr_114.pdf
13	Delta Habitat Conservation & Conveyance Program - Conceptual Engineering Report, Volume 1	dwr_212.pdf

14	CWF Petition Information for Regulation	dwr_324.pdf
15	CalSim II Modeling Results	dwr_514.pdf
16	Modeling Assumptions Table	dwr_515.pdf
Bureau of Reclamation		
1	Written Testimony of Ray Sahlberg	doi_4.pdf
2	PowerPoint Presentation for Ray Sahlberg Testimony	doi_5 errata.pdf
3	Written Testimony of Ron Milligan	doi_7.pdf
4	Contract Between United States and Maxwell Irrigation District (Sacramento River Settlement Contract - District Form) - Sample	doi_11.pdf
5	14-06-200-4816A LA City of Folsom Hatch & Parent Transfer of Rights 8-16-1996	doi_23.pdf
6	14-06-200-4816A LA2 City of Folsom SoCalEdison Transfer of Rights 9-10-1996	doi_24.pdf
7	14-06-200-5515A City of Folsom Water Rights 6-22-1971	doi_25.pdf
8	14-06-200-6497 City of Sacramento	doi_26.pdf
9	Oakdale ID SSJID 1988 8-07-20-W0714 Aug.30.1988 New Melones Ops	doi_27.pdf