



State Water Resources Control Board

February 6, 2018

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CALIFORNIA WATERFIX HEARING – RULING ON MOTIONS FOR CONTINUANCE

This ruling addresses the outstanding motions for continuance of Part 2 of the hearing in this matter.

On January 12, 2018, Save the California Delta Alliance (SCDA) moved for a continuance of the hearing while the hearing officers address alleged ex parte communications between State Water Resources Control Board (State Water Board or Board) staff and staff and consultants of the Department of Water Resources (hereafter, DWR staff).¹ Deirdre Des Jardins with California Water Research joined the motion in part and added a motion for a “partial conversion” of the proceeding.² Ms. Des Jardins also submitted a separate motion for continuance on January 28, 2018, on grounds similar to those included in SCDA’s motion. On January 15, 2018, County of Sacramento, Sacramento County Water Agency, County of San Joaquin, City of Stockton, Sacramento Regional County Sanitation District, City of Antioch (Antioch), and Local Agencies of the North Delta filed a request for stay or continuance of the hearing pending the production of public records, formal discovery, and a hearing to address the alleged ex parte contacts between State Water Board staff and DWR staff. The request was joined by numerous parties.³ On January 19, 2018, DWR submitted a consolidated opposition to SCDA, et al.’s, and County of Sacramento, et al.’s respective motions for continuance. On February 5, 2018, we received a motion from Patrick Porgans seeking a

¹ South Delta Water Agency and the California Sportfishing Protection Alliance (CSPA) joined the motion. We refer to these moving parties in this ruling collectively as SCDA, et al.

² Restore the Delta, the CSPA, California Water Impact Network (CWIN), AquAlliance, Friends of the River, and Sierra Club California joined Ms. Des Jardins’ motion for partial conversion.

³ The joining parties are: the CSPA, CWIN, and AquAlliance; County of Yolo; Contra Costa County, Contra Costa County Water Agency, and Solano County; South Delta Water Agency, Central Delta Water Agency, Lafayette Ranch, Heritage Lands, Mark Bachetti Farms and Rudy Mussi Investments L.P.; Carter Mutual Water Company, El Dorado Irrigation District, El Dorado Water & Power Authority, Howald Farms, Inc., Maxwell Irrigation District, Natomas Central Mutual Water Company, Meridian Farms Water Company, Oji Brothers Farm, Inc., Oji Family Partnership, Pelger Mutual Water Company, Pleasant-Grove Verona Mutual Water Co., Princeton-Codora-Glenn Irrigation District, Provident Irrigation District, Reclamation District 108, Sacramento Municipal Utility District, Henry D. Richter, et al., River Garden Farms Company, South Sutter Water District, Sutter Extension Water District, Sutter Mutual Water Company, Tisdale Irrigation and Drainage Company, Windswept Land and Livestock Company, North Delta Water Agency, Reclamation District 999, Reclamation District 2060, Reclamation District 2068, Brannan-Andrus Levee Maintenance District, Reclamation District 407, Reclamation District 2067, Reclamation District 317, Reclamation District 551, Reclamation District 563, Reclamation District 150, Reclamation District 2098, Reclamation District 800 (Byron Tract), and Tehama-Colusa Canal Authority and its member districts; Friends of the River and Sierra Club California; Pacific Coast Federation of Fisheries’ Associations and Institute for Fisheries Resources; and Ms. Des Jardins. We refer to these moving parties in this ruling collectively as County of Sacramento, et al.

continuance and entry of alleged ex parte communications into the record on grounds substantially similar to those raised in SCDA, et al.'s motion.

On January 25, 2018, Antioch submitted a separate motion for continuance in which it urged: (1) re-opening Part 1 based on changes to the proposed operational scenario for the WaterFix Project and (2) continuing Part 2 based on reports that DWR and the U.S. Bureau of Reclamation (collectively, Petitioners) are considering modifying the proposed project to comprise one tunnel rather than two.⁴ DWR opposed Antioch et al.'s motion on January 30, 2018. On January 31, 2018, the Natural Resources Defense Council, Defenders of Wildlife, and The Bay Institute (collectively, NRDC, et al.) filed a motion to continue Part 2 based on similar reports that Petitioners were considering a one-tunnel proposal.⁵

On January 17 and 31, 2018, we directed hearing team staff to cancel hearing days prior to February 8, 2018, to give us time to review the procedural motions addressed by this ruling. We have now independently reviewed the motions, joinders, oppositions, and supporting materials.

For the reasons discussed below, we find that no changes to the WaterFix project have been proposed that would warrant re-opening Part 1 or staying Part 2 at this time. Further, we find that the communications between State Water Board staff and DWR staff that are the subject of the motions either concerned non-controversial, procedural issues or were properly limited in scope to California Environmental Quality Act (CEQA) consultation between lead agency and responsible agency to ensure analysis of an adequate range of alternatives. We find that those communications did not violate the law prohibiting ex parte contacts, nor are the communications evidence of an unacceptable risk of bias that would warrant disqualification of hearing team members or the decision-makers in this proceeding. Finally, the possibility that grounds for a stay or other procedural steps could be found in responses to pending Public Records Act (PRA) requests does not justify granting a stay now. Therefore, all motions addressed by this ruling are denied.

MOTIONS FOR CONTINUANCE BASED ON CHANGES TO THE PROPOSED PROJECT

1. No Modification Has Been Proposed That Would Warrant a Continuance

Based on reports that Petitioners are in negotiations that could result in a modification of the proposed WaterFix project to consist of one tunnel rather than two, Antioch, et al., argue that a stay is warranted until Petitioners (1) "fully commit" to either two tunnels or one; and (2) if the latter, fully analyze and model the impacts of the one-tunnel project. NRDC, et al., similarly argue that a project that delays construction of one of the proposed intakes for an unspecified amount of time would necessarily result in distinct impacts compared to the three-intake, two-tunnel project currently proposed by DWR. Neither moving party provides support for its assertion that DWR now "intends" to switch to a

⁴ Local Agencies of the North Delta, Bogle Vineyards / Delta Watershed Landowner Coalition, Diablo Vineyards and Brad Lange / Delta Watershed Landowner Coalition, Stillwater Orchards / Delta Watershed Landowner Coalition, County of San Joaquin, San Joaquin County Flood Control and Water Conservation District, Mokelumne River Water and Power Authority, City of Stockton, South Delta Water Agency, Central Delta Water Agency, Lafayette Ranch, Heritage Lands, Mark Bachetti Farms, Rudy Mussi Investments, L.P., CSPA, CWIN, AquAlliance, Sacramento Regional County Sanitation District, Friends of the River, Sierra Club California, Contra Costa County, Contra Costa County Water Agency, Solano County, City of Folsom, City of Roseville, San Juan Water District, and Sacramento Suburban Water District joined in Antioch's motion. We refer to Antioch and these moving parties collectively as Antioch, et al., in this ruling.

⁵ Restore the Delta, CSPA, CWIN, and AquAlliance joined NRDC, et. al.'s motion.

one-tunnel project. DWR's opposition to Antioch, et al.'s motion argues that a continuance is unnecessary because DWR has not altered its water right change petition and DWR continues to seek authorization to divert up to 3,000 cubic feet per second at each of three new points of diversion identified in the petition.

News reports that Petitioners are *considering* a modification to the project do not constitute good cause to halt all consideration of the change petition currently before us. At this time, it is uncertain whether Petitioners will be modifying the proposed WaterFix project, and if so, how. Petitioners have not communicated any such commitment or intent to the State Water Board. Furthermore, it is speculative to conclude that any potential modifications being discussed necessarily would render moot the continued consideration of Petitioners' change petition.

We direct Petitioners to update us and the parties if and when they decide to modify the proposed WaterFix project. At that time, it may be necessary for us to solicit input from the parties as to whether such modifications necessitate an amended change petition or new or supplemental CEQA analysis. Until that time, however, we will proceed with consideration of the water right change petition that is now before us.

2. Re-opening Part 1 is Unwarranted at This Time

Antioch, et al., also urge us to re-open Part 1 because of the introduction of proposed operating scenario H3+ by Petitioners. Based on consultation with the federal fish agencies under section 7 of the Endangered Species Act, Petitioners revised the proposed operating scenario for WaterFix compared to the range of operating scenarios between H3 and H4, which formed the basis for Part 1 of this hearing. Antioch, et al., argue that these changes sufficiently alter the analysis of injury to legal users of water such that Part 1 should be re-opened and its key hearing issues reconsidered. In its opposition, DWR counters that the Biological Opinions that formed the basis of H3+ have been available for six months, and that this hearing's procedures provide sufficient opportunity for Antioch, et al., to introduce evidence on Part 1 issues based on H3+.

We acknowledge that Petitioners' proposed operational scenario H3+ differs in some important respects from operational scenarios in the range between H3 and H4. Given the number and timing of regulatory approvals required for the WaterFix project, we anticipated early in this water right hearing that the proposed project may be refined or even altered based on the requirements of other agencies with approval authority over the project. For that reason, our prior rulings have allowed some procedural flexibility in this water right hearing to accommodate new information and pertinent regulatory developments.

Our November 8, 2017 ruling provides that cross-examining parties may question a Part 2 witness on Part 1 issues so long as the line of questioning directly relates to the witness's direct testimony in Part 2. For example, the written testimony of multiple Part 2 witnesses for DWR describes the development and some details of operational scenario H3+, including how it differs from the No Action Alternative and from operational scenarios H3 and H4. Therefore, cross-examining parties may question those DWR witnesses regarding injury to legal users of water that may stem from the potential impacts of operational scenario H3+. Additionally, parties will have the opportunity during the rebuttal phase of Part 2 to introduce their own testimony and supporting exhibits on Part 1 issues if they are in direct response to another party's Part 2 case-in-chief. Finally, after the close of Part 2 but before we close the evidentiary hearing, we will consider requests to introduce evidence revisiting Part 1 issues to the extent that there was no opportunity to present such evidence at an earlier stage

of the hearing. Thus, under our prior rulings, cross-examination, rebuttal, and the above-described procedure after the conclusion of Part 2 are sufficient to ensure that Antioch, et al., will have ample opportunity during this hearing to present evidence on Part 1 issues without the need to re-open Part 1 at this stage in the proceeding.

Parties that anticipate raising Part 1 issues in response to case-in-chief testimony in Part 2 should bear in mind that comparisons between a without-project scenario and a post-project scenario are likely to be most relevant and productive for assessing injury to legal users. It is questionable whether comparisons between two operational scenarios, neither of which represents a without-project scenario (e.g., a comparison between H3 and H3+), would be useful for informing our understanding of potential injury to legal users from the proposed project.

MOTIONS FOR CONTINUANCE BASED ON ALLEGED EX PARTE CONTACTS

The motions filed on January 12, January 15, and January 28, 2018, allege that State Water Board staff engaged in unlawful ex parte contacts with DWR staff. The moving parties argue that such contacts demonstrate bias in favor of DWR and placed substantive discussions regarding the pending change petition beyond public view. SCDA, et al., seek a continuance to allow a “reformation hearing” to consider, among other suggestions, disqualifying the hearing officers and hearing team and replacing them with an administrative law judge. County of Sacramento, et al., seek to continue Part 2 of the hearing pending further investigation of the alleged ex parte communications.

The allegations in these motions are serious, and as the decision-makers responsible for upholding the integrity of these proceedings, we have considered them carefully. We have reviewed the documents produced in response to the requests for public records submitted by Patrick Porgans and Michael Brodsky. Additionally, we requested that staff provide detailed declarations recounting the time, date, and location of meetings with DWR staff; the nature of the meetings; and the subject matters discussed. Our ruling is based upon thorough consideration of the pertinent motions, joinders and oppositions, the documents produced, and the declarations by Dana Heinrich, Diane Riddle, and Kyle Ochenduszkowski, attached hereto as Attachments A, B, and C, respectively.

1. Background Concerning the CEQA Consultation Process

The preparation of environmental documentation for the WaterFix Project pursuant to CEQA was the subject of nearly all of the meetings and related communications identified as of concern in the motions before us.⁶ Under CEQA, the State Water Board has legal obligations as a responsible agency. (Pub. Res. Code, § 21069; 14 Cal Code Regs., § 15096.) The State Water Board must “respond to consultation by the lead agency in order to assist the lead agency in preparing adequate environmental documents for the project,” and “attend meetings requested by the lead agency to discuss the scope and content of the [Environmental Impact Report (EIR)].” (14 Cal. Code Regs., § 15096, subd. (b).) The meetings that occurred after DWR filed its petition were narrowly focused on refinement of a high-outflow operational scenario for the WaterFix Project that was necessary to provide a broader range of alternatives in the EIR.

⁶ Several communications identified in the motions that occurred were related to non-controversial procedural matters regarding the adequacy of the maps filed with the petition and the service list of interested persons for circulation of the Hearing Notice. These communications are addressed in Section 5, below.

Consultation between State Water Board staff and DWR staff regarding a high-outflow alternative began nearly a decade ago, during the development of the draft environmental impact report for the Bay-Delta Conservation Plan (BDCP). (Declaration of D. Riddle, ¶ 4.) BDCP included the water conveyance facilities that now comprise the WaterFix Project. As detailed in Attachment B (Declaration of D. Riddle), State Water Board staff commented repeatedly and publicly on the need for evaluation of an alternative that would provide greater protection to the Sacramento-San Joaquin Delta Estuary (Delta) by increasing Delta outflows without reducing storage in State Water Project (SWP) and Central Valley Project (CVP) reservoirs in a manner that could adversely affect fish habitat in Delta tributaries. (Declaration of D. Riddle, ¶¶ 4-14.) In these discussions, State Water Board staff were not advocating a high Delta outflow alternative; staff were acting in furtherance of the Board's duty as a responsible agency to identify the "reasonable alternatives and mitigation measures that the [State Water Board] will need to have explored in the draft EIR." (14 Cal. Code Regs., § 15082, subd. (b).) Evaluation of a high-outflow alternative in the EIR was necessary to inform the Board's discretionary decision whether and under what conditions to approve the change petition for the WaterFix Project consistent with the Delta Reform Act, the public trust doctrine, and other legal requirements. (Declaration of D. Heinrich, ¶¶ 5-6; see also Cal. Code Regs., § 15096, subd. (b) [A responsible agency must identify the "environmental information which would be germane to the responsible agency's statutory responsibilities in connection with the proposed project."].)

In the 2013 draft EIR for BDCP, DWR evaluated a high-outflow alternative (Alternative 8) as requested by State Water Board staff. Alternative 8 included operational criteria to achieve significant increases in modeled outflow compared to DWR's preferred alternative, but the model output showed decreases in storage in upstream reservoirs and corresponding flow and temperature impacts to aquatic resources. Alternative 8 did not evaluate the extent to which higher Delta outflows could be achieved without adversely affecting fishery resources upstream. To address this gap, State Water Board staff continued to meet with DWR staff to model a revised operational scenario. This effort resulted in the SWRCB staff scenario in Appendix C to the Revised Draft EIR that was released by DWR in July 2015. This scenario did not, however, fully optimize benefits to the Delta ecosystem while protecting upstream fisheries, because the release date for the revised draft precluded further refinement as requested by State Water Board staff. (Declaration of D. Riddle, ¶¶ 7-12.)

State Water Board staff continued to consult with DWR staff after the close of the comment period on the revised draft EIR in meetings held by phone, digital conference, and in-person. The meetings took place on January 4, 2016; January 25, 2016; April 21, 2016; May 26, 2016; June 16, 2016; July 14, 2016; and October 4, 2016 (this ruling hereafter refers to these meetings as the CEQA meetings). The purpose of the CEQA meetings and related communications was to refine the operational scenario requested by State Water Board staff to fully optimize increased Delta outflow while maintaining sufficient storage to avoid temperature and flow impacts to fishery resources. During the meetings, consultants for DWR presented modeling results and State Water Board staff requested alterations to the modeling inputs in an iterative process that ultimately culminated in the supplemental model run described as Scenario 2 in Appendix 5E. The meeting participants also discussed the appropriate scope and specificity of the environmental impacts analysis for Scenario 2 to be included in the final EIR based on the impacts analyses for alternatives that were already included in the revised draft EIR. DWR issued the final EIR for the WaterFix Project in December of 2016 and certified the final EIR on July 21, 2017.

2. The Contacts at Issue Were Not Unlawful Ex Parte Communications

SCDA, et al., and County of Sacramento, et al., assert that the contacts between State Water Board staff and DWR staff identified in their motions violated the prohibition on ex parte communications applicable to this proceeding. We conclude otherwise.

The procedures applicable to this water right hearing include Chapter 4.5 of the Administrative Procedure Act (commencing with section 11400 of the Government Code, hereafter APA), with exceptions enumerated in California Code of Regulations, title 23, section 648. Chapter 4.5 of the APA prohibits, while a proceeding is pending, “communication, direct or indirect, regarding any issue in the proceeding, to the presiding officer ... without notice and opportunity for all parties to participate in the communication.” (Gov. Code, § 11430.10, subd. (a).) The Act provides an exception for communications concerning procedural matters that are not in controversy, and a limited exception for communications from an employee or representative of an agency to assist and advise the presiding officer. (Gov. Code, § 11430.30.)

A communication from a party to State Water Board staff, alone, does not meet the legal definition of an ex parte communication. The APA prohibition on ex parte communications applies to a “communication, direct or indirect ... to the *presiding officer*” (Gov. Code, § 11430.10, subd. (a) [emphasis added].) The APA “does not prohibit ex parte contacts with adjudicatory advisers unless such contacts are part of an indirect attempt to influence the adjudicators.” (Michael Asimow, *The Influence of the Federal Administrative Procedure Act on California's New Administrative Procedure Act*, 32 Tulsa L.J. 297, 323 n. 99 (1996).) State Water Board staff who participated in the CEQA meetings are not presiding officers and therefore are not subject to the prohibition on ex parte communications under the APA.

Further, the declarations by State Water Board staff show that staff exercised care to avoid relaying to the hearing officers or to any other member of the State Water Board any information discussed with or received from DWR staff, and to the knowledge of the declarants, no such indirect communication took place. (Declaration, D. Heinrich, ¶ 18; Declaration of D. Riddle, ¶ 17; Declaration of K. Ochendusko, ¶ 11.) We add on our own behalf that, based on our recollection, no such information was relayed to us through any means. Based on the evidence before us, we conclude that no off-the-record information was indirectly passed by State Water Board staff from DWR to us or to any other member of the State Water Board.

The County of Sacramento, et al., cite *Department of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Board*, (2016) 40 Cal.4th 1, (hereafter, *Quintanar*) for the proposition that the prohibition on ex parte contacts under the APA extends to communications with members of the advisory team. We find the case to be inapplicable. First, the court was concerned in *Quintanar* with indirect communications to the decision maker through the advisor, a fact that – unlike here – was established in that case. (*Id.* at 16; see also *Rondon v. Alcoholic Beverage Control Appeals Bd.* (2007) 151 Cal.App.4th 1274, 1288 [court assumed that the decisionmaker had access to the offending communication].) The court noted in its analysis that “nothing in the APA contemplates permitting an agency to accomplish through secondhand communications what is forbidden through

firsthand communications.” (*Id.* at 10, n. 8.) Unlike in *Quintanar*, no party has established that such indirect communication occurred in this proceeding.⁷

We also note that the ban on *ex parte* communications is unidirectional, prohibiting communications *to* a presiding officer, but not communications *from* a presiding officer. (Gov. Code, § 11430.10, Law Rev. Comm'n Comment.) The bulk of communications at issue here appear to have been from State Water Board staff to DWR's modeling consultants requesting modeling input changes. Though advisers to a decision-maker providing substantive advice to the parties to a proceeding may raise fundamental fairness concerns – which we address in further detail in section 3, and which was not the circumstance in this case – that practice would not violate the prohibition on *ex parte* communications. (Gov. Code, § 11430.10, Law Rev. Comm'n Comment [“[A] presiding officer should give assistance or advice with caution, since there may be an appearance of unfairness if assistance or advice is given to some parties but not others.”].)

3. Due Process Considerations

SCDA, et al., and County of Sacramento, et al., argue that the communications between State Water Board staff and DWR staff suggest a level of bias that raises due process concerns. We reject these arguments on several bases. First, State Water Board staff did not assist DWR in the presentation of its case and the substance of the discussions that occurred does not show a preference for or against any party. Second, the use of the same staff in carrying out the Board's duties as a responsible agency under CEQA and in advising the hearing officers in this proceeding was appropriate, and not evidence of an unacceptable risk of bias. Finally, the CEQA analysis that was the subject of the communications has been offered into evidence, and the Board's decision in this proceeding will be based exclusively on the administrative record.

A fair hearing before an impartial tribunal is a basic due process requirement. (*Morongo Band of Mission Indians v. State Water Resources Control Bd.* (2009) 45 Cal.4th 731, 737.) The decision-maker must be free from bias, and must render a decision based on the evidence in the record. The APA codifies these general principles in application to adjudicatory hearings. (Gov. Code, § 11425.40, subd. (a).) In the absence of a tangible financial or relationship interest, decision-makers are presumed to be impartial. The presumption of impartiality can be overcome only by specific evidence demonstrating actual bias or a combination of circumstances creating an unacceptable risk of bias. (*Morongo Band of Mission Indians v. State Water Resources Control Bd.*, *supra*, 45 Cal.4th at pp. 737, 741-742; *Withrow v. Larkin*, 421 U.S. 35, 47.) “Bias and prejudice are not implied and must be clearly established. A party's unilateral perception of bias cannot alone serve as a basis for disqualification ... The challenge to the fairness of the adjudicator must set forth concrete facts demonstrating bias or prejudice.” (*State Water Res. Control Bd. Cases* (2006) 136 Cal. App. 4th 674, 840-41 [internal citation omitted].)

a. State Water Board Staff Did Not Assist DWR

Based on our independent consideration of the materials pertinent to the motions, we conclude that the sole purpose of the CEQA meetings was to ensure that the final EIR developed by DWR included an appropriate range of operational scenarios such that the Board's decision on the petition – whether

⁷ *Quintanar* also is distinguishable because it involved communications from the prosecutor in an enforcement proceeding who was advocating for a particular result. In contrast, the CEQA discussions at issue in this proceeding were fundamentally different from the type of partisan, off-the-record advocacy that the court found offensive in *Quintanar*.

it be to deny, approve, or approve with conditions – would fall within the scope of the environmental document. The need for a CEQA analysis of a broad range of alternatives for the State Water Board's consideration is not a new issue. As summarized above, this issue has been raised by State Water Board staff numerous times in public comments over the course of more than a decade. Moreover, the declarations make clear that neither DWR staff nor State Water Board staff discussed any aspect of DWR's participation in this water right hearing during the CEQA meetings or in any other communication. (See Declaration, D. Heinrich, ¶¶ 18-20; Declaration, D. Riddle, ¶¶ 16-17; Declaration, K. Ochendusko, ¶ 11.) The subject matter of the discussions was strictly limited to refinement of the high-outflow operational scenario and the scope of the associated impacts analysis. Insofar as CEQA directs the State Water Board as a responsible agency to assist in the preparation of an adequate environmental document, the meetings cannot constitute evidence of bias. State Water Board staff did not decide to assist DWR with the development of its EIR; staff were compelled to do so by law. Favoritism played no part in the matter.

SCDA, et al., and County of Sacramento, et al., characterize the CEQA meetings as assistance by State Water Board staff in the development of evidence for submission into the record for this proceeding, but we find no evidence of intent by State Water Board staff to use the CEQA meetings to assist DWR with the presentation of its case. State Water Board staff did not suggest presentation of a "boundary analysis" of potential operating criteria ranging from Boundary 1 to Boundary 2, nor did State Water Board staff advise or direct DWR to revise Appendix 5E of the EIR to include Boundary 1 and Boundary 2. (See Declaration, D. Heinrich, ¶¶ 18-19; Declaration, D. Riddle, ¶¶ 15-16.) The only scenario modeled at the request of State Water Board staff was Scenario 2. The inclusion of Boundary 2 in the petitioners' case-in-chief was a decision made without input from State Water Board staff, who had no advance knowledge of DWR's intent to incorporate the Boundary 2 scenario into its case-in-chief. (Declaration, D. Heinrich, ¶ 19; Declaration, D. Riddle, ¶ 16; Declaration, K. Ochendusko, ¶ 10.) In short, there is no evidence that State Water Board staff assisted DWR with the presentation of its case-in-chief or that staff are biased in DWR's favor.

As a practical matter, the refinement of a high-outflow alternative and its inclusion in the EIR no more assists DWR than it assists many of the protestants to this proceeding who are advocating in support of higher Delta outflows. Furthermore, this is not a binary proceeding in which the State Water Board has just two choices: approve or deny the petition as proposed. Rather, as with all water right change petitions, the Board has the discretion to impose a spectrum of conditions as necessary to make the statutory findings to support approval, should it be warranted. In this case, the Delta Reform Act of 2009 also requires the State Water Board to consider the Delta flow criteria previously developed by the Board and to include "appropriate Delta flow criteria" as a condition of any approval of the change petition. (Wat. Code, § 85086, subd. (c)(2).) The analysis of alternatives and potential environmental impacts in the WaterFix Project EIR will, of course, inform the State Water Board's decision on the petition before us. That is the very purpose of the requirement for environmental documentation under CEQA. Staff's efforts to ensure that a full range of alternatives is presented to the Board for consideration is not evidence of bias in favor of any one of these options. The parties will have the opportunity during this proceeding to test and challenge the information in the EIR and advocate in support of the outcome that they believe is appropriate. The Board will exercise its discretion and expertise to determine whether and under what conditions to approve the petition based on the entire evidentiary record.

SCDA, et al., and County of Sacramento, et al., also point to the hearing officers' ruling of June 10, 2016, which denied a continuance of the hearing to allow parties time to review modeling produced by DWR, as evidence of bias when considered in the context of the CEQA meetings that occurred during the same time period. Again, we find no evidence of intent by State Water Board staff to assist DWR

in the presentation of evidence in this proceeding and the denial of the continuance does not add any weight to the analysis. Our ruling of June 10, 2016, was supported by our conclusion that there was no net benefit to allowing further delays in the start of the proceeding, and that staggering the submission of cases-in-chief already allowed the protestants additional time to review and challenge Petitioners' evidence.

b. Separation of Functions Was Not Required

SCDA, et al., and the County of Sacramento, et al., argue that the failure to maintain a separation of functions between the hearing team and staff performing the duties of a CEQA responsible agency presented an unacceptable risk of bias. The APA requires the separation of an agency's adjudicative function from its investigative, prosecutorial, and advocacy functions. (Gov. Code, § 11425.10, subd. (a)(4).) Due process requires similar separation in some prosecutorial proceedings, but "the due process clause does not mandate importation of the adversary trial model into the administrative context in all or even most cases." (*Today's Fresh Start, Inc. v. Los Angeles County Office of Edu.* (2013) 57 Cal.4th 197.)

The role of a CEQA responsible agency is fundamentally different from the role of a prosecutor or advocate. Staff who consulted with DWR concerning the adequacy of the EIR to fulfill the State Water Board's role as a responsible agency were not acting as advocates. Their objective was to ensure that an adequate range of alternatives was analyzed in the EIR to cover the range of alternatives available to the State Water Board in its decision on the petition. Staff did not advocate for any particular alternative, including the SWRCB staff scenario, or weigh in on the substantive conclusions in the environmental impact analysis. (Declaration D. Heinrich, ¶ 18; Declaration, D. Riddle, ¶ 17; Declaration, K. Ochendusko, ¶ 11.) Conversely, DWR staff did not advocate for the preferred project or any other outcome during the CEQA meetings. (*Ibid.*)

The argument also overreaches insofar as it demands complete isolation of staff who advise the Board in adjudicatory matters. Although establishing a separate "CEQA team" might have provided an additional degree of separation between DWR and the decision-makers, it would not have been practicable. It is simply not possible for an agency with specialized technical expertise to maintain multiple groups of experts on complex subject matter solely to accomplish that degree of separation. "Separation of functions must be defined and administered in ways that permit decisionmakers access to needed staff advice except in cases where the adviser has significant adversarial involvement ...;" and as discussed, CEQA consultation is not an adversarial or advocacy function. (Michael Asimow, *The Influence of the Federal Administrative Procedure Act on California's New Administrative Procedure Act*, 32 Tulsa L.J. 297, 323 (1996).) The APA explicitly allows State Water Board decision-makers to consult with expert agency staff in non-prosecutorial actions such as this. As noted by the Law Revision Commission, the complexity of matters before the Board "may as a practical matter make it impossible for an agency to adhere to the restrictions of this article [prohibiting ex parte communications], given limited staffing and personnel." (Law Rev. Comm'n Comments, Gov. Code, § 11430.30.)

The Bay-Delta watershed and operation of the SWP and CVP are complex and difficult subject matters, requiring years of experience to develop more than a rudimentary understanding of the system. The State Water Board staff who participated in the CEQA meetings have significant experience with Bay-Delta matters and are familiar with the history and environmental documentation for the WaterFix Project. These staff were selected by the Division of Water Rights and Office of Chief Counsel to represent the State Water Board in CEQA consultation for the WaterFix project because of that same experience and expertise. These staff were the best qualified to serve on the

hearing team for the change petition proceedings to provide technical and legal advice to the hearing officers. If strict separation between the hearing team and staff participating in CEQA consultation had been required, at least one of these teams would have had to rely on staff members with relatively little knowledge of the legal and scientific complexities involved.

SCDA, et al., and County of Sacramento, et al., advance the related argument that the members of the hearing team who participated in the CEQA meetings would have, by virtue of their participation in developing model inputs, become so entrenched as to the quality and weight of the modeling evidence that they will be unable to fairly advise the hearing officers as to the admissibility and weight of the EIR as evidence. Although we acknowledge the tendency of human nature to form an attachment to one's work, this argument is unpersuasive in this case. State Water Board staff did not develop the modeling relied upon in the EIR and Petitioners' case-in-chief. Staff were involved in the development of a single scenario that was relegated to an appendix. Moreover, evidence pertaining only to State Water Board staff is insufficient to overcome the presumption that we are impartial decision-makers; we and other Board Members had neither involvement nor knowledge of the technical details of the discussions that produced the modeled scenario.

c. The "Exclusive Record" Principle Has Been Maintained

County of Sacramento, et al., note, in passing, the discussion in the court's opinion in *Quintanar*, *supra*, 40 Cal.4th 1, of the "exclusive record" principle in relation to the prohibition on ex parte communications. Due process and the APA protect the exclusivity of the record as the basis on which a decision may be rendered. (Gov. Code, § 11425.10, subd. (a)(6).) In *Quintanar*, the court concluded that the Department of Alcoholic Beverage Control's (Department) practice in enforcement proceedings of allowing a prosecutor to submit confidential hearing reports to the decision-maker violated the APA's prohibition against ex parte communications and was procedurally unfair. (*Id.* at p. 4.) The court's conclusion rested in part on the Department's refusal to include the hearing reports in the record. (*Id.* at pp. 10-11.) Not only did the party who was the subject of the enforcement action not have the opportunity to respond to the information in the report, but the reviewing court did not have access to the report to determine whether it was "as innocuous as the Department portrays [it] to be." (*Id.* at p. 17.) The motions before us raise similar concerns about the exclusivity of the record, but unlike the Department in *Quintanar*, this concern will be addressed by the inclusion in the record of Appendix 5E, the copies of public records appended to the motions, and the declarations by State Water Board staff. As a result, the parties have the opportunity to review and respond to the operational scenario that was developed and refined through the CEQA meetings and any other information contained in these documents.

4. State Water Board Practice to Prevent Ex Parte Communications

As a matter of general practice, State Water Board staff avoid substantive communications between parties to a proceeding and members of the hearing team. This practice is precautionary; it reduces the risk that a member of the hearing team will inadvertently act as a conduit for information from outside parties to the hearing officers or other Board Members. Notwithstanding these precautionary practices, shielding the hearing team from all substantive communications with outside parties is not legally required. (See Ex Parte Communications Questions and Answers, April 25, 2013, Question 17, [noting that staff assigned to advise the Board are not ordinarily subject to the prohibition on ex parte communications].) As we have already discussed, such a rule may present serious practical problems when the subject matter of the proceeding is complex and pertinent expertise within the agency is scarce. In some circumstances, a limited exception to the Board's typical practice is a necessity.

Here, the State Water Board's legal duties as a responsible agency under CEQA and the timing of the development of DWR's CEQA documents relative to this hearing presented challenges that necessitated a departure from usual Board practice. If the State Water Board had ceased all consultation with DWR upon the filing of the petition, the Board risked the possibility that DWR would certify a CEQA document that did not cover the range of operational criteria that the Board needed to consider in carrying out its statutory responsibilities.

Rather than trying to assist Petitioners, State Water Board staff were properly working to avoid the risk to the Board of having to expend considerable time and expense to prepare a supplement to the EIR before the Board could act on the petition consistent with applicable legal mandates. Preparation of a CEQA supplement would have been inefficient and likely would have necessitated the very consultation with DWR staff to which the moving parties have objected here. We conclude that staff appropriately acted to avoid this situation by continuing to consult with DWR to produce an EIR that analyzed a broad enough range of alternatives to allow the State Water Board to make decision on the merits of the petition.

5. Non-Controversial Procedural Matters

A few of the communications identified by SCDA, et al., and County of Sacramento, et al., were directly related to these proceedings but addressed procedural matters and technical mapping questions that were not in controversy. (Declaration, D. Heinrich, ¶¶ 22-23; Declaration, K. Ochendusko, ¶ 6.) Discussion of non-controversial procedural matters is explicitly excluded from the APA's prohibition on ex parte contacts. (Gov. Code, § 11430.20, subd. (b); Michael Asimow, *Toward A New California Administrative Procedure Act: Adjudication Fundamentals*, 39 UCLA L. Rev. 1067, 1139-40 (1992) [noting that the format of pleadings, number of copies required, manner of service, and scheduling are typically not considered to be "at issue"].) These exchanges neither violated the prohibition on ex parte communications, nor are evidence of bias in favor of Petitioners. State Water Board staff have offered assistance on non-controversial procedural matters equally to all parties to this proceeding.

6. Pending Public Record Act Requests Do Not Justify a Stay of This Hearing

Several parties included requests in their motions that we stay this water right hearing until all responses to outstanding PRA requests are complete. Such a step is unnecessary. Any additional grounds for a stay or other procedural steps that responses to the pending PRA requests might reveal are speculative at this point. Therefore, granting a stay based on pending PRA requests would be premature. Also, PRA requests may be submitted at any time, and stopping this hearing whenever one is received based on conjecture concerning the responsive documents that could be disclosed would unduly disrupt the orderly administration of this proceeding.

CONCLUSION

For the foregoing reasons, we find that the motions addressed by this ruling have failed to demonstrate good cause for a continuance of the hearing. Hearing procedures under our prior rulings will accommodate consideration of Part 1 issues in light of H3+, and it would be premature to stay the hearing based on unconfirmed changes to the project. None of the communications identified by SCDA, et al., or County of Sacramento, et al., constituted prohibited ex parte communications under the APA, nor are the communications evidence of any unacceptable risk of bias on the part of State Water Board staff, the hearing officers, or the State Water Board. The communications were limited

in scope and State Water Board staff were diligent in their efforts to ensure that none of the information was relayed to the hearing officers or any other member of the State Water Board. For these reasons, the requests for a continuance and the requests for a separate hearing to address the alleged ex parte communications are denied, and the hearing shall resume on **February 8, 2018**.

If you have any non-controversial, procedural questions about this ruling or other matters related to the California WaterFix Hearing, please contact the hearing team at CWFhearing@waterboards.ca.gov or (916) 319-0960.

Sincerely,

ORIGINAL SIGNED BY

Felicia Marcus, State Water Board Chair
WaterFix Project Co-Hearing Officer

ORIGINAL SIGNED BY

Tam M. Doduc, State Water Board Member
WaterFix Project Co-Hearing Officer

Attachment

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ANDREW H. SAWYER, Assistant Chief Counsel (SBN 073580)
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6 Attorneys for the State Water Resources Control Board

7
8 **STATE WATER RESOURCES CONTROL BOARD**

9
10 IN THE MATTER OF EVIDENTIARY
HEARING REGARDING WATER RIGHT
11 CHANGE PETITION FOR THE
CALIFORNIA WATERFIX PROJECT

DECLARATION OF DANA HEINRICH

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13
14
15 **DECLARATION OF DANA HEINRICH**

16 I, Dana Heinrich, declare as follows:

- 17
18 1. I am an Attorney IV with the State Water Resources Control Board's (State Water Board)
19 Office of Chief Counsel (OCC). I received my J.D. from the University of California, Davis
20 in 1996. I have been a staff attorney with the State Water Board since December 10, 1996.
21 Since 1999, I have provided legal advice to the State Water Board Members, management,
22 and staff concerning the programs administered by the State Water Board's Division of Water
23 Rights. My responsibilities include providing legal assistance in administrative proceedings
24 concerning contested applications for new water right permits, petitions to change existing
25 water rights, enforcement against unauthorized water diversions, water quality certification of
26 hydroelectric facilities, and the development of policies for water quality control. Through
my experience, I have developed expertise in water right and water quality law, administrative

1 procedures, and the California Environmental Quality Act (CEQA). One of my areas of
2 expertise is the complex set of water right, water quality, and environmental laws that apply to
3 the diversion and use of water from the Sacramento-San Joaquin Delta Estuary (Delta).

- 4
- 5 2. In December of 2013, I was assigned to provide legal advice concerning the State Water
6 Board's regulatory requirements that were applicable to a habitat conservation plan called the
7 Bay Delta Conservation Plan (BDCP). In 2015, BDCP was divided into two separate efforts:
8 the WaterFix Project and California EcoRestore. When the project changed, I continued to
9 advise the Board with respect to the WaterFix Project. Based on my position and experience,
10 I have knowledge of the following:
- 11
- 12 3. The WaterFix Project would allow the Department of Water Resources (DWR) and the U.S.
13 Bureau of Reclamation (Reclamation) to divert water from the Sacramento River in the
14 northern Delta and convey it through two tunnels to the existing pumping facilities for the
15 State Water Project (SWP) and federal Central Valley Project (CVP) in the southern Delta.
16 The project requires State Water Board approval of a petition to add three new points of
17 diversion to all of the water right permits for the SWP and some of the permits for the CVP.
18 DWR and Reclamation filed a joint water right change petition on August 26, 2015, seeking
19 approval of those changes. The State Water Board issued a notice of the petition and notice of
20 an evidentiary hearing to consider the petition on October 30, 2015. DWR also has filed an
21 application for water quality certification under section 401 of the Clean Water Act (33 U.S.C.
22 § 1341). The State Water Board plans to rely on the hearing record for the change petition to
23 inform the water quality certification decision, but the Board is processing the application for
24 water quality certification separately.
- 25
- 26 4. From 2013 until October of 2015, when two additional attorneys were hired to work on an
27 update to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin
28 Delta Estuary (Bay-Delta Plan), I was one of two staff attorneys in OCC with expertise in
Delta matters. For a brief period after issuance of the notice for the hearing on the change
petition for the WaterFix Project, one of the attorneys hired to work on the Bay-Delta Plan
update, Samantha Olson, was assigned to assist with the hearing. Due to other priorities,

1 principally the update to the Bay-Delta Plan, Ms. Olson is no longer working on the WaterFix
2 Project. Nicole Kuenzi, Staff Attorney III, began assisting with the hearing in April of 2017.
3 Andrew Deeringer, Staff Attorney III, joined the hearing team in November of 2017.

- 4 5. The State Water Board has broad discretionary authority over the water right change petition
5 for the WaterFix Project. Before approving the petition, the State Water Board must find that
6 the proposed changes in point of diversion will not alter flows or water quality in the Delta in
7 a manner that results in injury to other legal users of water. (Wat. Code, § 1702.) In addition,
8 the Board must consider and mitigate as appropriate the effects of the proposed changes on
9 fish and wildlife. (See Wat. Code, §§ 1701.2, subd. (c), 1701.3.) The State Water Board also
10 has a duty of continuing supervision over the diversion and use of water under the public trust
11 doctrine. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 446-447.) The
12 Board must protect the public trust uses of navigable water bodies, including navigation,
13 commerce, fishing, recreation, and the preservation of fish and wildlife habitat, to the extent
14 feasible and in the public interest. (*Id.* at pp. 434-435, 446-447.) To the extent that flows are
15 insufficient to fully satisfy all competing demands, the public trust doctrine requires a
16 balancing of the need for water to remain instream for the benefit of public trust resources,
17 and the need to divert water for other beneficial uses, including municipal, industrial, and
18 agricultural uses. (*Id.* at pp. 446-447.) Finally, the State Water Board has authority to prevent
19 the waste, unreasonable use, unreasonable method of use, or unreasonable method of
20 diversion of water. (Cal. Const., art. X, § 2, Wat. Code, § 275.)
- 21 6. In addition to the authority summarized above, which applies to all water right change
22 petitions, the Sacramento-San Joaquin Delta Reform Act of 2009 (Wat. Code, § 85000 et seq.)
23 establishes additional requirements that apply to the WaterFix Project. The Delta Reform Act
24 required the Board to develop non-regulatory flow criteria for the Delta ecosystem necessary
25 to protect public trust resources. (Wat. Code, § 85086, subd. (c)(1).) The State Water Board
26 developed Delta flow criteria in satisfaction of this requirement as documented in a report
27 entitled Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem,
28 which was approved by the State Water Board on August 3, 2010. (The report has been
posted on the State Water Board's website and is marked for identification as Exhibit

1 SWRCB-25 in the hearing on the change petition.) The Delta Reform Act specifies that the
2 flow criteria are intended to inform BDCP, but the criteria are not to be considered
3 predecisional with regard to State Water Board consideration of a permit in connection with
4 BDCP. (Wat. Code, § 85086, subd. (c)(1).) The Delta Reform Act requires the State Water
5 Board to consider the Delta flow criteria and include “appropriate Delta flow criteria” as a
6 condition of any approval of the change petition. (Wat. Code, § 85086, subd. (c)(2).)

7 7. Currently, DWR and Reclamation are required by their water right permits to operate the
8 SWP and the CVP in a manner that achieves compliance with the water quality objectives
9 established in the Bay-Delta Plan. (The Bay-Delta Plan is posted on the State Water Board’s
10 website. It is marked as Exhibit SWRCB-27 in the hearing on the change petition.) The Bay-
11 Delta Plan contains water quality objectives designed to provide reasonable protection to the
12 beneficial uses of water in the Delta, including municipal and industrial uses, agricultural
13 uses, and fish and wildlife habitat. The municipal and industrial objectives set maximum
14 chloride levels, and the agricultural objectives set maximum levels for electrical conductivity
15 (EC). (Bay-Delta Plan, Tables 1 and 2, pp. 12-14.) Those objectives are flow-dependent,
16 meaning they are met in part with flow. (*Id.* at pp. 26-27.) The fish and wildlife objectives
17 are a combination of minimum flow requirements, flow-dependent objectives, and operational
18 requirements. They include a minimum dissolved oxygen level, a narrative salmon doubling
19 requirement, maximum EC levels, minimum Delta outflows, minimum flows in the
20 Sacramento and San Joaquin Rivers, SWP and CVP export limits, and requirements for
21 closure of the Delta Cross Channel Gate. (*Id.*, Table 3, pp. 14-21.) Most of the objectives
22 vary by water year type and time of year. Compliance locations are specified in the Bay-Delta
23 Plan.

24 8. The fish and wildlife water quality objectives are fundamentally different from the 2010 Delta
25 flow criteria, legally and factually. As required by the Porter-Cologne Water Quality Control
26 Act (Wat. Code, § 13000 et seq.), the fish and wildlife objectives established in the Bay-Delta
27 Plan were designed to attain the highest quality of water that is reasonable, taking into
28 consideration economic concerns and competing demands for water in the Delta. (2006 Bay-
Delta Plan, p. 10.) The 2010 flow criteria, by contrast, were developed taking into

1 consideration only the flows need to protect the Delta ecosystem for the benefit of the fishery,
2 without taking into account economic concerns or competing demands for the water,
3 including the need to preserve sufficient volumes of cold water in upstream reservoirs to
4 control temperatures in Delta tributaries for the protection of salmonids. (Development of
5 Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (Aug. 3, 2010) pp. 2-4.) The
6 2010 flow criteria include a significant increase in Delta outflow relative to the amount of
7 outflow that has been provided historically in accordance with the objectives contained in the
8 Bay-Delta Plan. (*Id.* at p. 5.)

9 9. The water quality objectives contained in the Bay-Delta Plan were first established in a 1995
10 version of the plan, which was amended in 2006. The State Water Board implemented the
11 water quality objectives contained in the 1995 Bay-Delta Plan through Water Right Decision
12 1641, which was adopted on December 29, 1999 and revised on March 15, 2000. In that
13 decision, the State Water Board accepted the contributions that certain parties had agreed to
14 make toward meeting the objectives, and imposed the remaining responsibility to meet the
15 objectives on DWR and Reclamation by amending the water right permits for the SWP and
16 the CVP. (Decision 1641, pp. 1-2, 131-132, 146-147, 158-163.)

17 10. In 2009, the State Water Board completed a periodic review of the Bay-Delta Plan. The
18 periodic review and staff recommendations are documented in a report entitled Periodic
19 Review of the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San
20 Joaquin Delta Estuary, which was approved by the State Water Board on August 4, 2009.
21 (The report has been posted on the State Water Board's website and is marked for
22 identification as Exhibit SWRCB-26 in the hearing on the change petition.) Based on
23 scientific evidence of a significant decline in the populations of several species of fish in the
24 Delta, and evidence of a strong correlation between the health of the Delta ecosystem and
25 flow, State Water Board staff recommended that the State Water Board review and potentially
26 update several of the fish and wildlife objectives in the Bay-Delta Plan, including the Delta
27 outflow objective. (*Id.*, pp. 4, 17-25.) A proceeding to review and update the objectives and
28 the associated program of implementation is ongoing.

1 11. Taken together, the authority described above calls for consideration of a broad range of
2 alternative operating criteria in determining whether and what conditions to approve the
3 change petition for the WaterFix Project, from no change to Decision 1641 requirements, as
4 proposed by DWR and Reclamation, to an alternative more closely aligned with the 2010
5 Delta flow criteria. In determining what Delta flow criteria are appropriate and in the public
6 interest, the State Water Board must balance the need for flows in the Delta to protect public
7 trust uses against the competing need for SWP and CVP exports to meet the demands of
8 municipal and agricultural water supply contractors, and the need to conserve storage in SWP
9 and CVP reservoirs for multiple purposes, including temperature control in Delta tributaries to
10 protect salmonids.

11 12. As an attorney assigned to the WaterFix Project, one of my duties is to ensure that the State
12 Water Board complies with CEQA when exercising its discretionary approval authority over
13 the project. DWR was the lead agency for BDCP and is the lead agency for the WaterFix
14 Project. The State Water Board is a responsible agency. As the lead agency, DWR was
15 responsible for preparing environmental documentation for the project. In 2013, DWR and
16 Reclamation issued a Draft Environmental Impact Report/Environmental Impact Statement
17 (EIR/EIS) for BDCP that analyzed the significant environmental effects of the project, project
18 alternatives, and mitigation measures. (In addition to DWR's obligations under CEQA, the
19 EIR/EIS was intended to fulfill Reclamation's obligation to prepare an Environmental Impact
20 Statement (EIS) under the National Environmental Policy Act (42 U.S.C. § 4321 et seq.). The
21 2013 BDCP Public Draft EIR/EIS is posted on the State Water Board's website. It is marked
22 as Exhibit SWRCB-4 in the hearing on the change petition.) Subsequently, DWR and
23 Reclamation decided to advance the water conveyance component of BDCP as a separate
24 project that they named the California WaterFix Project. In July of 2015, DWR and
25 Reclamation issued the BDCP/California WaterFix Partially Recirculated Draft
26 EIR/Supplemental Draft EIS (RDEIR/SDEIS). (The 2015 BDCP/California WaterFix
27 Partially Recirculated RDEIR/SDEIS is posted on the State Water Board's website. It is
28 marked as Exhibit SWRCB-3 in the hearing on the change petition.) DWR and Reclamation
issued a Final EIR/EIS in December of 2016. (The 2016 BDCP/California WaterFix Final

1 EIR/EIS is posted on the State Water Board's website. It is marked for identification as
2 Exhibit SWRCB-102 in the hearing on the change petition.)

3
4 13. As a responsible agency, the State Water Board will comply with CEQA by considering the
5 Final EIR/EIS and reaching its own decision whether and under what conditions to approve
6 the project. (Cal. Code Regs., tit. 14, § 15096, subd. (a).) As a responsible agency, the State
7 Water Board also was required to consult with DWR to assist DWR with the preparation of an
8 adequate EIR and ensure that the EIR that the Board will use complies with CEQA. (*Id.*, §
9 15096, subd. (b).) As part of the consultation process, the State Water Board was required to
10 designate employees to attend meetings requested by DWR to discuss the scope and content
11 of the EIR. (*Id.*, § 15096, subd. (c).) In addition, the State Water Board was required to
12 review and comment on the draft EIR. (*Id.*, subd. (d).)

13
14 14. A responsible agency's options are limited if the agency determines that the final
15 environmental document prepared by the lead agency is inadequate for use by the responsible
16 agency. In that situation, the responsible agency must either (1) take the lead agency to court
17 within 30 days after the lead agency files a notice of determination, (2) be deemed to have
18 waived any objection to the adequacy of the document, (3) prepare a subsequent EIR if
19 permissible under section 15162 of the CEQA Guidelines, or (4) assume the lead agency role
20 as provided in section 15052, subdivision (a)(3) of the CEQA Guidelines. (Cal. Code Regs.,
21 tit. 14, § 15096, subd. (e).)

22
23 15. State Water Board staff consulted with DWR concerning the preparation of the 2013 Draft
24 EIR/EIS for BDCP, the 2015 BDCP/California WaterFix RDEIR/SDEIS, and the 2016 Final
25 EIR/EIS, and provided extensive comments on various drafts of documents. Beginning in
26 2013, I provided legal advice to State Water Board staff during the consultation process, and
27 am familiar with the issues raised during that process. One of the issues that State Water
28 Board staff raised repeatedly during the consultation process, including in their CEQA
comments, was whether the EIR evaluated a range of operational scenarios that would be
adequate for purposes of the State Water Board's decision whether and under what conditions
to approve the water right change petition for the project. In particular, State Water Board

1 staff requested that DWR evaluate an alternative or operational scenario that would provide
2 greater protection of the Delta ecosystem by increasing Delta outflows relative to existing
3 requirements without reducing reservoir storage in a manner that adversely affected the flows
4 and water temperatures needed to protect fishery resources in Delta tributaries.

5 16. In my opinion, evaluation of the operational scenario requested by staff was necessary to
6 ensure that the EIR would be adequate to support the State Water Board's discretionary
7 decision whether and under what conditions to approve the water right change petition for the
8 WaterFix Project. Consistent with the Delta Reform Act of 2009 and the other legal authority
9 summarized in paragraph 5, above, the State Water Board must consider a broad range of
10 Delta flow criteria, from no change to Decision 1641 requirements to an alternative more
11 closely aligned with the 2010 Delta flow criteria. In order for the State Water Board to
12 consider flow criteria that are more protective than Decision 1641, however, the potential
13 environmental impacts of those criteria should be evaluated and disclosed under CEQA.

14 17. In response to the request of State Water Board staff, DWR and Reclamation included
15 Alternative 8 in the 2013 BDCP Draft EIR/EIS. This alternative provided higher Delta
16 outflows than Decision 1641 requirements, as requested, but modeling of that alternative did
17 not include assumptions necessary to avoid flow and temperature impacts to fish and aquatic
18 resources attributable to a reduction in reservoir storage upstream of the Delta. To better
19 inform the State Water Board's consideration of the trade-off's between providing flows for
20 fishery resources, both within the Delta and upstream, and SWP and CVP water supplies,
21 State Water Board staff requested DWR and Reclamation to develop and evaluate an
22 operational scenario that maximizes Delta outflows without adverse consequences to fishery
23 resources. The supplemental modeling and analysis of this operational scenario, referred to as
24 the "SWRCB staff scenario," is contained in Appendix C to the 2015 BDCP/California
25 WaterFix RDEIR/SDEIS. Additional modeling and evaluation of a revised version of the
26 SWRCB staff scenario (referred to as SWRCB Staff Scenario 2) is contained in Appendix 5E
27 to the 2016 Final EIR/EIS.
28

1 18. I consulted with State Water Board staff concerning the development and analysis of the
2 SWRCB staff scenario evaluated in Appendix 5E. I also attended a series of meetings
3 between State Water Board staff and DWR staff concerning the modeling of the staff scenario
4 that was analyzed in Appendix 5E. Those meetings took place on the following dates:
5 January 4, 2016; January 25, 2016; April 21, 2016; May 26, 2016; June 16, 2016; July 14,
6 2016; and October 4, 2016. State Water Board staff who attended all or some of the meetings
7 included Diane Riddle, Kyle Ochenduszko, and John Gerlach. DWR staff included Cassandra
8 Enos, Marcus Yee, and Kenneth Bogdan. DWR's CEQA consultants included Chandra
9 Chilmakuri, with CH2M Hill, and Jennifer Pierre with ICF. The purpose of those meetings
10 was to discuss the modeling and CEQA impact analysis of the SWRCB staff scenario to
11 ensure that the EIR was adequate for the State Water Board's use as a CEQA document, not
12 to assist DWR with its participation in the hearing on the petition. During the meetings,
13 DWR's CEQA consultants presented modeling results and State Water Board staff provided
14 direction on refinements to the modeling in an iterative process that ultimately culminated in
15 the supplemental modeling described in Appendix 5E. The meeting participants also
16 discussed the preparation of a comprehensive analysis of the potential environmental impacts
17 of the SWRCB staff scenario based on the analysis of the impacts of Alternative 4A (the
18 preferred project) and Alternative 8. A comprehensive impact analysis had not been included
19 in Appendix C to the 2015 BDCP/California WaterFix RDEIR/RSEIS. During the meetings,
20 DWR staff did not advocate for the CEQA preferred project or against the SWRCB staff
21 scenario. In addition, I do not recall any debates between State Water Board staff and DWR
22 or its consultants over whether to designate an environmental impact under the State Water
23 Board staff scenario as significant. State Water Board staff deferred to DWR as CEQA lead
24 agency to make that determination. After the meetings, I did not relay to the hearing officers
25 or any of the other Board Members any of the information provided by DWR and its
26 consultants during the meetings concerning the modeling and analysis of the SWRCB staff
27 scenario.

28 19. In the meetings described in paragraph 18, above, State Water Board staff and DWR staff
shared a common understanding that the discussion should be limited to the CEQA analysis of
the SWRCB staff scenario, and DWR's and Reclamation's participation in the hearing should

1 not be discussed. Although State Water Board staff were aware that DWR would need to
2 submit the entire EIR as an exhibit in the hearing in order for the State Water Board to
3 consider the document as required by CEQA, staff did not provide any advice concerning the
4 admissibility of the EIR or any other evidence. Likewise, State Water Board staff did not
5 advise DWR staff to present a “boundary analysis” as part of the petitioners’ case-in-chief in
6 Part 1A of the hearing, or to use the SWRCB staff scenario as the basis for “Boundary 2” for
7 purposes of that analysis. I did not know until petitioners submitted their written testimony
8 and exhibits on May 31, 2016, that petitioners had decided to present a boundary analysis in
9 the hearing and to use the modeling of the SWRCB staff scenario as part of that analysis.

10 20. In an email concerning an upcoming meeting dated April 11, 2016, from Mr. Gerlach to Mr.
11 Bogdan and Chandra Chilmakuri, Mr. Gerlach requested clarification concerning what
12 modeling would be relied on for petitioners’ cases-in-chief for the hearing. I was copied on
13 this email, and recognized that Mr. Gerlach’s request was inappropriate because it concerned
14 DWR and Reclamation’s hearing participation. I immediately replied to Mr. Gerlach, Mr.
15 Bogdan, and Mr. Chilmakuri with an email explaining that our discussion at the meeting
16 should be limited to the modeling for the CEQA analysis, and we did not need to discuss the
17 modeling for the hearing. (A true and correct copy of my April 11, 2016 email to John
18 Gerlach, Kenneth Bogdan, and Chandra Chilmakuri is attached as Exhibit 1.) During the
19 subsequent meeting, which took place on April 21, 2016, DWR did not provide the
20 clarification requested by Mr. Gerlach.

21 21. DWR’s case-in-chief in Part 1A of the hearing included an analysis of the potential impacts to
22 legal users of water of four operational scenarios: Boundary 1; Alternative 4A, operational
23 scenario H3; Alternative 4A, operational scenario H4; and Boundary 2. Boundary 2 was
24 based on the SWRCB staff scenario. (2016 BDCP/California WaterFix Final EIR/EIS,
25 Appendix 5E, p. 5E-2.) On September 21, 2016, DWR sent a draft of Appendix 5E to State
26 Water Board staff for review. The draft included an evaluation of Boundary 1 and Boundary
27 2, in addition to an evaluation of SWRCB Staff Scenario 2. To the best of my recollection,
28 DWR elected to include Boundary 1 and Boundary 2 on its own, without any direction from
State Water Board staff. Ms. Riddle, Mr. Ochendusko, and I reviewed the draft and provided

1 feedback to DWR. I recall requesting two substantive changes to the draft of Appendix 5E.
2 First, we asked DWR to correct a statement in the introduction that State Water Board staff
3 had requested supplemental modeling for three scenarios: Boundary 1, Boundary 2, and
4 SWRCB Staff Scenario 2. Contrary to this statement, State Water Board staff never requested
5 modeling or analysis of Boundary 1, nor did State Water Board staff request Boundary 2 to be
6 developed based on the SWRCB staff scenario. The September 21, 2016 email from DWR
7 transmitting the draft of Appendix 5E stated that DWR had not yet reviewed the draft, so I
8 assume this error was made by DWR's CEQA consultants. (A true and correct copy of a
9 September 21, 2016 email from Marcus Yee to Diane Riddle is attached as Exhibit 2.) By
10 email dated October 4, 2016, Mr. Bogdan sent a revised version of Appendix 5E to State
11 Water Board staff that deleted the statement that State Water Board staff had requested the
12 modeling and analysis of Boundaries 1 and 2. In addition to this correction, State Water
13 Board staff asked for clarifications to portions of the CEQA impact analysis. Certain impacts
14 of SWRCB Staff Scenario 2 had been described as "similar to" impacts under another project
15 alternative. We asked DWR and its CEQA consultants to clarify whether those impacts
16 would be greater than, equal to, or less than the impacts disclosed under the other alternative.

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22. On September 15, 2015, I attended a meeting with State Water Board staff and Tripp Mizell,
DWR staff counsel. The subject line of the meeting appointment is "technical and procedural
details of petition addendum." To the best of my recollection, the discussion at this meeting
concerned technical requirements for the maps submitted with the petition. My meeting
acceptance messages says "I think it's okay to meet to discuss mapping issues." (A true and
correct copy of my September 14, 2015 Outlook message accepting an appointment for a
September 15, 2015 meeting with Mr. Mizell is attached as Exhibit 3.) I do not recall
discussing any substantive or controversial issues concerning the petition at the September 15,
2015 meeting or at any other time.

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23. On July 19, 2016, I sent an email to Mr. Bogdan in which I suggested that DWR consider
renting space at the Retro Lodge on H Street. This suggestion was in response to a request
that DWR had made a few days earlier for a room in the CalEPA Building to use during the
hearing. Mr. Ochendusko had denied DWR's request because space in the CalEPA

1 Headquarters Building is limited, and the State Water Board was unable to provide the same
2 accommodation to all of the hearing parties. I suggested that DWR look into renting office
3 space at the Retro Lodge instead.

4 I declare under penalty of perjury that the foregoing is true and correct.

5 Dated: February 6, 2018
6

7 Dana Heinrich

8 Dana Heinrich
9 Attorney IV
10 Office of Chief Counsel
11 State Water Resources Control Board
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From: Heinrich.Dana@Waterboards
To: Gerlach.John@Waterboards; Bogdan.Kenneth.M.@DWR; Chandra.Chilmakuri@CH2M.com
Cc: Riddle.Diane@Waterboards
Subject: RE: Water Board modeling for WaterFix
Date: Monday, April 11, 2016 10:07:22 AM

Ken,

I'll talk to John, but I don't think we need to get into the modeling for the hearing. We'll learn more about that in due course when DWR submits its testimony and exhibits and presents its case in chief. I think we should limit our discussion to the modeling for the CEQA analysis. And unless you get us the impact analysis piece for the H3 scenario before our meeting, I think we can limit the discussion to the assumptions for the modeling for the H4 scenario.

Thanks,

-Dana

From: Gerlach, John@Waterboards
Sent: Monday, April 11, 2016 9:55 AM
To: Bogdan, Kenneth M.@DWR; Chandra.Chilmakuri@CH2M.com
Cc: Riddle, Diane@Waterboards; Heinrich, Dana@Waterboards
Subject: RE: Water Board modeling for WaterFix

Thanks Ken.

It sounds as if the meeting should include more than technical staff as the issues likely go beyond pure technical issues.

Given the different statements that I've read, could you please clarify what modeling will be relied on for the case-in-chief for each of the three phases of the hearing - 1A, 1B, and 2. It's not clear to me from the tables in the March 11, 2015 letter from DWR and Reclamation to the SWRCB how the WaterFix RDEIR/SDEIS modeling for water quality (DSM2 16 year period) and the BA modeling for endangered species (82 year period) are being used in the various hearing phases.

Based on what I can see on Diane's Outlook calendar, could we set up a meeting at 11 am on Thursday April 21st?

Thank you,

John

From: Bogdan, Kenneth M.@DWR
Sent: Monday, April 11, 2016 9:10 AM
To: Gerlach, John@Waterboards; Chandra.Chilmakuri@CH2M.com
Subject: RE: Water Board modeling for WaterFix

Hi John and Chandra – just to clarify (I am sure I wasn't clear with Dana since modeling is not my

specialty!), Chandra has not run the latter end H4 analysis and wanted to talk with you on several assumptions (including whether to use the 2015 version of CalSim). I'd like to be part of the discussion as there are a few things that may weigh into the decisions on moving forward with the modeling. I have also been the bottle neck on the impact analysis side of things and can give an update about that too.

Ken

Kenneth M Bogdan
Senior Staff Counsel
Office of Chief Counsel
CA Department of Water Resources

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1416 9th Street
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From: Gerlach, John@Waterboards
Sent: Monday, April 11, 2016 7:21 AM
To: Chandra.Chilmakuri@CH2M.com
Cc: Bogdan, Kenneth M.@DWR
Subject: Water Board modeling for WaterFix

Hi Chandra,

Ken mentioned to one of our attorneys that you had completed some additional modeling for the Water Boards scenario using H4 as the baseline. Dianne Riddle asked me to contact you so that you could provide some technical specifics to me about the new modeling. Our discussion will be focused on the modeling and not the effects analysis. My third hand information is that while the H3 baseline was based on the 2010 version of CalSim2 that the H4 baseline might be based on the 2015 version of CalSim2. We'd also like to know if both runs used the same analysis period, say ELT, and whether there are any other different assumptions.

After you bring me up to speed on the new modeling Diane would like a meeting with the larger group to discuss the CEQA effects analysis based on the modeling. I don't know the status of those efforts but if they have been completed Diane would like to set something up for late next week as she is out of town this week.

If you have any questions please feel free to give me a call.

Thanks,

John

=====
John Gerlach, Ph.D., J.D. | Senior Environmental Scientist
State Water Resources Control Board | Division of Water Rights
1001 "I" Street, 14th Floor | Sacramento, CA 95814

John.Gerlach@waterboards.ca.gov

P: (916) 341-5394

From: [Heinrich, Dana@Waterboards](mailto:Heinrich.Dana@Waterboards)
To: [Bogdan, Kenneth M.@DWR](mailto:Bogdan.Kenneth.M.@DWR)
Subject: RE: Appendix 5E
Date: Monday, October 10, 2016 2:24:00 PM

Ken,

Did Diane ever get back to you with feedback on your edits to the intro? I didn't see anything cross my inbox last week and Diane is out this week. I'm afraid this may have fallen through the cracks.

From: Bogdan, Kenneth M.@DWR
Sent: Tuesday, October 04, 2016 11:01 AM
To: Riddle, Diane@Waterboards; Heinrich, Dana@Waterboards; Ochendusko, Kyle@Waterboards
Cc: Yee, Marcus@DWR; 'Pierre, Jennifer'; Chandra.Chilmakuri@CH2M.com
Subject: RE: Appendix 5E

Hi here are the edits to the Intro that we discussed this morning. It's in track and some of the underlying edits were ones Jennifer had made in discussions after we sent you the appendix, I made additional ones on top of that. Hopefully its clear(er) now.

p.s. MARCUS please forward to Rick Wilder – I don't seem to have his e-mail.

Ken

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From: Yee, Marcus@DWR
Sent: Wednesday, September 21, 2016 5:27 PM
To: Riddle, Diane@Waterboards
Cc: Bogdan, Kenneth M.@DWR
Subject: Appendix 5E

Hi Diane,
I just left you a voicemail.

DWR just received the attached screencheck version of App 5e. Recognizing that time is of the essence, I'm sending this right away. Please note that DWR has not had a chance to review this version, so Ken and I will be reviewing concurrently with you.

Please give me a call or let me know a good time to reach you so that we can discuss a follow-up meeting.

-marcus

Marcus L. Yee | Department of Water Resources | 📞 (916) 651-6736

EXHIBIT 3

From: Heinrich.Dana@Waterboards
To: Mizell.James@DWR
Subject: Accepted: Technical and Procedural Details of Petition Addendum

I think it's okay to meet to discuss mapping issues. I don't think we need to talk first, but let me know if you'd like me to call you this afternoon.

MICHAEL A.M. LAUFFER, Chief Counsel (SBN 178485)
ANDREW H. SAWYER, Assistant Chief Counsel (SBN 073580)
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Attorneys for the State Water Resources Control Board

STATE WATER RESOURCES CONTROL BOARD

IN THE MATTER OF EVIDENTIARY
HEARING REGARDING WATER RIGHT
CHANGE PETITION FOR THE
CALIFORNIA WATERFIX PROJECT

DECLARATION OF DIANE RIDDLE

DECLARATION OF DIANE RIDDLE

I, Diane Riddle, declare as follows:

1. I am an Assistant Deputy Director with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division). I oversee the activities of the Division's Bay-Delta and Hearings Branch at the State Water Board including various activities associated with the California WaterFix Project (WaterFix) and its predecessor effort the Bay Delta Conservation Plan (BDCP).
2. The mission of the State Water Board and the nine Regional Water Quality Control Boards (Regional Water Boards) (collectively Water Boards) is to preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource

DECLARATION OF DIANE RIDDLE, IN THE MATTER OF EVIDENTIARY HEARING REGARDING WATER
RIGHT CHANGE PETITION FOR THE CALIFORNIA WATERFIX PROJECT

1 allocation and efficient use, for the benefit of present and future generations. The State Water
2 Board administers water rights in California, including water rights for the Department of
3 Water Resources's (DWR) State Water Project (SWP) and the U.S. Bureau of Reclamation's
4 (Reclamation) Central Valley Project (CVP) (collectively, Projects). The Water Boards also
5 have primary authority over the protection of California's water quality. The WaterFix
6 Project requires both water right and water quality approvals from the Water Boards.
7 Accordingly, the Water Boards are responsible agencies for the WaterFix Project pursuant to
8 the California Environmental Quality Act (CEQA). Specifically, activities that require
9 approval by the Water Boards include changes to the SWP's and CVP's points of diversion of
10 water and other provisions of their water rights, water quality certifications pursuant to Clean
11 Water Act section 401, National Pollutant Discharge Elimination System permits, and
12 potentially other water quality approvals. In addition, the Delta Reform Act of 2009 imposes
13 unique requirements on processing the water right change petition. Any decision by the State
14 Water Board to approve the change petition must include "appropriate Delta flow criteria" and
15 must be informed by flow criteria to protect the Delta ecosystem, which the State Water
16 Board was required to develop in 2010 pursuant to the 2009 Delta Reform Act.

- 17 3. I have held an Environmental Program Manager II position with the State Water Board since
18 February of 2017. Prior to that, I held an Environmental Manager I position since May of
19 2011, overseeing what was then the Hearings and Special Programs Section. Prior to May of
20 2011, I served as a Senior Environmental Scientist Supervisor of the Bay-Delta Unit and as a
21 Senior Environmental Scientist Specialist in the Hearings and Special Programs Section. In
22 these capacities, I have participated in meetings, developed, and overseen the development of
23 comments on the WaterFix Project and the BDCP to ensure that issues within the Water
24 Boards' authorities are adequately addressed. I also have overseen the State Water Board's
25 water right hearing process to consider DWR and USBR's water right petition to add points of
26 diversion to their permits for the SWP and the CVP. The 401 Water Quality Certification is
27 planned to be processed by another branch in the Division in coordination with staff in the
28 Bay-Delta and Hearings Branch and staff from the Central Valley Regional Water Board and
San Francisco Regional Water Board as necessary. The Central Valley Regional Water Board
will also process other water quality approvals that may be needed for the project. I have

1 worked with both the 401 Water Quality Certification staff in the Division and the Regional
2 Water Board staff on developing comments on the CEQA process for the WaterFix/BDCP.

3
4 4. In their role as CEQA responsible agencies, the Water Boards provided written and oral input
5 over the course of the BDCP/WaterFix process, including comments on the Notices of
6 Preparation (NOP) for the BDCP/WaterFix and on various administrative and public drafts of
7 the Environmental Impact Report/Environmental Impact Statement (EIR/EIS). I have served
8 as a lead staff person developing and overseeing the development of these comments.
9 Starting with the State Water Board's May 30, 2008 comments on the NOP for the BDCP,
10 which I primarily drafted, staff have emphasized the need for DWR to analyze a broad range
11 of alternatives pursuant to CEQA to protect fish and wildlife, including alternatives with
12 increased Delta outflows and reductions in exports to provide improved conditions for fish
13 and wildlife and public trust resources. (Attached as Exhibit 1 is a true and correct copy of
14 the State Water Board's May 30, 2008 Comments on Preparation of a Joint Draft EIR/EIS for
15 the BDCP.)

16
17 5. Comments regarding the need to analyze higher outflow/lower export alternatives were also
18 reiterated in State Water Board's May 15, 2009 comments on the revised NOP for the BDCP,
19 which I primarily drafted. Those comments specifically state that "a reduced diversion
20 alternative should be analyzed to inform the State Water Board and others of the potential
21 tradeoffs between delivering water for consumptive uses and protection of fish and wildlife
22 beneficial uses" and that "[u]ncertainty remains concerning the amount of water that can be
23 diverted from the estuary without significantly impacting fish and wildlife beneficial uses."
24 The comment letter states that "[t]hese impacts must be analyzed under CEQA before
25 significant changes are made to the plumbing and hydrology of the Delta." (Attached as
26 Exhibit 2 is a true a correct copy of the State Water Board's May 15, 2009 Comments on
27 February 13, 2009 Revised Notice of Preparation of a Draft EIR and EIS for the BDCP.)

28 6. The State Water Board followed up on its NOP comments in a letter dated April 19, 2011, to
Gerald Meral, Deputy Secretary for the BDCP with the California Natural Resources Agency.
In that letter, the State Water Board provided additional input on how to develop a reasonable

1 range of alternatives with respect to outflows and exports based on findings from the State
2 Water Board's 2010 Delta Flow Criteria Report prepared pursuant to the Delta Reform Act.
3 That letter suggests modifications to modeling alternatives that had been prepared for the
4 BDCP to provide additional spring Delta outflow in all years to promote increased abundance
5 and improved productivity for estuarine species and to provide flows that promote a more
6 natural hydrograph. The letter specifically states that **no changes to the existing modeling
7 should be made that would affect cold water pool storage or temperature control.** The
8 letter also stated that the State Water Board staff was not advocating for any specific
9 alternative, but that the requested information was necessary to inform the State Water
10 Board's future balancing decisions. (Attached as Exhibit 3 is a true and correct copy of a
11 April 19, 2011 letter from Thomas Howard, Executive Director of the State Water Board, to
12 Gerald H. Meral, Ph.D., Deputy Secretary, BDCP, California Natural Resources Agency.)

- 13 7. The 2013 Draft EIR/EIS for the BDCP evaluated a range of alternatives, including Alternative
14 4, which DWR designated the CEQA preferred alternative, and Alternative 8, which was
15 included as a higher outflow alternative pursuant to the above comments from State Water
16 Board staff. Both alternatives included construction and operation of the water diversion and
17 conveyance facilities that presently comprise the physical components of the WaterFix
18 Project. Some of the operating rules under the two alternatives were the same, and some were
19 different. All of the alternatives, including Alternatives 4 and 8, assumed that DWR and
20 Reclamation would continue to meet water quality objectives for Delta outflow, as required
21 by Water Right Decision 1641. (2013 Public Draft BDCP EIR/EIS, p. 3-33.)¹ In addition,
22 four operational scenarios were analyzed under Alternative 4, H1-H4, with different possible
23 outcomes for spring and fall Delta outflow depending on a proposed "decision tree." (*Id.*, pp.
24 3-206-3-209.) Under Alternative 8, 55 percent of unimpaired Delta outflow was provided in
25 February through June, which represented a significant increase in outflow, and a
26 corresponding reduction in SWP and CVP exports from the Delta, relative to Alternative 4.
27 (*Id.*, p. ES-54.)

28 ¹ A copy of the 2013 Public Draft BDCP EIR/EIS is posted on the State Water Board's website. It was marked Exhibit SWRCB-4 in the hearing on the water right change petition for the WaterFix Project.

- 1 8. In a public comment letter on the 2013 public draft EIR/EIS for the BDCP written on behalf
2 of the Water Boards, staff expressed concern that, with the exception of Scenario H4 in drier
3 years, all four operational scenarios evaluated under Alternative 4 would decrease total Delta
4 outflow relative to the no-project alternative. On page 12 of the letter, staff commented that
5 including a broader range of Delta outflows would be appropriate given the existence of
6 significant information supporting the need for more Delta outflow for the protection of
7 aquatic resources. (A true and correct copy of the Water Boards' July 29, 2014 Comments on
8 the Draft BDCP, Draft EIR/EIS for the BDCP and the Implementing Agreement for the
9 BDCP is attached as Exhibit 4.)
- 10 9. Water Board staff also expressed concern with the manner in which Alternative 8 had been
11 analyzed. In addition to other impacts, the 2013 draft EIR/EIS found that project operations
12 under Alternative 8 would have significant and unavoidable impacts to endangered winter-run
13 Chinook salmon due to a decrease in storage in Shasta Reservoir and a corresponding
14 decrease in flows and increase in temperatures in the Sacramento River during the May
15 through September spawning and egg incubation period. (2013 Public Draft BDCP EIR/EIS,
16 pp. 11-2497-2503.) Water Board staff suggested that the potential for these impacts to be
17 avoided through real time operations or other mitigation should have been evaluated given the
18 real-time operations proposed for the project that specifically state that "operational decisions
19 will take into account upstream operational constraints, such as coldwater pool management,
20 instream flow, and temperature requirements." (July 2014 comment letter, p. 24.)
- 21 10. Starting in 2013, I and other Water Board staff met with DWR to resolve comments raised in
22 the Water Boards' comment letters. Several meetings were held to come to agreement about
23 the need to prepare additional analyses to evaluate a higher outflow scenario that did not have
24 impacts to fisheries or water quality. Throughout these meetings, I and other State Water
25 Board staff identified that this information was needed to support the State Water Board's
26 decision making processes, including the requirements of the Delta Reform Act to include
27 appropriate Delta flow requirements in any approval of the project. Specifically, while State
28 Water Board staff were clear that the State Water Board had not made any determinations
about the WaterFix project, including whether to approve the water right petitions or the

1 appropriate Delta outflow criteria for any approval of the project, the State Water Board
2 would need adequate CEQA documentation and other analyses on which to base its decisions.
3 State Water Board staff informed DWR that if DWR did not prepare the needed analyses, the
4 State Water Board would likely need to prepare its own analyses, which would be inefficient
5 and contrary to the guidance provided by CEQA to avoid the production of multiple CEQA
6 documents for one project. Based on these discussions, DWR agreed to prepare additional
7 analyses to address the State Water Board's comments. To the best of my recollection, this
8 agreement was reached in late 2014. These analyses were described in Appendix C to the
9 2015 BDCP/California WaterFix Partially Recirculated Revised Draft EIR/Supplemental
10 Draft EIS (RDEIR/SDEIS), discussed below.²

11 11. I and other State Water Board staff met with staff from DWR and their consultants on
12 numerous occasions in an attempt to ensure that the analyses included in Appendix C would
13 meet the State Water Board's information needs. Originally, State Water Board staff
14 requested to modify the CALSIM II³ modeling parameters of Alternative 8 to eliminate
15 modeling assumptions that produced results that indicated that this alternative could have
16 negative effects to fish and wildlife. Specifically, staff requested to modify modeling
17 assumptions that produced potential impacts related to reservoir cold water pool volume,
18 water temperatures in the Sacramento River and its tributaries, and instream flows that could
19 impact habitat quality or extent, or directly impact fish by dewatering redds or stranding fish.
20 Staff asked to meet regularly with BDCP modeling staff to iteratively adjust modeling
21 assumptions to produce the best possible outcome for Alternative 8.

22 12. Because the modeling for Alternative 8 included several assumptions that lead to modeling
23 results indicating fisheries impacts, and the modeling for Alternative 4H3 did not, the BDCP
24 modelers recommended modifying Alternative 4H3 rather than modifying Alternative 8 to
25 produce a higher outflow scenario without fisheries impacts. State Water Board staff agreed
26 and proceeded to work with BDCP modelers on this scenario between February and March of

27 ² A copy of the 2015 BDCP/California WaterFix Partially Recirculated RDEIR/SDEIS is posted on the State Water Board's
28 website. It was marked Exhibit SWRCB-3 in the hearing on the water right change petition for the WaterFix Project.

³ CALSIM II is a water project operational model that DWR used to inform its CEQA analyses.

1 2015. Due to the limited time available to prepare the analyses, it was not possible to fully
2 optimize the scenario or to include specific environmental impact determinations for that
3 scenario. A simplified approach was used to achieve the higher outflows identified in Table
4 C-A of Appendix C in a way that would not impact fish and wildlife. Specifically, any time
5 when the higher outflow goals identified in Table C-A were not being met, Project exports
6 were reduced to minimum pumping levels. The Table C-A outflow targets were only met to
7 the extent that reducing exports could achieve higher outflows without making additional
8 storage releases. Accordingly, the targeted Delta outflow values were not achieved for every
9 combination of month and water-year. (2015 BDCP/California WaterFix Partially
10 Recirculated RDEIR/SDEIS, Appendix C, p. C-2.) The scenario also included additional
11 year-round south Delta Old and Middle River flow requirements beyond Alternative 4H3 that
12 constrained south of Delta exports in an effort to provide an outer bracket for operations to
13 protect fish and wildlife.

- 13 13. Appendix C provided minimal analysis of the impacts of the scenario and instead stated that:
14 “[t]he nature and severity of the impacts fall within the range of impacts disclosed under
15 Alternative 4H3 and Alternative 8. Generally, for water supply related effects (effects to
16 agricultural resources, groundwater resources, etc.), the impacts are equal to or less than the
17 impacts disclosed under Alternative 8. For biological related effects (effects on fish species)
18 the impacts are less than significant, similar to Alternative 4H3.” (p. 3-38.) Specifically, the
19 modeling results for storage, flow, and temperature under the scenario were found to meet the
20 goals of avoiding impacts to fish and aquatic resources disclosed under Alternative 8.
21 However, there were some cases where flows (in the high-flow channel of the Feather River
22 and in the American River) were slightly lower than the no action alternative (NAA) and it
23 was unclear if there would be associated impacts. Accordingly, the exact impacts of the
24 scenario were not clearly articulated in Appendix C in way that would allow the State Water
25 Board to make CEQA findings as a responsible agency if it were to include a higher-outflow
26 requirement in any approval of the WaterFix water right petition. Additionally, the potential
27 benefits of the scenario were not optimized. Delta outflow in April and May, a particularly
28 important time period for fish in which higher outflows are generally desired, was not
significantly greater than outflow under the Alternative 4H3 and the NAA. Thus, the scenario

1 did not entirely achieve the goal of higher outflows during those months. At the same time,
2 storage volumes in Folsom, Shasta, and particularly Oroville exceeded the NAA due to the
3 built in logic in the model that caused water to back up into storage when water was not
4 allowed to be exported. With respect to these issues, Appendix C stated that “[t]o the extent
5 that releasing this increased storage would not impact cold water pool supplies or instream
6 flows necessary to protect fish or other beneficial uses, this increased storage could potentially
7 be available to offset water supply effects or to further augment Delta outflows or instream
8 flows.” (2015 BDCP/California WaterFix Partially Recirculated DEIR/SDEIS, Appendix C,
9 p. C-38.) Water Board staff provided comments on the RDEIR/SDEIS that raised this issue.
10 (A true and correct copy of the Water Boards’ October 30, 2015 Comments on the
11 BDCP/California WaterFix Partially Recirculated Draft EIR/Supplemental Draft EIS is
12 attached as Exhibit 5.)

13 14. To address the State Water Board’s comments and avoid the need for additional or separate
14 CEQA documentation, DWR and its consultants and State Water Board staff continued to
15 meet after the RDEIR/SDEIS was released to ensure that the final analyses included in the
16 final EIR/EIS would meet the State Water Board’s information needs. Specifically, based on
17 my calendar, State Water Board staff met with DWR and its consultants to discuss the
18 refinement of the Appendix C analyses on the following dates: 1/4/16, 1/25/16, 4/21/16,
19 5/26/16, 6/16/16, 7/14/16 and 10/4/16. I was involved in most, if not all, of these meetings
20 along with Dana Heinrich with the State Water Board’s Office of Chief Counsel. Ms.
21 Heinrich was present to provide feedback on the Board’s legal needs from a CEQA
22 perspective and to ensure that the discussions were properly focused on CEQA responsible
23 agency issues, and did not involve any substantive or controversial procedural hearing issues.
24 I provided technical feedback with assistance from Kyle Ochendszko and John Gerlach. My
25 supervisor, Les Grober, also attended at least one of these meetings to provide technical
26 feedback. Staff attending the meetings from DWR included Cassandra Enos and Marcus Yee,
27 who held project management responsibilities over the WaterFix Project for DWR, and Ken
28 Bogdan from DWR’s legal office. Mr. Bogdan also helped to ensure that the discussions were
narrowly focused on the State Water Board’s CEQA needs. Consultants who attended the

1 meetings included Chandra Chilmakuri, the lead CALSIM II modeler, and Jennifer Pierre, the
2 lead CEQA consultant.

3
4 15. The refinements that resulted from the Appendix C scenario became what was referred to as
5 Scenario 2 in Appendix 5E of the Final WaterFix EIR/EIS.⁴ Specific issues that were the
6 focus of these refinements included modeling additional releases from Oroville Reservoir to
7 increase Delta outflows. As mentioned above, the modeling that was conducted for Appendix
8 C increased storage in upstream reservoirs beyond the NAA and Alternative 4. Appendix C
9 states that this additional storage could be used for outflow but did not model it. This was
10 modeled in Appendix 5E. I also recall that we discussed whether to use the current version of
11 the CALSIM II model for Scenario 2. Mr. Chilmakuri advised the use of the current version
12 that included more up to date realistic assumptions. I recall that State Water Board staff
13 deferred to Mr. Chilmakuri on this decision. We also discussed how the modeling related to
14 the CEQA analyses to ensure that the results did not indicate that there could be impacts to
15 fish and wildlife from the new modeling scenario, and that for other potential impacts the
16 scenario fell within the bounds of Alternative 8 and Alternative 4. We discussed relaxing
17 some of the export constraints under the scenario to avoid modeled reductions in deliveries to
18 water users that were not evaluated under Alternative 8. In addition, we discussed the
19 development of a more detailed CEQA analysis for Scenario 2 so that the State Water Board
20 would be able to potentially use the CEQA analysis in its decision making. State Water Board
21 staff did not direct DWR on what the impacts determinations should be. Instead, State Water
22 Board staff requested that Scenario 2 be adjusted as necessary to avoid what DWR would
23 determine to be impacts to fish and wildlife without causing modeled exceedance of water
24 quality objectives. As the modeling was being conducted, I requested that Mr. Chilmakuri
25 work with Ms. Pierre and the environmental review team to ensure that Scenario 2 was being
26 developed consistent with this feedback. I and other State Water Board staff also met with
27 Ms. Pierre, Mr. Chilmakuri and DWR staff to discuss this matter. Ms. Pierre confirmed that
28 the final Scenario 2 modeling did not indicate any fisheries impacts.

⁴ A copy of the 2016 BDCP/California WaterFix Final EIR/EIS is posted on the State Water Board's website. It has been marked for identification as Exhibit SWRCB-102 in the hearing on the water right change petition for the WaterFix Project.

1
2 16. In addition to Scenario 2, DWR also independently decided to prepare two additional
3 scenarios that DWR referred to as Boundary 1 and Boundary 2. DWR presented these
4 scenarios as part of its case and chief for the water right hearing and included them in
5 Appendix 5E. State Water Board staff were not involved in the boundary analysis in any way.
6 Appendix 5E states that Boundaries 1 and 2 were presented during the water rights petition
7 process “as a means to represent a potential range of operations that could occur as a result of
8 the proposed Adaptive Management Program, and the conditions of any approvals obtained as
9 a result of the ongoing regulatory review of U.S. Fish and Wildlife Service, National Marine
10 Fisheries Service, California Department of Fish and Wildlife, and State Water Board.” (2016
11 BCDP/California WaterFix Final EIR/EIS, Appendix 5E, p. 5E-1.) The appendix states that
12 Boundary 2 is identical to Scenario 2 with the exception that Scenario 2 includes higher
13 releases from Oroville Reservoir in April and May to support the higher Delta outflow targets
14 originally requested by the State Water Board. (*Id.*, p. 5E-4.)

15 17. During these meetings, State Water Board staff only discussed the CEQA modeling and
16 documentation issues to the extent necessary to fulfill the Board’s responsible agency
17 obligations. State Water Board staff did not discuss or provide any guidance or advice to
18 DWR or its consultants related to any substantive or controversial hearing matters. Legal
19 counsel Dana Heinrich provided consistent oversight and advice during these meetings to
20 ensure that the discussion was entirely focused on meeting the State Water Board’s
21 information needs as a responsible agency only. Information from these meetings was also
22 not shared with Board Members.

23 I declare under penalty of perjury that the foregoing is true and correct.

24
25
26
27
28 *[Signature block on following page]*

1 Dated: February 6, 2018
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Diane Riddle

Diane Riddle
Assistant Deputy Director
Division of Water Rights
State Water Resources Control Board

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Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

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Arnold Schwarzenegger
Governor

May 30, 2008

VIA ELECTRONIC MAIL

Delores Brown, Chief
Office of Environmental Compliance
Department of Water Resources
P.O. Box 942836
Sacramento, CA 95236
delores@water.ca.gov

Dear Ms. Brown:

COMMENTS ON PREPARATION OF A JOINT DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT FOR THE BAY DELTA CONSERVATION PLAN

This letter responds to the California Department of Water Resources' (DWR) March 17, 2008 Notice of Preparation (NOP) for a joint draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for the Bay Delta Conservation Plan (BDCP). The State Water Board appreciates the opportunity to contribute information regarding the development of reasonable alternatives and potential environmental impacts to be addressed in the EIR/EIS for the BDCP.

According to the NOP, the BDCP process is intended to provide the basis for DWR, State Water Project (SWP) and federal Central Valley Project (CVP) water contractors, and Mirant Delta to apply for incidental take permits pursuant to section 10 of the Federal Endangered Species Act (FESA) and California Fish and Game Code section 2835 and/or 2081. The BDCP is also intended to provide the U.S. Bureau of Reclamation (USBR) the ability to obtain Biological Opinions and incidental take statements pursuant to section 7 of FESA. Additional core purposes of the BDCP identified in the NOP include conserving, protecting, and restoring at risk species and their habitats and providing for water supplies and ecosystem health within a stable regulatory framework.

The NOP states that the BDCP will likely consist of several major elements, including new capital improvements to the water supply conveyance system (e.g., dual or isolated conveyance systems¹) in the Delta, a restoration program in order to improve the ecological productivity and sustainability of the Delta, and a monitoring and adaptive management plan for the restoration program. The plan will also likely include operational improvements for the water supply system in the near-term and for the long-term once any capital improvements have been completed and put into operation.

¹ New dual or isolated conveyance systems would require a canal from the Sacramento River to the SWP's Harvey O. Banks and the CVP's C.W. Jones pumping plants near Tracy which would likely require approval by the State Water Board of petitions to change the SWP's and CVP's authorized points of diversions.

General Comments

The mission of the State Water Board and the Regional Water Quality Control Boards (Regional Water Boards) is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The State Water Board administers water rights in California, including those of the SWP and CVP. The State and Regional Water Boards also have primary authority over the protection of the State's water quality. While the BDCP planning effort is still in the preliminary stages, and details regarding this project are as yet unclear, it appears that the State and Regional Water Boards will have discretionary approvals over water right and water quality aspects of the project and are responsible agencies for this project under the California Environmental Quality Act (CEQA). As responsible agencies under CEQA, the State and Regional Water Boards must review and consider the environmental effects of the project identified in the EIR/EIS that are within their purview and reach their own conclusions on whether and how to approve the project involved. (Cal. Code Regs., tit. 14, § 15096, subd. (a).)

Specifically, activities that may require approval by the State and Regional Water Boards include: changes to the SWP's and CVP's points of diversions of water or to other provisions of their water rights to accommodate dual or isolated conveyance options, water quality certifications pursuant to Clean Water Act section 401, National Pollutant Discharge Elimination System Permitting for the Mirant Delta power plants, and potentially other activities. In addition, any changes to conveyance of water in the Delta and other possible components of the BDCP could result in changes to flow paths in the Delta that may affect the ability of the SWP, CVP, and other responsible parties to meet water right permit/license and other requirements to implement water quality objectives included in the Bay-Delta Water Quality Control Plan (Bay-Delta Plan).

To address the above issues, the EIR/EIS must analyze the impacts to water quality and beneficial uses (including fish and wildlife resources) associated with BDCP-covered activities and identify feasible alternatives or mitigation measures that would mitigate or avoid any significant impacts of the project on water quality or beneficial uses. For example, BDCP alternatives could have impacts on water and sediment quality in the Delta including: salinity, mercury, nutrients, dissolved oxygen, dissolved organic carbons, turbidity, temperature, and other constituents within the State and Regional Water Boards' purview.²

In addition, to achieve BDCP's project objectives to assure protection and restoration of fish and wildlife resources, the EIR/EIS should analyze a broad range of alternate water quality objectives and operational strategies, including reductions in exports, that may be more protective of fish and wildlife beneficial uses. The State Water Board may use this and other information to consider potential changes to the Bay-Delta Plan and its implementation to

² The Bay-Delta is listed as impaired pursuant to Clean Water Act section 303(d) for a variety of toxic contaminants including group A pesticides, Diazinon, Chlorpyrifos, DDT, PCB's, Dioxin, Furan, metals, selenium, nickel, mercury, toxicity, exotic species, nutrients, pathogens, and oxygen demanding substances that cause critically low dissolved oxygen. In addition, there is concern that a number of emerging contaminants could affect beneficial uses such as heavy metals and other naturally occurring elements, pharmaceuticals and endocrine disrupting compounds, blue-green algal blooms, organic carbon and bromide.

protect fish and wildlife and other beneficial uses of water in the Bay-Delta. Accordingly, the State Water Board requests analysis of a broad range of alternatives under the following scenarios: (1) potential interim changes to the Bay-Delta Plan; (2) long-term changes to the Bay-Delta Plan with new conveyance facilities; and (3) long-term changes to the Bay-Delta Plan without new conveyance facilities. Specifically, the State Water Board requests analysis of a broad range of conveyance alternatives, flows (including changes to Delta outflow objectives), and diversions by the SWP and CVP (including reduced diversions or a cap on diversions) for providing open water habitat under the above scenarios.

The EIR/EIS analyses also should consider water quality activities that have been initiated by the State and Regional Water Boards, but are not yet complete. Specifically, the State Water Board has begun a review of the southern Delta salinity and San Joaquin River flow objectives included in the Bay-Delta Plan. As a result of that review, the State Water Board may modify the southern Delta salinity or San Joaquin River flow objectives. The EIR/EIS should consider the information developed in this process and the potential future changes in these boundary conditions in its analyses. In addition, the EIR/EIS analyses should consider other known and foreseeable projects by the State and Regional Water Boards, including those discussed in the Strategic Workplan for the Bay-Delta (Workplan) which describes activities the State and Regional Water Boards intend to take in the Bay-Delta over the next five years. A draft Workplan is planned for release for public comment in the beginning of June and is expected to be considered by the State Water Board for approval at its July 15, 2008 Board meeting, followed by consideration by the Central Valley and San Francisco Bay Regional Water Boards later this year.

Moreover, before the State Water Board may approve a change in a water right permit or license, it must find that the change will not injure any legal user of water. (Wat. Code, § 1702.) Accordingly, if the proposed project will involve any changes in water rights, the EIR/EIS should fully analyze and propose mitigation for any potential impacts of the project on other legal users of water (and on public trust resources to the extent not already addressed). While CEQA does not specifically require analysis of impacts to other legal users of water, there may be direct or indirect environmental impacts associated with the project that would require analysis under CEQA.

Further, regardless of its responsibilities under CEQA, the State Water Board must consider the full range of impacts associated with the BDCP in order to fulfill its responsibilities under the public trust doctrine. The State Water Board has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible, and to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419 [189 Cal.Rptr. 346]; Cal.Const., art. X, § 2; Wat. Code, § 275.)

Pursuant to its authority under the Water Code, the State Water Board may request additional information outside of the CEQA process in order to meet the State Water Board's public trust and other obligations. Accordingly, while BDCP parties may determine that CEQA does not require an analysis of all of the issues discussed herein (including impacts to other legal users of water and public trust resources), it would further the State Water Board's consideration of

the BDCP if the draft EIR/EIS discussed these issues. Given the similarity of the scope of analyses, it would be expeditious to address these issues in one document.

Specific Comments on the NOP

In addition to the above general comments, the State Water Board provides additional specific comments on the NOP, as follows:

At the top of page 4, the NOP states that formal preparation of the EIR/EIS will commence once the BDCP has been further developed. The State Water Board reserves the right to provide additional comments once additional information becomes available. This information may be provided in writing or through participation in the BDCP Steering Committee, technical teams, or workgroups.

In the third paragraph on page 4, the NOP states that the BDCP is being developed to set out near- and long-term approaches to meet the objectives of the BDCP. Any near-term actions that involve activities within the State or Regional Water Boards' regulatory purview should be coordinated with the appropriate agency as soon as possible to assure that adequate analyses are conducted to satisfy the State and Regional Water Boards' regulatory requirements.

In the first paragraph on page 5, the NOP states that the BDCP is anticipated to include a comprehensive monitoring, assessment, and adaptive management program. Development of this program should be coordinated with the water quality compliance and baseline monitoring required by the State Water Board pursuant to Decision 1641 and the Regional Monitoring Program currently being developed by the Central Valley Regional Water Board.

The last paragraph on page 5 lists activities that may be included in the BDCP, including, among others: (1) existing Delta conveyance elements and operations of the SWP and CVP; (2) new Delta conveyance facilities; (3) operational activities in the Delta related to water transfers involving water contractors or to serve environmental programs; (4) projects designed to improve Delta salinity conditions; and (5) existing power generation operations of the Mirant Delta power plants, among other activities. As discussed above, the EIR/EIS must address the State and Regional Water Boards' regulatory requirements related to these issues. It must identify any impacts to beneficial uses of water that may result from these activities, and propose alternative measures or mitigation measures to reduce or avoid any impacts.

On page 7 under the project area discussion, the NOP states that the BDCP may include conservation actions in Suisun Marsh and Suisun Bay. Any such actions should be coordinated with the State and Regional Water Boards and the development of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan.

Role of the State Water Board in the BDCP Process

In the second paragraph on page 4, the NOP states that the BDCP is being prepared with the participation of the State Water Board and other agencies. To clarify, the State Water Board is participating in the BDCP planning process for the limited purposes of advising the BDCP parties of the State Water Board's regulatory requirements and providing technical information.

The State Water Board is neither a party to the BDCP planning agreement nor a decision-making member of the Steering Committee. By participating in the process in an advisory capacity, the State Water Board hopes to ensure that a broad range of alternatives is evaluated, and the potential impacts of all the alternatives are fully disclosed.

While the State Water Board can provide information that will help guide the BDCP parties toward a successful completion of the BDCP process, the State Water Board cannot make a prior commitment to the outcome of any regulatory approval that must be issued by the State Water Board. The State Water Board acts in an adjudicative capacity when it acts on a request for water right application, change petition, or other water right approval that may be required for or requested in connection with a proposed project. The State Water Board must be an impartial decision-maker, avoiding bias, prejudice or interest, in any adjudicative proceedings conducted in accordance with the State Water Board's regulatory approvals. Accordingly, State Water Board staff will not act as advocates for any alternatives considered during the BDCP process.

In closing, the State Water Board will continue to participate in the BDCP Steering Committee and working groups and technical teams to advise BDCP regarding the State Water Board's regulatory and informational requirements. Thank you for the opportunity to comment. If you have any questions, please contact Diane Riddle, Staff Environmental Scientist with the Division of Water Rights at (916) 341-5297, or at driddle@waterboards.ca.gov.

Sincerely,



Dorothy Rice
Executive Director

cc: See next page.

Ms. Delores Brown
Department of Water Resources

- 6 -

May 30, 2008

cc: Pamela Creedon
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Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

ELECTRONIC MAIL

May 15, 2009

Delores Brown, Chief
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Sacramento, CA 95236
delores@water.ca.gov

Dear Ms. Brown:

COMMENTS ON FEBRUARY 13, 2009 REVISED NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND ENVIRONMENTAL IMPACT STATEMENT FOR THE BAY DELTA CONSERVATION PLAN

This letter responds to the California Department of Water Resources' (DWR) February 13, 2009 Revised Notice of Preparation (NOP) of a Draft Environmental Impact Report and Environmental Impact Statement (EIR/EIS) for the Bay Delta Conservation Plan (BDCP). As a responsible agency under the California Environmental Quality Act (CEQA) for this project, the State Water Resources Control Board (State Water Board) appreciates the opportunity to provide comments on the revised NOP and additional comments related to this project. Previously, the State Water Board provided comments to you on the March 17, 2008 NOP for the BDCP by letter dated May 30, 2008. The State Water Board reaffirms all of the comments in its May 30, 2008 letter and incorporates them by reference. I will not repeat those comments here.

Since the March 17, 2008 NOP was issued, additional information concerning the BDCP project has been made available. Specifically, as referred to in the revised NOP, a draft conservation plan for the BDCP was released. However, many specifics regarding the proposed project are still not available. Accordingly, the State Water Board continues to reserve the right to provide additional comments on the environmental review for the BDCP as additional information becomes available. Again, this information may be provided in writing or through participation in the BDCP Steering Committee, technical teams, workgroups, or environmental coordination team meetings.

Implementation of the BDCP will likely result in new water conveyance and habitat restoration measures. In addition to changes in water right terms and conditions to facilitate these measures, the State Water Board may need to consider changes to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta

California Environmental Protection Agency

Estuary (Bay-Delta Plan) and to water rights implementing that plan to ensure that beneficial uses are protected in light of those measures. Thus, as indicated in the State Water Board's May 30, 2008 letter, the State Water Board will have discretionary approval over aspects of the BDCP project related to potential changes to the State Water Project's (SWP) and Central Valley Project's (CVP) water rights (such as changes to the points of diversion and operational requirements) and to water right conditions associated with water quality requirements for the two projects. In order for the State Water Board to consider any water quality and water right applications or petitions related to these aspects of the project, environmental documentation must be prepared that evaluates the environmental effects of the proposed actions, identifies a reasonable range of interim and long-term alternatives that would reduce or avoid the potential significant environmental effects of the actions, and discusses the significant effects of the alternatives. Similarly, any environmental analysis associated with changes to the Bay-Delta Plan must evaluate the significant environmental impacts of any such changes and identify a reasonable range of potentially feasible alternatives to such changes. The State Water Board and BDCP lead agencies will need to continue to coordinate their activities to assure that adequate environmental documentation is prepared to address the State Water Board's and BDCP's environmental review needs.

One issue in particular that will require coordination is environmental review of the SWP's and CVP's interim and long-term exports from the Delta. As noted in the State Water Board's May 30, 2008 letter, a reduced diversion alternative should be analyzed to inform the State Water Board and others of the potential tradeoffs between delivering water for consumptive uses and protection of fish and wildlife beneficial uses. While SWP and CVP exports are not the only factor contributing to the current degraded state of the Bay-Delta ecosystem, exports remain an important factor requiring analysis. Uncertainty remains concerning the amount of water that can be diverted from the estuary without significantly impacting fish and wildlife beneficial uses. These impacts must be analyzed under CEQA before significant changes are made to the plumbing and hydrology of the Delta. In addition, independent of CEQA, the State Water Board has an obligation to consider the effect of the proposed project on public trust resources and to protect those resources.

A reduced diversion alternative should be lower than diversions allowed for in the current delta smelt biological opinion and soon-to-be released salmonid and green sturgeon biological opinions for the Long-Term CVP and SWP Operations, Criteria, and Plan. This reduced diversion alternative should be low enough to assure not only continued existence of the species, but also some level of rehabilitation for the estuary. To determine what this level should be, State Water Board staff suggests reviewing historic fisheries data and water export data to arrive at a low export level that is reflective of the quantity of water that could be diverted from the Delta with reasonable confidence of not causing significant or long term impacts to the estuary. Through environmental analysis of such an alternative and higher export alternatives, the State Water Board and other responsible agencies will have information on which to consider the various environmental tradeoffs related to export restrictions. Once the salmonid

and green sturgeon biological opinion has been finalized, staff would be willing to provide technical assistance to the BDCP environmental review team.

Combined with analyzing potential reductions in exports, an alternative for changes to Delta outflows (and potentially inflow requirements) should also be analyzed that reflects a more natural hydrograph. Current outflows and operations have tended to flatten the natural hydrograph and produce more static flow conditions in the Delta. Outflows and export regimes that support a more natural variable hydrograph should be analyzed, including both the naturally high outflow and naturally low outflow ends of the hydrograph for both the interim and long-term. One way to conduct this analysis would be to analyze the effects of providing various percentages of the unimpaired Delta inflow and outflow, and managing storage releases and exports to attempt to parallel this pattern.

As the State Water Board previously commented on the first BDCP NOP, the State Water Board is currently conducting a review of the southern Delta salinity and San Joaquin River flow objectives included in the Bay-Delta Plan. This review is not necessarily intended to address or inform the evaluation of any similar issues (i.e., salinity or other issues) that may arise during the BDCP process. Accordingly, the BDCP environmental review will need to address any southern Delta salinity or other issues associated with the BDCP project that are not addressed by the State Water Board in its water quality control planning review.

Finally, in order to assure that the environmental review and permitting activities associated with the BDCP project for which the State Water Board has regulatory authority are adequately addressed (water rights application and petitions, water quality certification pursuant to Clean Water Act section 401, and potentially others), State Water Board staff request additional focused discussions with the environmental review team on these issues.

State Water Board staff look forward to continue working with the BDCP environmental review effort for this project. If you have any questions concerning this matter, please contact Diane Riddle, Staff Environmental Scientist with the Division of Water Rights at (916) 341-5297 or driddle@waterboards.ca.gov.

Sincerely,



Dorothy Rice
Executive Director

cc: See next page.

cc: (First Class Mail)

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Edmund G. Brown Jr.
Governor

April 19, 2011

Gerald H. Meral, Ph.D.
Deputy Secretary
Bay Delta Conservation Plan
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Dear Dr. Meral:

ENVIRONMENTAL ANALYSES IN SUPPORT OF THE BAY DELTA CONSERVATION PLAN

This letter is concerning environmental analyses being prepared in support of the Bay Delta Conservation Plan (BDCP). The State Water Resources Control Board (State Water Board) is a responsible agency for this Project pursuant to the California Environmental Quality Act (CEQA). In addition, the State Water Board has also been in discussions with the Department of Water Resources (DWR) concerning environmental documentation needed in order for the State Water Board to consider changes to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta Plan).

Implementation of the BDCP will likely result in new water conveyance and habitat restoration measures that require approval by the State Water Board. In addition to changes in water right terms and conditions to facilitate these measures, the State Water Board may need to consider changes to the Bay-Delta Plan and to water rights implementing that plan to ensure that beneficial uses are protected in light of those measures. Due to the interrelated nature of the BDCP and the State Water Board's review of the Bay-Delta Plan, DWR agreed to conduct analyses necessary for the State Water Board planned comprehensive review of the Bay-Delta Plan in conjunction with environmental review for the BDCP. The State Water Board previously provided comments on DWR's March 17, 2008 and February 14, 2009 CEQA Notices of Preparation (NOP) regarding the scope and content of the environmental analyses for the BDCP and the State Water Board's review of the Bay-Delta Plan by letters dated May 30, 2008 and May 15, 2009. This memo provides additional follow-up and clarifying information concerning those comments.

The primary concern expressed in the NOP comments were that in order for the State Water Board to consider any water quality and water right applications or petitions for the BDCP, environmental documentation prepared for the project must identify a reasonable range of interim and long-term alternatives that would reduce or avoid the potential significant environmental effects of the proposed project and discuss the significant effects of the alternatives. Similarly, any environmental analysis associated with changes to the Bay-Delta Plan must evaluate the significant environmental impacts of any such changes and identify a

California Environmental Protection Agency

reasonable range of potentially feasible alternatives to such changes. Since our May 15, 2009 letter, the State Water Board developed additional technical information that can be used to inform the development of a reasonable range of alternatives.

Pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009, the State Water Board prepared a report with flow criteria for the Sacramento-San Joaquin Delta Ecosystem that can be used to aid in the development of alternatives for Delta outflows, including the reduced export alternative referenced in the State Water Board's previous NOP comments. The State Water Board's Delta Flow Criteria Report includes determinations of flow criteria for the Delta ecosystem to protect public trust resources. The report makes clear that the flow criteria do not consider the balancing of public trust resource protection with public interest needs for water. The flow criteria also did not consider other public trust resource needs such as the need to manage cold-water resources in reservoirs tributary to the Delta. Nonetheless, the flow determinations contained in the Delta Flow Criteria Report, together with recent scientific conclusions of other State and federal agencies, including the Department of Fish and Game, National Marine Fisheries Service, and the Interagency Ecological Program provide a useful guide to establish one side of a reasonable range of alternatives.

State Water Board staff suggests that a reasonable range of alternatives may be established by making changes to the operational criteria already being evaluated in one or several of the alternatives considered by the BDCP per the September 1, 2010 Table 1: Modified Array of Alternatives. The changes should be made to address two of the summary determinations in the Delta Flow Criteria Report: 1) provide additional spring Delta outflow in all years to promote increased abundance and improved productivity for longfin smelt and other estuarine species; and 2) provide flows that promote a more natural hydrograph at all times.

As discussed in the Delta Flow Criteria Report, it is likely impossible to determine exactly what flow is needed to protect fish and wildlife. Such a determination would also depend on numerous factors, many of which are not known at this time, therefore necessitating the need for adaptive management. This uncertainty reinforces the value of analyzing a sufficiently broad range of alternatives. The range of alternatives should bracket the range of potential environmental impacts, and also the economic and social effects that may result from any decision the State Water Board will have to make regarding the balancing of beneficial uses within and upstream of the Delta related to the BDCP and the State Water Board's water quality control planning efforts. Evaluation of such a range will also provide information to inform the Delta Stewardship Council's Delta Plan vision to achieve the coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem."

State Water Board staff suggests establishing this reasonable range of alternatives by modifying CALSIM model alternatives that have already been developed. One or more alternatives should be modified to supplement Delta outflow by a fixed quantity that is apportioned proportional to unimpaired flows for all water year types except wet years. Model runs for these revised alternatives should be made in an iterative fashion to ascertain the maximum additional fixed quantity of additional Delta outflow that would provide useful information to evaluate balancing of the beneficial uses of water and achieving the coequal goals. As a starting point, staff suggests adding 1.5 million acre-feet per year to Delta outflow.

No other changes should be made that would affect cold-water pool storage or temperature control in Delta tributaries. State Water Board staff recommends that these constraints be applied to Alternative 4 from the September 1, 2010 BDCP "Modified Array of Alternatives" in order to inform the State Water Board's decisions regarding BDCP project operations. Additional runs should also be applied to the no-project alternative 1 to inform the State Water Board's water quality control planning efforts for the interim period before any new facilities are implemented. State Water staff is particularly interested in the environmental, social, and economic effects that an enhanced ecosystem alternative could have on the project export area.

As stated previously in our NOP comments, the State Water Board is not advocating for any specific alternative and is not suggesting that such an enhanced ecosystem protection alternative would necessarily be implemented. Such information, however, is necessary to inform the State Water Board's future balancing decisions. State Water Board staff would be happy to meet with DWR and other lead and responsible agency staff to refine this suggested approach. Initial model results, for example, may demonstrate that something other than 1.5 million acre-feet per year would provide information that is more useful.

In addition to the export and Delta outflow issues discussed above, the State Water Board would also like to coordinate on the remaining environmental analyses necessary for the State Water Board to consider other comprehensive changes to the Bay-Delta Plan. The State Water Board's project to comprehensively review the Bay-Delta Plan may extend beyond the purpose and needs of the BDCP process. The State Water Board would appreciate DWR's assistance in preparing environmental documentation to address these matters.

Please contact me at (916) 341-5615, or Mr. Les Grober at lgrober@waterboards.ca.gov or (916) 341-5428 to discuss this matter further.

Sincerely,


Thomas Howard
Executive Director

cc: Mr. Mark Cowin, Director
California Department of Water Resources
P.O. Box 942836, Room 1115-1
Sacramento, CA 94236-0001



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

July 29, 2014

BDCP Comments
 Ryan Wulff, National Marine Fisheries Service
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 Via email to: BDCP.Comments@noaa.gov

Dear Mr. Wulff:

COMMENTS ON THE DRAFT BAY DELTA CONSERVATION PLAN, DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT FOR THE BAY DELTA CONSERVATION PLAN AND THE IMPLEMENTING AGREEMENT FOR THE BAY DELTA CONSERVATION PLAN

The State Water Resources Control Board (State Water Board) and the Central Valley and San Francisco Bay Regional Water Quality Control Boards (Regional Water Boards) (collectively Water Boards) appreciate the opportunity to comment on the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Bay Delta Conservation Plan (BDCP), as well as the associated BDCP and the Implementing Agreement (IA) for the BDCP. A summary of our key comments is provided following our contact information below, and our detailed comments are provided in the attached table.

The mission of the Water Boards is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The State Water Board administers water rights in California including water rights for the Department of Water Resources' (DWR) State Water Project (SWP) and the U.S. Bureau of Reclamation's (USBR) Central Valley Project (CVP). The Water Boards also have primary authority over the protection of California's water quality. The BDCP will require both water right and water quality approvals from the Water Boards. Accordingly, the Water Boards are responsible agencies for the BDCP pursuant to the California Environmental Quality Act (CEQA). Specifically, activities that may require approval by the Water Boards include, changes to the SWP's and CVP's points of diversion of water and other provisions of their water rights, water quality certifications pursuant to Clean Water Act section 401, National Pollutant Discharge Elimination System permits, and potentially other water quality approvals.

In our role as responsible agencies the Water Boards previously reviewed and provided comments on the Notices of Preparation for the BDCP EIR/EIS and on the Second Administrative Draft of the EIR/EIS and the draft BDCP, as well as other written and oral input over the course of the BDCP process. To the extent that previous comments on the Second Administrative Draft EIR/EIS have not been fully addressed, they are incorporated by reference

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

in this comment letter. The Water Boards will continue to work with the BDCP lead agencies to determine how to address outstanding comments.

This letter provides comments on the December 2013 Draft EIR/EIS for the BDCP. Due to the interdependent and connected nature of the EIR/EIS, the BDCP, and the IA, this comment letter also provides limited comments on those documents as well. This comment letter does not reiterate all of the previous comments from the Water Boards that may not yet have been fully addressed, particularly in regards to Water Board approval and permitting related issues and information needs that may be outside the scope of the above documents. As discussed in the Water Boards' previous comment letter, additional information may be needed to support Water Board approvals beyond what is included in the above documents. Water Board staff will continue to work with DWR and other appropriate agencies on these issues. Further, due to the enormous size of the documents, the unprecedented complexity of the BDCP, the relatively short comment period considering the size and complexity of the BDCP, and the demands on staff resources due to the drought, we have focused our analysis on Alternative 4 (the preferred project), and to a lesser extent on Alternative 8 (the alternative requested by the State Water Board to provide a broad range of operational alternatives). Within our analysis of those two alternatives we generally further restricted our review to three areas. First, we reviewed the conceptual basis for the alternatives analysis in the EIR/EIS and the consistency and validity of the implementation of the conceptual basis in both the EIR/EIS and the BDCP. Second, we reviewed the models and analytical methods used for the Delta smelt and winter-run Chinook salmon analyses in BDCP Chapter 5, Effects Analysis, and in EIR/EIS Chapter 11, Fish and Aquatic Resources. Third, we reviewed the water quality and other sections of the EIR/EIS, IA, and BDCP that fall within the regulatory authority of the Water Boards.

We appreciate the extensive effort that went into preparation of the various BDCP documents. We also appreciate that the complexities and uncertainties associated with this project, given its large geographic scope and time horizon, which make it difficult to analyze the proposed project and the various alternatives. We nonetheless have general comments in the following topic areas:

- Analytical Methods
- Consideration of Uncertainty
- BDCP Decision Tree and Adaptive Management
- Reporting of Early vs. Long Term Analyses
- Modeling of Climate Change and Reservoir Operations
- Synthesis of BDCP Effects on Covered Fish
- Use and Representation of Data

As we have discussed in previous correspondence to DWR and other lead agencies, the Water Boards have specific statutory and regulatory responsibilities that are separate and distinct from the primary focus of the BDCP on ESA related issues that must be fulfilled in order for the BDCP to proceed. To meet those requirements, the Water Boards must independently consider whether and under what conditions to issue the various approvals needed for the BDCP, regardless of the provisions of the BDCP and its proposed processes.

Water Board staff are available to continue discussions regarding the process for considering the various approvals needed from the Water Boards for the project. If you have any questions concerning this matter, please contact me at diane.riddle@waterboards.ca.gov or

(916) 341-5297. Written correspondence should be addressed as follows: State Water Resources Control Board; Division of Water Rights; Attn: Diane Riddle; P.O. Box 2000; Sacramento, CA 95812.

Sincerely,

ORIGINAL SIGNED BY

Diane Riddle
Environmental Program Manager

Summary of Comments on the BDCP EIR/EIS, BDCP, and IA

Water Board Information Needs

The BDCP will require multiple water right and water quality approvals from the Water Boards that will take a year or more to process. To the extent the EIR/EIS will be used to support these approvals pursuant to CEQA, they should be clearly described, including the proposed changes to water right requirements for DWR and USBR. While not all of the project details the Water Boards will need to consider for various approvals need to be included in the EIR/EIS, that information must be provided to the Water Boards in a timely fashion to avoid delays. The Water Boards' comments on the Second Administrative Draft EIR/EIS address many of these issues in more detail. Water Board staff encourage the BDCP proponents to identify point staff familiar with Water Board permitting issues to coordinate with Water Board staff and identify what permits are needed by when and what additional information is required.

BDCP Analytical Method

Because of the complexity of the biological and physical factors considered within the BDCP, and the changes anticipated during its 50-year planning horizon, it is difficult to produce accurate and precise quantitative data that can be used to determine the magnitude and direction of the effects of the BDCP over its entire planning period. BDCP attempts to address this issue through qualitative modeling and adaptive management. Under the adaptive management process, qualitative results are converted into semi-quantitative results by updating the current knowledge that is used in the modeling scenarios over the duration of the 50-year planning horizon.

The distinction between qualitative planning and quantitative prediction is not, however, clearly identified in the BDCP and supporting EIR/EIS. The numerous model results reported in the BDCP and the EIR/EIS comprise a suite of hypothetical futures in which specified alternative conveyance construction, water operations, and habitat restoration scenarios are compared. According to the modeling appendices of the BDCP and the EIR/EIS, the majority of the model results can only be appropriately compared qualitatively at monthly time steps. This limitation is often violated in both the BDCP and the EIR/EIS. The explicit caution that it is only appropriate to use model results for planning and scenario analyses is stated in the technical appendices for the BDCP and the EIR/EIS, and not in the BDCP effects analysis and in the EIR/EIS alternatives analysis. To address this issue, the caution should be clearly stated and appropriately adhered to throughout the analyses.

Consideration of Uncertainty

Significant negative impacts tend to be discounted and positive results tend to be inflated in the EIR/EIS and the BDCP. The assumed effectiveness of various conservation measures, for example, appear to be overly optimistic, especially with regard to the effectiveness of habitat restoration, where it is assumed that habitat restoration will be 100 percent effective. This overly optimistic assumption is frequently used to offset impacts from water operations associated with Conservation Measure (CM) 1 (the new conveyance facility) and to support a potentially over-constrained range of operations for the protection of covered species under CM1. To address this issue, it would be appropriate to assume a more realistic rate of success for conservation measures and a wider range of adaptive management provisions, such as for Delta Outflows.

BDCP Decision Tree and Adaptive Management

The general structure of the BDCP decision tree and adaptive management processes have been described in the documents but the details for how the adaptive management provisions will be implemented are not provided, and are instead proposed to be developed in the future by the Implementation Office and the Adaptive Management Team. Further, those provisions are assumed to be adequate without provisions for contingency plans or specific thresholds for actions. It is therefore difficult to determine whether the measures will have the expected results or be adequate to reasonably protect beneficial uses of water and the public trust. Further, the range for adaptive management may be overly constrained given the high degree of uncertainty regarding the effectiveness of the conservation measures.

Reporting of Early vs. Long Term Analyses

A single comparison of the BDCP effects at the Late Long Term (LLT) analysis point (Alternative 4 vs. the No Action Alternative (NAA) for example) may not accurately describe the potential effects of the BDCP on covered fish. For example, the BDCP Appendix 5C.5.2-60 concludes that the negative effect of the BDCP in the Early Long Term (ELT) on spawning weighted usable area for winter-run Chinook salmon would be rendered moot by the late long term due to climate change driven reductions in the population size of winter-run Chinook. Similarly, in the analysis of the IOS model effects on winter-run Chinook, it was determined that the model results were sensitive to water-year starting conditions, with dry starting conditions leading to lower levels of escapement for decades under the BDCP while wetter starting years would have resulted in the BDCP providing a benefit (BDCP Appendix 5.G-81, line 37). In both cases, the BDCP has significant short term negative effects on winter-run Chinook that could significantly reduce the size of its single population and render it more susceptible to extinction long before the effects of climate change could affect the population at the LLT analysis point.

Except for some analyses conducted during the development of the BDCP Effects Analysis, model results for the ELT analysis point are not reported. For the purposes of determining the impacts of the new conveyance facility, the effects of the project at the ELT point are important to understand, especially since the Water Boards will not necessarily be considering the 50 year Endangered Species Act (ESA) related approvals that the fisheries agencies will be considering. Further, to differentiate between the effects of the project and other confounding and uncertain effects like climate change, ELT results should be reported. The 50 year time frame for the LLT analyses may mask significant effects of the project. These effects are important to understand given the high degree of uncertainty with future conditions, including climate change.

CEQA and NEPA Baselines in section 4.2.1.1 of the EIR/EIS explicitly recognize the requirement for consideration of both short-term and long-term impacts of the proposed project, and include quotes from *Neighbors for Smart Rail v. Exposition Metro Line Construction 10 Authority* (2013) 57 Cal.4th 439 (Smart Rail):

For example, “[e]ven when a project is intended and expected to improve conditions in the long term—20 or 30 years after an EIR is prepared—decision makers and members of the public are entitled under CEQA to know the short- and medium-term environmental costs of achieving that desirable improvement.” (Ibid.) Further, “[a]n EIR stating that in 20 or 30 years the project will improve the environment, but neglecting, without justification, to provide any evaluation of the project’s impacts in the meantime does not ‘giv[e] due consideration to both the short-term and long-term effects’ of the project ... and does not serve CEQA’s

informational purpose well.” (Ibid., quoting CEQA Guidelines, § 15126.2, subd. (a).)

While the EIR/EIS states that its use of the Existing Conditions as the CEQA baseline is consistent with the Smart Rail decision, use of the differencing method of comparing the baseline as of the date of the Notice of Preparation against alternative effects more than 50-years distant, prevents any short-term analysis of the effects of the project.

Modeling of Climate Change and Reservoir Operations

While explicitly recognizing that climate change will affect the BDCP as well as the operations of the upstream reservoirs such as Shasta and Oroville, the BDCP does not provide a corresponding range of adaptive changes in reservoir operations under climate change. Not considering adaptive reservoir operations responses to climate change confounds the impacts assessment and comparison of alternatives, and may result in over or understatement of impacts that could be attributable to reservoir reoperations, including the NAA. Comparing alternatives to the NAA is one way to distinguish climate change effects from project effects. However, if climate change impacts are overstated, comparisons between a proposed alternative and the NAA may exaggerate the positive benefits of an alternative. Similarly, impacts that may be addressed by reservoir reoperations may be overstated. In addition, if an alternative is shown to have an erroneous positive or null effect then it may be excluded from necessary adaptive management and mitigation. To address these issues, sensitivity results could be provided. For example, reservoir reoperations could be included in the climate change analyses or the analyses could be presented without either climate change or water operational changes. The second option would provide a clearer distinction of project effects versus erroneous conclusions resulting from climate change assumptions.

Synthesis of BDCP Effects on Covered Fish

The EIR/EIS does not provide an explicit analytical framework for synthesizing the individual effects conclusions for each covered fish into a coherent statement describing the overall effect of BDCP on each covered fish. We recognize that given the large number of sometimes contradictory results considered for each covered fish that this is a difficult task. However, relying exclusively on professional opinion without specifying critical biological thresholds or how the various results contributed to the expert opinion provides little useful information for evaluating the adequacy of the opinion and the impacts assessment. The BDCP explicitly recognizes this approach but seems to misstate the transparency of the analysis (5.2.7.10, Page 5.2-27).

Use and Representation of Data

The BDCP effects analysis converts qualitative data to quantitative data (page 5.5-1, line 20), and then performs mathematical operations on the numerical codes for the ranked data as if the coded scores were quantitative ratio scale data. Because there is no method to determine if the intervals between ranks are constant, it is mathematically incorrect to perform addition, subtraction, multiplication, etc. on the numerically coded scores. The subsequent “transformation” of the scores back to a “qualitative scale” demonstrates that the intervals between ranks are not constant, as the very low to low rank interval is one unit while the rank interval from high to very high is seven units. These re-ranked results are then used to generate “net effect” tables (see Figure 5.5.1-5 for an example) that are the foundation of the BDCP effects analysis and, presumably, the professional judgment that forms the basis of the impact assessment conclusions in the EIR/EIS alternatives analyses.

The Delta Independent Science Board (ISB) came to a similar conclusion. The ISB also described how the improper use of qualitative data compounds the uncertainty inherent in attributing importance among multiple attributes of the covered fish and their habitat (Page B-43). The ISB also described the multiple sources of uncertainty present in both documents and recommended that “uncertainty and the many underlying assumptions be dealt with upfront, forcefully, and directly”. Even with perfect data, in the execution of scenario analyses it is expected and desirable that different models produce different results, and that some may show negative impacts while others may not. This situation is described as uncertainty in both documents, and in the effects and impacts analyses is postponed as an issue for the adaptive management program to resolve. No method is provided to determine how this will be addressed when the adaptive management process must consider multiple models and conflicting results.

Table 1**Detailed Comments and Recommendations****EIR/EIS General Comments**

	Chapter/ Appendix	Page/Line # or Section	Comment
1	General	General	The EIR/EIS relies on a large number of sometimes unclearly labeled and numbered EIR/EIS appendices, the BDCP and its appendices, and primary source documents to support its methods and results. This reliance on a suite of documents produced at different times appears to have caused inconsistencies and errors in the documents and makes it difficult to verify which methods were used for analyses. Additionally, chains of references from the EIR/EIS to its appendices and then to the BDCP and its appendices sometimes lead to dead ends that provide no relevant information. These issues should be addressed.
2	General	General	The EIR/EIS and BDCP appear to assume that natural community restoration will be 100 percent successful. This is highly optimistic given the current status of the science regarding this issue. Is there an assumption of a success rate for any of the restoration projects? If so, please provide that assumption and detailed support for it. If not, a discussion of the success rate among restoration projects for each of the natural communities is appropriate for providing the reader an understanding of the potential for restoration to be successful and reduce impacts.
3	General	General	There is no explicit analytical framework for synthesizing the individual effects conclusions for each covered fish into a statement describing the overall effect of BDCP on each covered fish making it difficult to confirm the validity of the impacts determinations. The presentation of the conclusions is arranged by tunnel construction related impacts and by conservation measure. A series of individual life stage analyses specific to each covered fish is nested within the construction/conservation measure organization. Nested within each life stage analysis are multiple analyses that are supported using different model runs. Interpretations of each model result and effect

			<p>conclusions follow the results. A summary table then lists the conclusion for each of the life stages. However, there is no explicit synthesis and explanation to support the overall CEQA and NEPA conclusions of the effect of BDCP on a particular covered fish. There is generally only a statement that all impacts considered in total were deemed to be a significant impact or a less than significant impact. This approach is described in the BDCP Effects analysis 5.2.7.10, Page 5.2-27, Line 36 as: "The net effects analysis assumes that there is no overarching analytical framework [emphasis added] that integrates all effects and derives a quantitative estimate of the overall effect of the BDCP. Instead, the BDCP effects analysis is designed to provide a transparent, systematic, and comprehensive process for combining results from quantitative and qualitative analyses. This process is described below. The conclusions represent qualitative judgments [emphasis added] of the effects of the BDCP that are grounded in the detailed quantitative and qualitative analyses in the appendices."</p>
4	General	General	<p>The use of model results sometimes appears to deviate from the stated limitations for their use (Section 4.3 Overview of Tools, Analytical Methods, and Applications, page 4-13) (See also EIR/EIS Appendix 5A-C5): "The models were used to compare and contrast the effects among various operating scenarios. The models incorporated a set of base assumptions; the assumptions were then modified to reflect the operations associated with each of the alternatives. The output of the models is used to show the comparative difference in the conditions among the different alternative scenarios. The model output does not predict absolute conditions in the future; rather, the output is intended to show what type of changes would occur. This type of model is described as comparative rather than predictive. Because of the comparative nature of these models, these results are best interpreted using various statistical measures such as long-term and year-type averages and probability of exceedance. Additionally, results from one model cannot be quantitatively compared to results from another model; therefore, comparisons between alternatives must be based on results that are derived from a consistent modeling approach." If the appropriate use of model results is as stated then the use of those results should be limited to the evaluation of relatively coarse metrics for purposes of ranking and</p>

			<p>selecting alternative scenarios. However, in the EIR/EIS the coarse scale results were incorporated into models with daily to hourly time steps to generate predictive results such as daily temperature thresholds. The appropriateness of these numerical comparisons should be clearly explained.</p>
5	General	General	<p>When multiple models are run to analyze the same impact, such as water temperature below Keswick, it is expected that the models will produce different results and that some may show negative impacts while others may not. This uncertainty in the analysis is proposed to be addressed through the adaptive management plan. However, the adaptive management plan is not fully developed and as such it is difficult to determine whether it will be adequate to address potential impacts as proposed.</p>
6	General	General	<p>For the purposes of informing potential changes to water rights and water quality approvals needed for construction of the project in the near term, the EIR/EIS should include an analysis of all of the ELT operational and construction related effects of the project. The LLT analysis point represents the end of the term of the requested take permits and while relevant for producing an estimate of take during the period of the permits may not adequately inform the Water Board's decision making processes.</p>
7	General	General	<p>There are 9 flow requirements and 6 of those have potential Real Time Operations (RTO) restrictions (BDCP Chapter 3.4.1.4.3):</p> <ul style="list-style-type: none"> • OMR flows RTO • HORB RTO • Delta outflow/X2 • North Delta bypass flow RTO • E:I • Sac River at Rio Vista flow • DCC RTO • Suisun Marsh Salinity Gates • Fremont Weir RTO <p>There are several factors that could be considered in the RTO process including:</p> <ul style="list-style-type: none"> • Covered fish species risks • Actions to avoid adverse effects on covered fish • Allocations in year of action or future years

			<ul style="list-style-type: none"> • End of water year storage • San Luis Reservoir low point • Delivery schedules for any SWP or CVP contractor • Actions that could be implemented throughout the year to recover any water supplies reduced by actions taken by the RTO team. • Obligations to meet the SWRCB water quality standards • Will take into account upstream operational constraints such as coldwater pool management, instream flow, and temperature requirements. <p>As of the date of the Public Drafts of the BDCP and EIR/EIS no agreement had been reached concerning how RTOs will affect the BDCP flow related requirements. These requirements are relied upon in the EIR/EIS to reduce impacts to less than significant levels. However, it is unclear whether the RTOs will be adequate until they have been fully developed and reviewed, especially given that the considerations for RTOs may have mutually exclusive purposes.</p>
8	General	General	<p>The tables in EIR/EIS Appendix 5A, Section C should be clarified. The data in the tables is arranged in the format required to plot cumulative frequencies of monthly data but the implied cell by cell analysis of the data as presented in the tables appears to be in conflict with the appropriate use of the data described in EIR/EIS Appendix 5A.4.6, page A31. In contrast, the associated figures all present cumulative frequencies of long-term monthly data. This issue also appears elsewhere, including EIR/EIS Appendix 11C, page 11C-218, Table 1, Mean Monthly Flows (cfs) for Model Scenarios in the Sacramento River at Keswick. A table that appears to illustrate the appropriate use of the data is shown on page 11C-220, Table 2, Differences (Percent Differences) between pairs of Model Scenarios in the Sacramento River at Keswick, Year-Round which shows differences between alternatives across the long-term data and across water-year data.</p>
9	General	General	<p>As indicated in several comment letters on the BDCP environmental review process, for the Water Boards to consider any water quality and water rights applications or petitions for the BDCP, environmental documentation prepared for the project must disclose the significant effects of the proposed project and identify a</p>

			<p>reasonable range of interim and long-term alternatives that would reduce or avoid the potential significant environmental effects. The BDCP does not appear to propose interim water project operational measures needed to protect fish and wildlife beneficial uses beyond those requirements associated with biological opinions. The measures required by the biological opinions are designed to avoid jeopardy of listed species which is not the same standard as the standard of reasonable protection of beneficial uses. Since the State Water Board is required by law to periodically review and update, as appropriate, the Bay-Delta Plan, it will continue its independent review and update of the Bay-Delta Plan, and will establish requirements during the interim that are based on the best available science at the time of the update. The Water Boards will also need to independently evaluate the long-term measures proposed by BDCP and reach an independent conclusion on whether to approve changes associated with the project.</p>
10	General	General	<p>The Alternative 4 Decision Tree for Delta outflow includes four operational scenarios. Compared to the No Action Alternative (NAA), these operational scenarios decrease total Delta outflow in the late-long term with some exceptions for critical water-years and for below normal, dry and critical water-years for the H4 high outflow scenario (EIR/EIS Appendix 5A.C.7). The justification for this limited range of Delta outflow scenarios is not clear given that there is significant information supporting the need for more Delta outflow for the protection of aquatic resources and the substantial uncertainty that other conservation measures will be effective in reducing the need for Delta outflow. For this reason a broader range of Delta outflows should be considered for the preferred project. Regardless of the BDCP proposed project, the State Water Board may establish higher Delta outflow requirements in the future and may allocate responsibility for those flows differently than proposed in the BDCP.</p>
11	General	General	<p>The geographical scope of the BDCP impacts assessment excludes San Pablo and San Francisco</p>

			<p>Bays from the analysis. CEQA requires the evaluation of impacts to the affected environment regardless of the scope of the project. The impacts assessment should both evaluate potential impacts downstream of the Delta and propose appropriate monitoring and mitigation to address those impacts. Specifically, the EIR/EIS should evaluate project effects on water quality and the various beneficial uses of water in the Bay area, including effects on adadromous and other fish species.</p>
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EIR/EIS Specific Comments

	Chapter/ Appendix	Page/Line # or Section	Comment
12	EIR/EIS 3	<p>4.14.2 (page 3.4-88, lines 1-14), 4.14.4 (page 3.4-290,lines 19-33) 6.3.3 (pages 3-155 to 3-157)</p>	<p>While the EIR/EIS states that CM1 will not substantially change dissolved oxygen levels in the Delta, CM1 will periodically increase the load of oxidizable material entering the Stockton Deep Water Ship Channel (DWSC) from the upper San Joaquin Basin. The increased load will occur when the project is diverting most of its water from the North Delta while allowing San Joaquin River flows to enter the South Delta through the DWSC. This increased load of organic material may reduce the assimilative capacity of the DWSC and cause a depression of water dissolved oxygen levels that may be greater than the capacity of the existing aeration facility to reoxygenate.</p> <p>The BDCP includes CM14 (Stockton Deep Water Ship Channel Dissolved Oxygen Levels). The purpose of CM14 is to ensure continued funding for and operation of the aeration facility and to improve the facility's effectiveness in meeting the BDCP's biological goals and objectives and DO TMDL objectives. The BDCP will share in funding the long-term operation and maintenance costs associated with operation of the aeration facility.</p> <p>The BDCP recognizes the current limitations of the existing aeration facility to provide sufficient oxygen at all times and places. If oxygen levels fall below the Water Quality Objective after implementation of CM1 potential causes of noncompliance will be evaluated and the means to achieve compliance identified. BDCP states that it <u>will consider</u> funding modifications to the Aeration Facility and/or construction of additional aeration facilities to increase DO levels in the DWSC.</p>

			The BDCP should explicitly identify whether it will fully mitigate this impact or whether full mitigation is not feasible and why.
13	EIR/EIS 8	8.2.1.7	The EIR/EIS/S does not clearly state that Suisun Marsh wetlands are listed on the 2010 303(d) list as impaired for low DO/organic enrichment, mercury, nutrients and salinity. Potential impacts related to dissolved oxygen conditions, nutrient concentrations and mercury levels are not fully considered in the document. Only effects of changes in salinity levels are considered in detail. Please include this information in the document, including appropriate monitoring and mitigation.
14	EIR/EIS 8	8-423 & 8-436	The EIR/EIS concludes that preferred Alternative 4 may cause unavoidable adverse impacts to chloride and electrical conductivity (EC) levels in the Delta and Suisun Marsh which will increase the frequency of violations of DWR's and USBR's water right permit and license conditions to meet water quality objectives included in State Water Board Decision 1641 (D-1641). The EIR/EIS states that these impacts may be detrimental to municipal, agricultural, and fish and wildlife beneficial uses of the water. DWR and USBR must comply with their water right permits and license or pursue a change in those requirements. Changes to permit and license requirements to implement water quality objectives may also require changes to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan). Change to the Bay-Delta Plan will require substantial support to demonstrate reasonable protection of beneficial uses. Changes to water right requirements will require support to indicate that there will not be impacts to other legal users of water or unreasonable effect on fish and wildlife before any such changes will be considered.
15	EIR/EIS 8	8.4.3.9 (pages 475-476) 8.4.3.15 (pages 692-693)	The EIR/EIS indicates that quantitative modeling for CM1 Alternative 4 water operations would have little to no effect on selenium concentrations in water and in fish tissues in Delta channels. In contrast, similar modeling for CM1 Alternative 8 shows that there may be an increase in selenium concentrations in fish in the western Delta. BDCP proposes to validate their bioaccumulation model with site specific monitoring if CM1 Alternative 8 is selected.

			<p>Selenium cycling in the Delta is complicated and insufficiently well understood to accurately model concentrations in water and in fish under any of the CM1 alternatives. Monitoring and assessment of selenium fish tissue concentrations in the Delta should be conducted after implementation of CM1, regardless of the alternative selected to better understand actual project effects and associated mitigation, adaptive management and regulatory activities by the Water Boards and others.</p>
16	EIR/EIS Chapter 8	8.2.3.15	<p>The EIS/EIR defines the existing conditions in the Sacramento River based on mean selenium concentrations at Knights Landing of 0.32 µg/L, which are much higher than the concentrations found downstream at Freeport (mean < 0.1 µg/L). Similarly, the existing conditions in San Francisco Bay were assumed to be higher (0.21 to 0.31 µg/L at Mallard Island) than the observed concentrations across multiple sampling events in Suisun Bay (0.08-0.12 µg/L). As a result, it appears that the EIR/EIS overestimates baseline selenium conditions which as a result may underestimate the effects of the alternatives when compared to this overestimated baseline condition. Depending on the hydrological conditions, it actually appears that the preferred alternative may result in increases in water column selenium concentrations by 8 to 20 percent compared to the change estimated in the EIS/EIR of 1 to 2 percent. This issue should be clarified in the EIR/EIS. In addition, as discussed above, regular monitoring of the system should be conducted to better understand actual project effects and associated mitigation, adaptive management and regulatory activities by the Water Boards and others.</p>
17	EIR/EIS Chapters 8 and 31	8.4.3.9 (pages 445-446), 8.4.3.15 (pages 673-674) Table 31.1	<p>Table 31.1 of the EIR/EIS lists the projected increase in mercury in fish as a significant and unavoidable adverse impact of restoring wetlands under Alternative 4. Similar conclusions were reached for Alternative 8.</p> <p>The BDCP proposes to mitigate mercury impacts under all alternatives by implementing CM12 (Methyl Mercury Management) which it states will minimize the increased mobilization of methyl mercury at restoration areas. CM12 will employ pre-design characterization, design elements, and best management practices to mitigate methylation of mercury, and will require the monitoring and reporting of observed methyl mercury levels. The BDCP notes that the effectiveness of CM12 will be</p>

			<p>enhanced by employing best management practices developed by the Phase I Methyl Mercury TMDL Control Studies. CM12 identifies restoration actions in the Yolo Bypass and the Cosumnes-Mokelumne areas of the Delta as having the greatest potential for methyl mercury generation.</p> <p>The inorganic mercury content of sediment is an important factor contributing to methyl mercury production. Some of the highest sediment mercury concentrations are in Cache Creek and downstream in the Yolo Bypass. This is because the Cache Creek watershed exports about half of all the mercury entering the Delta. Half of this load is trapped in the Cache Creek Settling Basin while the rest is exported to the Yolo Bypass. Decreasing this inorganic mercury load will reduce methyl mercury production in restored wetlands in the Yolo Bypass.</p> <p>The Cache Creek Settling Basin is owned and operated by DWR and by the U.S. Army Corp of Engineers. The Methyl Mercury Basin Plan Amendment calls for DWR and others to develop and implement a plan for improving the mercury trapping efficiency of the Cache Creek Settling Basin. CM12 should ensure these improvements are carried out.</p> <p>If fully implemented, the BDCP conservation measures will increase wetland acreage by about fourfold in the Delta, from 20,000 to 80,000-acres. Wetlands have high methyl mercury production efficiency and the increased acreage may increase fish tissue concentrations in the Delta by up to 50-percent.</p> <p>The BDCP can do more to minimize projected mercury increases in fish tissue concentrations than what is proposed in CM12. The BDCP should commit to funding improvements in the Cache Creek Settling Basin to reduce loads of inorganic mercury entering the Yolo Bypass. It should also commit to providing funding for the Phase I Basin Plan Amendment mercury control studies so that best management practices will be understood when restoration areas are developed under CM12.</p>
18	EIR/EIS 8	8.4.3.9 (pages 432-434), 8.4.3.15	Chapter 4 of BDCP states that the annual installation, operation and removal of the temporary South Delta barriers in Middle and Old rivers, Grantline Canal, and at the Head of Old River will continue as part of CM1.

		(pages 666-667)	<p>However, the temporary barriers program is not evaluated under any of the CM1 alternatives.</p> <p>Implementation of any CM1 alternative will fundamentally change the flow of water in the South Delta, which can change the impacts of the temporary barriers. Old and Middle rivers are on the CWA 303(d)-list for low dissolved oxygen. DWR currently monitors water quality conditions in the South Delta as a requirement under its 401 Water Quality Certification for the South Delta Temporary Barriers Program. If the BDCP will continue to use the temporary barriers under any of the alternatives in CM1, then the use of the barriers should be explicitly evaluated in the various CM1 alternatives. In addition, the BDCP should provide for continued water quality monitoring to understand the effects of the barriers in the context of the BDCP in addition to any appropriate mitigation to address impacts of the barriers in the context of the BDCP, including impacts to dissolved oxygen levels.</p>
19	EIR/EIS 11	2 Line 16	<p>The EIR/EIS states: "The methods used to analyze impacts to covered and non-covered fish and aquatic species in Chapter 11 rely on the models and data included in the Effects Analysis. Chapter 11 references specific sections of the Effects Analysis, including Appendix 5.B, Entrainment; Appendix 5.C, Flow, Passage, Salinity, and Turbidity; Appendix 5.D, Contaminants; Appendix 5.E, Habitat Restoration; and Appendix 5.F, Biological Stressors on Covered Fish." In general, the EIR/EIS states that the BDCP is incorporated by reference and there are many statements describing which BDCP models are included such as BDCP Chapter 4, pages 4-8. Given the stated integration of the two documents, why are some model results such as those for IOS and OBAN selectively excluded from the EIR/EIS analysis? Additionally, why are the results of the BDCP net effects analysis not explicitly incorporated into the EIR/EIS?</p>
20	EIR/EIS 11	186 Line 1	<p>Table 11-4. How is abundance defined with respect to the legend provided at the bottom of the table? Delta smelt currently are a low abundance species throughout the Delta. It appears that this is a risk assessment and not a reference to a numerical abundance value. How were the probability of occurrence and the abundance if present both determined and weighed for their relative contribution to risk?</p>

21	EIR/EIS 11	186 Line 1	Table 11-4 appears to have contradictory statements regarding the presence of covered fish at construction sites during the June 1 - October 31 in-water construction period. In the body of the table the white cells have included text that states the species life stage is "Not Present" while the legend at the bottom of the table states that the white cells indicate "unsure if present". Also, the statements in the alternatives text appears to conflict with both statements in the table. For example, on page 11-287, line 7 states that: "Longfin smelt are not expected to be present in the project construction zones during the expected in-water construction window (June1-October 31) (see Table 11-4)". Please address these issues.
22	EIR/EIS 11	203 Line 26	Both SacEFT and SALMOD were used for analyzing Impact AQUA-41 but only SacEFT is included in the list of models used in the analysis. Please explain why or provide both sets of results?
23	EIR/EIS 11	239 Line 38	Impact Aqua-1. What is the justification for the statement with respect to Delta smelt and temporary turbidity generated by construction activities that: "[a]ny exposure would not be adverse because of their preference for turbid condition..."(page 11-239). Why are local areas of artificially generated turbidity considered to be equal in effect to naturally generated turbidity? There are a number of physical and biological processes that are involved that are very different between the two sources of turbidity and it seems very unlikely that the turbidity generated by each of the two sources is equivalent. Turbidity is a measure of light extinction in the water column and not a direct measure of the processes that cause reduced light levels in water. These distinctions are noted on page 11-239, lines 13-16. Additionally, since it is acknowledged that the sediment generated during these activities is likely to release toxic substances, what is the basis for the statement that the temporary increase in turbidity would have no effect? Turbidity is an indirect measure of suspended sediment properties and the suspended sediment is likely to contain toxic substances.
24	EIR/EIS 11	1290 Line 36	Impact Aqua-1. What is the justification for the statement with respect to Delta smelt and temporary turbidity generated by construction activities that: "delta and longfin smelt have evolved and adapted to life in turbid waters...so increases in turbidity are expected to generally improve habitat conditions for these

			species"(page 11-239). Why are local areas of artificially generated turbidity considered to be equal in effect to naturally generated turbidity? There are a number of physical and biological processes that are involved that are very different between the two sources of turbidity and it seems very unlikely that the types of turbidity generated by the two sources are equivalent. Turbidity is a measure of light extinction in the water column and not a direct measure of the processes that cause reduced light levels in water. These distinctions are noted on page 11-239, lines 13-16.
25	EIR/EIS 11	1291 Line 24	Impact Aqua 2. See above comments for Aqua 1. Please address this issue.
26	EIR/EIS 11	1293 Line 7	Impact Aqua-3. There is some evidence that Delta smelt spawn over sandy substrate (EIR/EIS Appendix A, 11A-9, line 10). Given that significant amounts of sediment will be attracted to the North Delta Diversion (NDD) pumps during high sediment periods after initial pulse flows, that coarser sediment materials such as sand move as bed-load, that the NDD will cause local changes in hydrological energy gradients, that there will be dredging of sediment (upstream, downstream, and midstream) near each NDD pump, it seems reasonable to assume that deposition of sand will occur near the NDDs. This sandy substrate could potentially attract spawning Delta smelt and subject larvae to entrainment. Please explain how this potential issue being addressed.
27	EIR/EIS 11	1295 Line 24	Impact Aqua-4. This impact for Alternative 4 was determined to have a potentially significant impact on Delta smelt spawning and egg incubation habitat but concluded that the potential impacts would be offset by habitat restoration because the Habitat Suitability Index "in each subregion of the Plan Area is appreciably greater under the BDCP than under Existing Conditions" (note that this was the NEPA conclusion so the term "existing conditions" is assumed to be a typographical error and NAA was assumed to be the intended baseline). However, BDCP Appendix 5E, page 5.E-95, line 27 with respect to the Cache Slough subregion states: "It is unclear from this analysis if the overall increase in HUs [(Habitat Unit)] as a result of CM4 compensates for the decline in habitat suitability related to increasing temperatures for spawning delta smelt in Cache Slough." This seems to imply that climate change may render any habitat restoration ineffective so that

			habitat restoration may not fully mitigate for the negative impacts found under Impacts Aqua-4, especially given that the Cache Slough subregion is one of the two most important restoration areas for Delta Smelt a. This analysis stated that it was conducted in the same manner as that for Impact Aqua-4 for Alternative 1A, however, the analysis under Alternative 1A appear to have been based on a different set of analytical tools and as such its conclusions may not be directly applicable to Alternative 4. Please address this issue.
28	EIR/EIS 11	1295 Line 25	The results of BDCP Appendix 5E are cited to support the Habitat Suitability Index (HSI) and Habitat Unit (HU) approaches used in the EIR/EIS assessment. The methods described in BDCP Appendix 5E state that three physical parameters were included in the HSI but that turbidity could not be modeled and was held constant between scenarios and water-year type (page 5.E-72, line 10). Holding turbidity constant across the comparisons effectively eliminated it from the model as indicated in Figures 5.E.4-40 through 5.E.4-40. The same paragraph states that there were very small differences in temperature and concludes that the driving variable was salinity. Given that the subregions can be divided into brackish or fresh water habitat and the fresh water habitat never becomes brackish, the HSI analysis reduces to the effects of operations on salinity in the brackish region. On page 5.E-38, line 39 the methods state that monthly salinity was used for DCM2 stations within each subregion. Please explain how are average monthly salinity results relevant to evaluating the quality of habitat for Delta smelt? How are these results useful for rating habitat quality within a freshwater subregion such as Cache Slough where there is a resident population of Delta smelt?
29	EIR/EIS 11	1295 Line 38	Impact Aqua-5: The discussion states that the abiotic habitat methods are detailed in BDCP Appendix 5C.5.4.5.1. However, that section provides only results and not detailed methods and refers the reader to Feyrer and coauthors (2011) for method details. In referring to that paper it is not clear which of their detailed methods were actually used in the effects analysis and in the EIR/EIS. Please clarify.
30	EIR/EIS 11	1298 Line 15	Why are differences reported in hectares instead of acres? The remainder of both the BDCP and the EIR/EIS reports area in acres.

31	EIR/EIS 11	1301 Line 5	Impact Aqua-19. What is the justification for the statement with respect to longfin smelt and temporary turbidity generated by construction activities that longfin smelt: "are unlikely to be adversely affected by temporary increases in turbidity"(page 11-287). Why are local areas of artificially generated turbidity considered to be equal in effect to naturally generated turbidity? There are a number of physical and biological processes that are involved that are very different between the two sources of turbidity and it seems very unlikely that the types of turbidity generated by the two sources are equivalent. Turbidity is a measure of light extinction in the water column and not a direct measure of the processes that cause reduced light levels in water. These distinctions are noted in the delta smelt Impact Aqua 1 discussion on page 11-239, lines 13-16 which is specifically referenced in longfin smelt Impacts Aqua 19.
32	EIR/EIS 11	1315 Line 15	Impact Aqua-40. Summary. The EIR/EIS states that the effects of Alternative 4 on spawning and egg incubation habitat for winter-run Chinook salmon are uncertain. What criteria will be used by the BDCP to select one model result over the alternative results?
33	EIR/EIS 11	1315 Line 21	Impact Aqua-40. Flow. The brief summary of the effect of Alt 4 H3 vs the NAA on Sacramento River flow at Keswick Dam for winter-run Chinook ESU spawning and egg incubation habitat concludes that scenario H3 generally provides a benefit by increasing flows in May and June and results in no effects in later months. However, the results cited as supporting the summary statement (EIR/EIS Appendix 11C.4.1.1, Table 2, pages 220-222) indicate complex water-year dependent results for July through September that include no difference, a substantial number of decreases, and two increases. Please clarify.
34	EIR/EIS 11	1316 Line 9	Impact Aqua-40. Exceedence days. The methods for calculating the exceedence frequency are not clear. Additionally, it appears that the mathematical operations in Table 11-4-15 may be incorrect. For example, if we assume a hypothetical example with a score for the NAA of 41 days out of 150 and a score for scenario H3 of 38 days out of 100 then the "divide-by-zero" rule cannot be violated as you do not subtract 41-38 to get -3 and 150-150 to get 0 and then divide -3 by 0. Please clarify.

35	EIR/EIS 11	1317 Line 9	Impact Aqua-40. It appears that the results of Table 11-4-16 contradict those of Table 11-4-15 when they are compared using all of the water-years for a particular month. Please clarify.
36	EIR/EIS 11	1318 Line 5	Impact Aqua-40. Reclamation Egg Mortality Model. The methods and reporting values should be clarified in this section of the EIR/EIS and BDCP Appendix 5C.4. It is not clear if Table 11-4-17 is reporting daily mortality rates or annual mortality rates. It is also not clear how the daily time step data were used. Also, the statement that when the data are interpreted on an absolute scale that the increase in mortality would be negligible may not be true not based on a complete life cycle analysis. . A very small change in the rate of mortality could lead to a very large increase in the number of eggs killed.
37	EIR/EIS 11	1319 Line 4	Impact Aqua-40. SacEFT. The methods described for the SacEFT model are not clearly described making the results difficult to evaluate.
38	EIR/EIS 11	1319 Line 23	Impact Aqua-40. Scenario H1 vs. Scenario H3 and not NAA comparison. Generally, in the text of this section the results for Alternative 4 Scenario H1 were compared against Alternative 4 Scenario H3 instead of the NAA while the figures supporting the analysis provided the comparison with the NAA. While the text states that the effects of Scenario H1 were generally similar to those for Scenario H3 for May-September, Appendix 11C4.1.1 Table 2, page 222, indicates that Scenario H1 will have large flow effects in September of Wet and Above Normal water-years. Please clarify.
39	EIR/EIS 11	1321 Line 5	Impact Aqua-40. H3 vs. H4 and not NAA comparison. Generally, the text of this section compares the results for Alternative 4 Scenario H4 against Alternative 4 Scenario H3 instead of the NAA while the figures supporting the analysis provide the comparison with the NAA. Please address.
40	EIR/EIS 11	1322 Line 15	Impact Aqua-40. This analysis is based on the results of seven different model results: 1) Sacramento River flows; 2) Shasta Reservoir storage; 3) mean monthly water temperature; 4) days per month temperature exceedences; 5) total degree days; Reclamation Egg Mortality Model, and: 7) SacEFT. For Alternative 4 the CEQA conclusion is that the impacts are Less Than Significant while the NEPA effect is Not Determined. The basis for the Less Than Significant CEQA determination is not clear given that there was little

			correlation between the more general model results (Sacramento River flow, Shasta Reservoir storage, mean monthly water temperature) and the more specific model results. Additionally, it is not clear how the complex pattern of negative and beneficial effects under the more specific models assessed arrived at a Less Than Significant determination.
41	EIR/EIS 11	1326 Line 1	Impact Aqua-41. H3 Scenario. It appears that the analysis should have used a symmetrical period around the peak juvenile rearing period of August through January or explained why it chose an asymmetrical period of August through December (BDCP Appendix 5C.A, SacEFT attachment following table of references, Figure I.2, page 7). Additionally, this analysis of Scenario H3 does not clearly state which Sacramento River flow stations it is discussing ("upstream of Red Bluff") while the analysis of Scenario H1 appears to state that it is discussing the stations at Keswick and the Red Bluff Diversion Dam. Please address.
42	EIR/EIS 11	1326 Line 5	Impact Aqua-41. Flows. The analysis found that flows were up to 18 percent less than the NAA but concluded that the duration and magnitude of the reduction was not biologically significant without providing support for that determination. Please describe the standards used for this conclusion.
43	EIR/EIS 11	1326 Line 15	Impact Aqua-41. SacEFT Juvenile WUA for rearing. It is unclear from the descriptions of the methods exactly what the index represents (see SacEFT pages 59-60). Also, it is unclear what the basis is for the SacEFT determinations. Finally, the model was run with daily flow and temperature data from the SRWQM instead of the standard monthly time step. Using daily mortality data summed over a year as a quantitative result may violate the monthly time step rule stated in EIR/EIS Appendix 5A.4.6, page A31. Please address these issues.
44	EIR/EIS 11	1326 Line 17	Impact Aqua-41. SacEFT Juvenile Stranding Index. This index reflects the average proportion of habitat available on a particular day and is not a measure of the proportion of juveniles lost nor does it take into account the loss of total habitat area that would have occurred under ideal conditions (SacEFT pages 69-70). Please address.

45	EIR/EIS 11	1326 Line 22	Impact Aqua-41. There are no SALMOD data provided to evaluate the SALMOD results for winter-run Chinook smolt equivalent habitat-related mortality. Please provide such results. Also, both SALMOD and SacEFT use the same flow data downscaled from CALSIM monthly data to daily data as well as the same water temperature data from the SRWQM. The two models represent biological and physical processes differently so they should by design produce different results. What criteria will be used to select one model result over that of another model?
46	EIR/EIS 11	1326 Line 31	Impact Aqua-41. H1 Scenario. See H3 Scenario comments.
47	EIR/EIS 11	1327 Line 1	Impact Aqua-41. H4 Scenario. See H3 Scenario comments above.
48	EIR/EIS 11	2506 Line 3	In the NEPA and CEQA analyses, conclusions for Alternatives 4 and 8 appear to be treated differently with respect to a finding of significant effects of operations on spawning and egg incubation habitat. The Alternatives should be treated the same with respect to impacts assessments and potential adaptive management and mitigation. If adaptive management or other mitigation could be employed to avoid or reduce an impact, it should be proposed. Further, uncertainty should be treated consistently with the alternatives. For this analysis it appears that for CEQA purposes uncertainty for Alternative 4 yielded a less than significant impact and yielded a significant impact for Alternative 8. It appears that Alternative 8 impacts to spawning and egg incubation could be mitigated but that that mitigation would result in additional water supply impacts. This mitigation should have been proposed given the statement made under real-time operations in Chapter 3.4.1.4.5, page 3.4-27, line 36 that "operational decisions will take into account upstream operational constraints, such as coldwater pool management, instream flow, and temperature requirements."
49	EIR/EIS Appendix 5A	A22	The example shown of daily variations in north of Delta diversions (NDD) and bypass flows is for a wet year with very high flows. It would be illustrative to show similar charts for other year-types, particularly dry and critical years.

50	EIR/EIS Appendix 5A	A23	<p>The Appendix states that: “The CALSIM II simulations <u>do not</u> consider future climate change adaptation which may manage the SWP and CVP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the BDCP. Thus, the CALSIM II BDCP results represent the risks to operations, water users, and the environment in the absence of dynamic adaptation for climate change.”</p> <p>Because the CALSIM simulations don’t consider operational adaptation to climate change, they may overstate or understate the impacts and benefits associated with the alternatives and may make it difficult to differentiate between uncertain climate change effects and the effects of the alternatives. It also makes it difficult to determine to what extent potential impacts may be mitigated. The uncertainty associated with this issue should be clearly addressed in each impact assessment for which this issue may apply.</p>
51	EIR/EIS Appendix 5A	A28	<p>The appendix states that: “Reservoir inflow temperatures were derived from the available record of observed data and averaged by month. The mean monthly inflow temperatures are then repeated for each study year.” This assumption may lead to overestimating the amount of coldwater pool in warm or dry years.</p>
52	EIR/EIS Appendix 5A	A46	<p>The NDD diversions are modelled in 15 minute increments, and are set to only divert when downstream velocity is > 0.4 ft/sec. The graph on page 5A-A48 shows the NDD pumps being turned on and off on an hourly basis to meet this target. However, most pumps are not physically capable of that type of operations.</p>
53	EIR/EIS Appendix 5A	B6 Line 22	<p>The following statement is made beginning on Line 22:</p> <p>“SWP Banks pumping plant has an installed capacity of about 10,668 cfs (two units of 375 cfs, five units of 1,130 cfs, and four units of 1,067 cfs). The SWP water rights for diversions specify a maximum of 10,350 cfs, but the U. S. Army Corps’ of Engineers (ACOE) permit for SWP Banks Pumping Plant allows a maximum pumping of 6,680 cfs. With additional diversions depending on Vernalis flows the total diversion can go up to 8,500 cfs during December 15th – March 15th. Additional capacity</p>

			<p>of 500 cfs (pumping limit up to 7,180 cfs) is allowed to reduce impact of NMFS BO Action 4.2.1 on SWP.”</p> <p>The SWP water right permits for diversions at Banks authorize DWR to divert or redivert up to 10,350 cfs. From January 8, 1995, to February 6, 1995, diversions at the Banks pumping plant totaled 468,542 acre-feet at an average rate of 7,874 cfs, the largest amount taken during any 30-day period since the project was constructed. The permits have an expired “complete-use” date of December 31, 2009. As stated in our previous comments on the Second Administrative Draft EIR/EIS, DWR must file petitions to extend the “complete-use” date in its permits and the State Water Board must approve those petitions before additional use is authorized above the maximum amounts previously used. . DWR filed time extension petitions in 2009 to extend the permits to 2015. The petitions were publicly noticed and timely protested, but there has been no activity since the protests were received, including completion of necessary CEQA documentation to support the proposed change. This issue should be acknowledged in the EIR/EIS.</p>
54	EIR/EIS Appendix 5A	B39 Line 34	<p>The EIR/EIS states that “Stored water releases to meet the enhanced spring outflow requirement occurs only from Oroville, minimizing storage impacts to other reservoirs like Shasta and Folsom.” It seems highly unlikely that all additional spring outflows would come from Oroville. This assumption should be discussed.</p>
55	EIR/EIS Appendix 5A	B40 Line 7	<p>Regarding the D-1641 export-inflow ratio the appendix states: “In the Alternative 4 scenarios H1 and H3, however, this requirement is applied to the south Delta exports only, and the NDD is not included in the Delta inflow or the Delta exports computation used to determine this requirement. Conversely, in the Alternative 4 scenarios H2 and H4, this requirement is applied to the total Delta exports by including the north Delta diversion in the Delta inflow and the Delta exports computation used to determine this requirement.”</p> <p>This is inconsistent and makes the alternatives difficult to compare. To address this, a technical memorandum was prepared and included on page 5A-D149. The analysis re-ran scenarios H1 and H3 including the NDD in the E/I ratio and compared the results to the original model runs. Unfortunately, only a very small subset of the results were presented. The text states “the results</p>

			<p>from the sensitivity run for A4_ESO_ELТ with E/I ratio approach recommended by NMFS showed that on a long-term average, there are minor changes in the flow and storage operations compared to the A4_ESO_ELТ results included in the current effects analysis.”</p> <p>However, the long-term average doesn’t capture dry year effects or effects during specific months that may impact sensitive species. Without showing the full results of the study the analysis cannot be fully verified.</p>
56	EIR/EIS Appendix 5A	B97	<p>It is unclear what averaging period is proposed for the bypass flows on the Sacramento River. Will diversions be based on the monthly average flow, daily average flow, instantaneous flow, or some other metric? Without knowing what averaging period will be used it is not possible to assess the protectiveness of the proposed bypass flows.</p> <p>Flows at Freeport reverse occasionally at ebb tide under current conditions. If proposed tunnel diversions are based on an average flow rather than instantaneous flow, reverse flows at Freeport would likely become more common and more extreme in the period from July to November. Additionally, flows at Freeport upstream of the intakes are projected to decrease during that time period, as compared to existing conditions, which will exacerbate any potential reverse flow issue (Appendix 5A, page C-738). This issue should be addressed in the EIR/EIS and potential impacts mitigated.</p>
57	EIR/EIS Appendix 5A	5A.C.1285	<p>It is not clear if this graph is actually displaying salinity at Emmaton or if it is displaying salinity at Threemile Slough. Regardless, based on the model results, the chances of exceeding the D-1641 salinity standards at Emmaton increase dramatically. The chance of exceeding the 0.45 mmhos/cm standard in April increases from approximately 5 percent under existing conditions to approximately 35 percent under Alternative 4, with other months showing similar changes.</p>
58	EIR/EIS Appendix 8M	Section 3.1	<p>Appendix 8M section 3.1 states that discharges from point sources in North San Francisco Bay (i.e., refineries) that contribute selenium to Suisun Bay and the western Delta are expected to be reduced through a TMDL under development by the San Francisco Bay Regional Water Quality Control Board that is expected to result in decreasing discharges of selenium.</p> <p>The EIR/EIS should not presume the outcome of a</p>

			TMDL that has not been completed or adopted by the San Francisco Bay Regional Water Quality Control Board. Potential increases in upstream discharges of selenium associated with alternatives proposed in the EIR/EIS should be addressed by the project independent of the outcome of the TMDL currently under development. Increases in upstream discharge of selenium are a concern for downstream water quality.
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Implementing Agreement Specific Comments

	Chapter/ Appendix	Page/Line # or Section	Comment
59	IA	1.0 Page 1	<p>The Draft Implementing Agreement makes the following statement: “The United States Bureau of Reclamation (Reclamation) of the United States Department of the Interior is not a Party to this Agreement. References to Reclamation’s roles and responsibilities in this Agreement reflect those as set forth in the BDCP. There are no obligations on behalf of Reclamation established in this Agreement.”</p> <p>It is not clear from reading the BDCP n EIR/EIS what, if any, role USBR will have in the BDCP process. This should be clarified. The EIR/EIS should clearly describe the various approvals both DWR and USBR will need for the BDCP from the Water Boards and disclose any impacts and appropriate mitigation measures.</p>
60	IA	10.2.1.1 Page 25	The review process referred to in Section 15.8 refers to BDCP Chapter 7, Table 7-1 to determine which agency has final decision making authority. Table 7-1 doesn’t specifically address the Decision Tree process which does not change a conservation measure but instead results in the selection of one of the alternatives provided by the conservation measure. The document should state which agency has final decision making authority with respect to the Decision Tree process.
61	IA	10.2.1.2 Page 26, 10.2.2.2.2 Page 28, 10.3 and 10.4	The data and other information devolved through the Decision Tree adaptive management, and real time operations processes should be made readily available to the public to facilitate independent analysis and evaluation. Raw data should be included, and documentation of QA/QC processes should be clear and complete. Methods of analysis should be

			documented clearly so that analyses are reproducible. We recommend coordination with the California Water Quality Monitoring Council and Delta Science Program to ensure that data sharing is consistent with emerging community standards.
62	IA	10.2.1.2 Page 26	Step 3, part (iii) of the Decision Tree process provides that the Implementing Office will administer the process of interpreting the scientific results of the process and identifying a course of action with respect to the alternatives. The document should state what standards or risk assessment processes will be used to interpret the results and formulate the decision.
63	IA	9.5 Page 22	The document should define the terms “future plan or project”. Also, the term “Permittee” is defined in IA 3.46 and conflicts with the usage here.
64	IA	10.2.1 Page 24	The Implementing Agreement includes a discussion of Real-Time Operations, the Decision Tree Process and Adaptive Management. This discussion does not mention of the State Water Board’s continuing authority over the State Water Project and Central Valley Project water right permits as well as the ongoing periodic review process to update the Bay-Delta Water Quality Control Plan that may result in additional requirements set outside of the BDCP processes described here. A statement to this effect should be included in the document.
65	IA	10.2.2.1 Page 27	The third bulleted item states that real-time operations will be used to “maximize conservation benefits to covered fish species and maximize water supplies.” In contrast, BDCP Chapter 3.4.1.4.5, page 3.4-26, line 16 states that real-time operations will maximize water supply for SWP and CVP ... subject to providing the necessary protections for covered species.” The two documents should be edited to harmonize the potentially conflicting goals.
66	IA	10.2.2.2.3 Page 28	The IA states that “[a]bsent concurrence of the relevant agency directors, the disputed real-time operational adjustment will not be made.” The agency directors in the IA include the director of CDFW, the regional directors of the relevant federal fish and wildlife agencies, the director of DWR, and the regional director of USBR. In contrast, BDCP Chapter 3.4.1.4.5, page 3.4-27, line 28 states that “the decision will be made by the Regional Director of the relevant fish agency(s),

			given that the Directory of the project agency concurs that the change is within their authority.” This is also stated in Table 7-1. Both documents should be consistent.
67	IA	10.2.2.2.3 Page 28	The document should state how technical and jurisdictional issues will be resolved given that a real-time operational adjustment will not be made where there is no concurrence of the relevant agency directors.
68	IA	10.2.2.3 Page 28	The document should clearly define the term “specific parameter.” The term parameter is used in many different ways in BDCP 3.4.1.4.
69	IA	10.3.4	The document should clearly define the term “process” as it is used in multiple ways in the IA and its use with respect to the Adaptive Management Programs needs to be explicitly stated where the term occurs to eliminate ambiguity. For example, “AMP decision making process.”
70	IA	10.3.5.1.2 Page 34	The document should clearly define what the term “adaptive resources” means.
71	IA	10.3.7.1 Page 36	The document should be corrected. The parties’ commitments to funding the Supplemental Adaptive Management Fund are not specified in Chapter 8.
72	IA	10.3.7.2 Page 37	The document should describe the resources to be shared and the process for sharing the resources that are included in the second bulleted item.
73	IA	11.4.2.1 Page 43	The Adaptive Management Team should be involved in the process of evaluating the effectiveness of the Reserve Management Plan and revising the plan as necessary.
74	IA	13.1.1 Page 46	The document should clearly state the Authorized Entities’ share of the cost of the Supplemental Adaptive Management Fund and the Supplemental Resources Fund as those values are not stated in the BDCP.
75	IA	15.2.4.4	The document should be edited to harmonize this section with section 10.2.1.1, BDCP Chapter 3.6.3.5.1, and BDCP Chapter 7 as there are many conflicts between roles and appeals processes. The implementation of water operations in CMs is treated differently than the non-water operation sections of

			CMs in Chapter 7. The Decision Tree process has different rules. Finally, non-water operation sections of CMs prior to the end of the Decision Tree process are inadequately described. The document needs to be edited to clearly describe those sections.
76	IA	16.3.2	The document should clearly state how operations prior to the time that the NDDs become operational will be reported.
77	IA	22.0 Page 80	The document should define the term “non-participating”.
78	IA	22.6 Page 84	The last sentence of this section assumes that the Permittees will invoke the review process provided in section 15.8 but does not address the situation in which the Permittees do not invoke the review process. This sentence in the document should be modified to address this potential circumstance.

BDCP Plan General Comments

	Chapter/ Appendix	Page/Line # or Section	Comment
79	BDCP Chapter 5	General	The BDCP effects analysis process(which presumably carries over to the similar qualitative judgments in the EIR/EIS) appears to potentially misinterpret the coding of ranked data with numbers instead of letters as converting qualitative data to quantitative data (page 5.5-1, line 20). This issue appears to be further compounded by performing mathematical operations on the numerical codes for the ranked data as if the coded scores were quantitative ratio scale data. Please address.
80	BDCP 5	5.5.3-33 Line 19	In contrast to the BDCP Effects conclusion that there is generally limited change in physical attributes in upstream areas except for the Feather River (see Figure 5.5.3-4, page 5.5.3-43), the EIR/EIS found that the effect could not be determined (EIR/EIS ES-73, AQUA-43). Which is correct?

81	BDCP Chapter 6	6.4.2.2.4	Neither this section nor the modeling sections referred to in this section clearly describe how a drought is defined for purposes of defining changed and unforeseen circumstances. While the frequency and inflow standards (75% of median) are clear it is not clear how the median is calculated using the models. It appears that a drought may be defined differently than the current river index methods and that operations upstream of the rim dams may be included in the modeling. Please clearly state how modeling of drought conditions was conducted in the BDCP document.
82	BDCP Chapter 6	6.4.2.2.4	Is the median inflow defined differently for each of the Alternative Actions? Is the median inflow defined differently for each of the four scenarios (H1, H2, H3, H4) of Alternative 4, the preferred project? Please clearly state how median inflow is defined for each of the alternatives and scenarios in the document.
83	BDCP Chapter 6	6.4.2.2.4	Please state in the document (a table would be ideal) which of the BDCP Natural Communities are aquatic natural communities and which are terrestrial communities in the context of changed and unforeseen circumstances.
84	BDCP Chapter 6	6.4.3	Please clearly state in the document how drought conditions are defined and calculated for each of the action alternatives.
85	BDCP Chapter 6	6.4.3	Please clearly state in the document how median inflow will be calculated to determine if unforeseen drought circumstances exist during the ten-year Decision Tree period if Alternative 4 is adopted and none of the four scenarios (H1, H2, H3, H4) will be chosen until the end of the ten-year period.
86	BDCP Chapter 6	6.4.3	How is climate change incorporated into the calculation of inflow for purposes of calculating the median inflow to determine that unforeseen drought circumstances are impacting an aquatic natural community? Is the comparison between the NAA or Baseline Conditions versus the Action Alternative with climate change at year 2060 or the Action Alternative with climate change at the end of each water year? Please clarify and please clearly state in the document how climate change is incorporated and calculated for each of the action alternatives.

87	BDCP Chapter 6	6.4.3	The meaning of the phrase “original terms of the Plan” in the third bulleted item is ambiguous. The document should clearly define what this phrase means and provide examples of original terms.
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BDCP Plan Specific Comments

	Chapter/ Appendix	Page/Line # or Section	Comment
88	BDCP 3	3.4.1.4.5	Please describe how it will be possible to adequately test the alternative hypotheses of the Decision Tree within the 10-year time period especially if there is an inadequate representation of water year types and replicate conditions and habitat restoration during that time period? It appears that 10 years may be too short of a time period to assure that adequate data will be collected to dictate operational requirements for the following approximately 40 year period within the narrow range included in the Decision Tree process. As stated in previous comments, the State Water Board must make an independent determination of water project, water quality and other requirements needed to reasonably protect beneficial uses. Those requirements are subject to regular review and modification and as such may not conform to the proposed BDCP process.
89	BDCP 3	3.4.1.4.5	As stated above with regard to the IA, the data and other information devolved through the Decision Tree adaptive management, and real time operations processes should be made readily available to the public to facilitate independent analysis and evaluation. Raw data should be included, and documentation of QA/QC processes should be clear and complete. Methods of analysis should be documented clearly so that analyses are reproducible. We recommend coordination with the California Water Quality Monitoring Council and Delta Science Program to ensure that data sharing is consistent with emerging community standards.
90	BDCP 3	3.4.1.4.5	We suggest adding an introductory paragraph clarifying the language and organization for this section.
91	BDCP 3	3.4.1.4.5	CM2 should be referenced in most of the discussion as Fremont Weir operations are included in this section.

92	BDCP Appendix 5C.4.5.2.1	5C.4-118 Line 24	Delta Smelt Abiotic Habitat Index. There are numerous statements critical of the results of Feyrer and coauthors (2011) including a comment that the actual habitat requirements of Delta smelt are more complex than X2. That complexity is actually acknowledged by Feyrer and coauthors (2011). The authors' approach was designed to be a scenario analysis to investigate the potential effects of climate change on Delta smelt physical habitat. That type of climate change analysis is difficult to accomplish even using data restricted to the physical environment as was found to be the case during BDCP modeling of HSI (BDCP Appendix 5E) where turbidity could not be modeled but was instead held constant. The statement that "[i]t is unclear what portion of that fractional variance is actually due to turbidity, rather than salinity" appears to contain three errors. GAMs compute estimates of deviance not variance and Secchi depth and specific conductivity were analyzed not turbidity and salinity.
93	BDCP Appendix 5C	4-24 Line 4	The statement that immigration, spawning, and emigration for winter-run Chinook is assumed to be December through August appears to be incorrect as these life stages occur over the entire year.
94	BDCP Appendix 5E	38	A single monthly temperature and salinity value was used for each ROA to model the Habitat Suitability for each fish species. How does this accurately represent the known variability of Delta smelt habitat?
95	BDCP Appendix 5E	40 Line 43	Turbidity was held constant. How does this accurately represent the known variability of Delta smelt habitat?
96	BDCP Appendix 5E	41 Line 23	The extent of physical habitat used in the analysis is the maximum available acreage without consideration of potential constraints of limited tidal energy. This should be noted in the analysis.

97	BDCP Appendix 5E	95 Line 27	<p>The document states that: "The decrease in HSI for the egg-larvae stage is the result of increased water temperatures in the subregion by the LLT primarily due to climate change impacts. There was almost no change in the HSI value for temperature over the period due to covered activities alone reflecting the lack of impact of the BDCP on temperature in Cache Slough (Figure 5.E.4-40). It is unclear from this analysis if the overall increase in HUs as a result of CM4 compensates for the decline in habitat suitability related to increasing temperatures for spawning delta smelt in Cache Slough." Please provide data to support this conclusion. While Figure 5.E.4-40 shows that BDCP does not affect temperature it does not provide data regarding water temperature increases due to climate change. It does show that BDCP will cause increases in salinity in 3 out of the 5 water-year types.</p>
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EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

October 30, 2015

BDCP/California WaterFix Comments
P.O. Box 1919
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Comments on the Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS)

The State Water Resources Control Board (State Water Board) and the Central Valley and San Francisco Bay Regional Water Quality Control Boards (Regional Water Boards) (collectively Water Boards) appreciate the opportunity to comment on the public draft of the Bay Delta Conservation Plan/California WaterFix (BDCP/Cal WaterFix) Partially Recirculated Draft Environmental Impact Report/Environmental Impact Statement (RDEIR/EIS).

The mission of the Water Boards is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The State Water Board administers water rights in California including water rights for the Department of Water Resources' (DWR) State Water Project (SWP) and the U.S. Bureau of Reclamation's (USBR) Central Valley Project (CVP). The Water Boards also have primary authority over the protection of California's water quality. The BDCP/Cal WaterFix will require both water right and water quality approvals from the Water Boards. Accordingly, the Water Boards are responsible agencies for the project pursuant to the California Environmental Quality Act (CEQA). Specifically, activities that may require approval by the Water Boards include, changes to the SWP's and CVP's points of diversion of water and other provisions of their water rights, water quality certifications pursuant to Clean Water Act section 401, National Pollutant Discharge Elimination System permits, and potentially other water quality approvals. The State Water Board has received and is currently processing the water right change petition and the water quality certification for the Cal WaterFix, the current preferred project. The RDEIR/EIS and Final EIR/EIS will inform these processes.

In our role as responsible agencies, the Water Boards previously reviewed and provided comments on the Notices of Preparation, administrative and public draft EIR/EISs, and provided other written and oral input over the course of the BDCP/Cal WaterFix development process. To the extent that previous comments from the Water Boards have not been fully addressed, they are incorporated by reference in this comment letter and are not reiterated. In addition, as discussed in the Water Boards' previous comment letters, additional information may be needed to support Water Board approvals beyond what is included in the above documents. Following are specific comments on the RDEIR/EIS.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

Optimization of Alternatives

As noted previously, only the preferred alternative for this project has been optimized to enhance the performance of the alternative for environmental and water supply purposes. The lack of optimization of the other alternatives should be noted and where possible addressed. For example, only Alternative 4A is modeled using the current Emmaton salinity compliance point while the other alternatives use a Threemile Slough compliance point. Additionally, while Cal WaterFix-specific alternatives 2D and 5A represent high and low levels of construction and infrastructure impacts, no alternative was proposed that would optimize operational conditions for environmental purposes. To illustrate that there is additional potential for providing environmental benefits without impacting cold water pool resources and compliance with water quality requirements, the State Water Board requested that a scenario that increases Delta outflows without impacting cold water pools be evaluated. This scenario illustrates that more outflow can be provided without impacting cold water pools. However, given the limited time for this scenario analysis, it was also not optimized or developed into an alternative.

Continued Involvement of the Water Boards

The descriptions of the various alternatives provides that flow requirements and other operational requirements may be set and modified during interim operations under the decision tree process, during initial operations after the north Delta diversions begin, during the Real-Time Operational Decision-Making Process, during ad hoc adaptive management actions, and within the context of a formal Adaptive Management and Monitoring Program. The document does not describe a role for the State Water Board, but the State Water Board will have a role in these decision-making processes, and may establish additional requirements through its water right authorities.

Water Transfer Assumptions The assumptions for potential water transfers that may occur due to the BDCP/Cal WaterFix should be reconsidered in the context of the current drought. The analysis should consider that the magnitude of transfers and other water exchanges that did or could have occurred in the drought would occur more often if there were more pumping capacity under the BDCP/Cal WaterFix.

Assumptions for Water Demand and Reliability

The Cal WaterFix baseline No Action Alternative (NAA)-2025 assumes increased north of Delta diversions of approximately 483 thousand acre-feet (TAF)/year and maximum contract amounts for SWP south of Delta municipal and industrial demands regardless of hydrological conditions without the project. The magnitude of those assumed demands is unlikely to be realized by 2025, and to some degree may occur because of the additional water supply reliability provided by the Cal WaterFix. To the extent that the magnitude of these factors is caused by the Cal WaterFix or the assumptions are simply too large, the effects of action alternative such as Alternative 4A will be underestimated and masked. These assumptions should be revisited.

Uncertainty and Scenario Analysis vs. Prediction of Outcome

The level of uncertainty associated with the modeling should be clearly articulated in the impacts analysis. There is a large degree of uncertainty regarding the exact effects of the project due to a number of factors. However, this is not always clear in the RDEIR/EIS. The effects analysis frequently does not follow the guidelines for use of output from physical and biological models. Generally, those issues arise either when a particular analysis fails to distinguish between modeling as a decision support tool versus modeling to establish predictive

point values or when the analysis rescales physical model output from a monthly time step to a daily or hourly time step for input to biological models. The comparative analysis approach should have been applied for every analysis.

Downstream Water Quality, Noncovered Fish, and Natural Communities

Downstream effects of the alternatives on Suisun Bay, Carquinez Straight, San Pablo Bay, and San Francisco Bay should be further analyzed and the methods used in the analyses should be consistent with accepted methods that have been used to model and measure the effects of changing water export timing, volume, and rate on salinity, water quality, and aquatic and terrestrial biological resources throughout the entire Bay-Delta ecosystem. The effects analysis conclusion that the change in Delta outflow under either Alternative 4 or Alternative 4A would have no measureable effect on San Francisco Bay salinity because the change would be two to three orders of magnitude lower than the tidal flow mischaracterizes the bidirectional flow of the tides and the unidirectional Delta outflow. Neither quantitative nor qualitative model results were provided to support the conclusion. The UnTrim model was developed specifically to conduct this type of analysis and was extensively used in the BDCP/Cal Water Fix analyses of water quality and X2.

Stockton Ship Channel Aeration Continued Funding

The staff report for the low dissolved oxygen Total Maximum Daily Load (TMDL) in the Stockton Ship Channel identified three causes for the impairment. One of these was the magnitude of San Joaquin River flow entering the channel. Alternative 4, the original preferred BDCP alternative, included Conservation Measure 14. Conservation Measure 14 committed to contribute funding to maintain and operate the experimental aeration device as mitigation for altering San Joaquin River flow. Alternatives 4A, 2D and 5A, while continuing to manipulate channel flow in a manner similar to Alternative 4, no longer includes a commitment to share in the cost of aeration. The RDEIR/EIS justifies this decision by noting that the impact of the project is less than significant because of the aerator. The aerator is being funded on a voluntary basis by others and may not be present in the future should they decide to stop contributing funds. If this occurs, then the lack of oxygen in the channel could again block the fall return of upstream migrating adult chinook salmon. We recommend that all alternatives commit to contributing funding for continued aeration or other measures to address any impacts of the project on dissolved oxygen conditions.

Cache Creek Settling Basin Improvements

The Water Boards understand that the BDCP Alternative 4 that includes habitat conservation measures beyond the mitigation needed for the Cal WaterFix is no longer the preferred project in the RDEIR/EIS. However, to the extent that this and other BDCP alternatives are still evaluated and may carry over into the EcoRestore effort, the Water Boards recommend that commitments to improve the Cache Creek Settling Basin be made to mitigate for expected increases in mercury fish tissue concentrations from restoration efforts. The Delta Methyl Mercury TMDL report estimated that 56 percent of all inorganic mercury loads entering the Delta came from the Cache Creek drainage. Half of this load is trapped in the Cache Creek Settling Basin while the rest is exported to the Yolo Bypass and downstream Delta. The Methyl Mercury TMDL Control Program recommended that improvements be made to the Cache Creek Settling Basin to increase the trapping efficiency and decrease mercury exports.

Thank you for the opportunity to comment on the RDEIR/EIS. If you have any questions concerning this matter, please contact me at diane.riddle@waterboards.ca.gov or (916) 341-5297.

Sincerely,

ORIGINAL SIGNED BY

Diane Riddle
Environmental Program Manager

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STATE WATER RESOURCES CONTROL BOARD

IN THE MATTER OF EVIDENTIARY
HEARING REGARDING WATER RIGHT
CHANGE PETITION FOR THE
CALIFORNIA WATERFIX PROJECT

DECLARATION OF
KYLE OCHENDUSZKO, P.E.

DECLARATION OF KYLE OCHENDUSZKO, P.E.

I, Kyle D. Ochenduszeko, P.E. declare as follows:

1. Below is a summary of my work experience germane to the WaterFix change petition hearing:
 - a. From June 2011 through March 2013 I was a Water Resource Control Engineer within the State Water Resources Control Board (State Water Board) Division of Water Rights (Division) working on projects within the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) including Sacramento River temperature management and Bay-Delta water quality control planning efforts.
 - b. From March 2013 through March 2016, I worked with the California Department of Public Health and the State Water Board's Division of Financial Assistance to help communities fund drinking water infrastructure projects.

- 1 c. From March 2016 to January 21, 2018, I was a Senior Water Resource Control
2 Engineer in the Division. I was responsible for overseeing the activities of Division
3 staff related to the WaterFix change petition hearing and other projects within the Bay-
4 Delta.
- 5 d. On January 22, 2018, I was promoted to Supervising Water Resource Control
6 Engineer and am currently on temporary assignment to help oversee Division activities
7 related to the WaterFix change petition hearing.

8 2. Based on my experience and position at the State Water Board, I have personal knowledge of
9 the following:

10 3. The State Water Board is the primary state agency charged with implementing the legal
11 mandates of the California Water Code and for administering programs to promote the
12 reasonable and beneficial use of California's waters. In discharging these duties, the State
13 Water Board exercises regulatory authority over both the allocation of water resources (water
14 rights) and the discharge of waste to waters of the state (water quality). In this capacity, the
15 State Water Board frequently acts as a California Environmental Quality Act (CEQA)
16 responsible agency when a state or local agency proposes a project that requires the State
17 Water Board's approval.

18 4. When acting as a CEQA responsible agency, the State Water Board is responsible for
19 providing written as well as informal comments on CEQA documents prepared by the CEQA
20 lead agency that describe a proposed project's potential impacts to the environment, including
21 water resources. Part of the State Water Board's role as a CEQA responsible agency involves
22 working with the CEQA lead agency and other responsible and trustee agencies to ensure that
23 CEQA documentation associated with the project provides sufficient detail on an appropriate
24 range of alternatives. The State Water Board routinely works with CEQA lead agencies to
25 ensure that CEQA documentation analyzes a sufficiently broad range of alternatives to
26 provide the State Water Board with the flexibility to issue an approval upon conditions that
27 ensure the reasonable protection of beneficial uses of water resources.

- 1 5. In an adjudicative water right proceeding, the water rights hearing team advises and provides
2 technical and legal support to the hearing officers so that they can conduct the hearing and
3 make decisions in a manner that is fair, efficient, and legally defensible. In this capacity, the
4 hearing team implements many precautionary measures to prevent unlawful ex parte
5 communications. For example, even though the prohibition against ex parte communications
6 applies only to communications between hearing participants and decision makers such as the
7 hearing officers, hearing team staff also refrain from substantive conversations or written
8 communications with hearing participants to avoid inadvertently acting as a conduit for ex
9 parte communications to hearing officers.
- 10 6. At times, it has been important for me, or other hearing team staff, to communicate directly
11 with a hearing party regarding a non-substantive hearing issue. Examples of these types of
12 communication are detailed below:
- 13 a. In May of 2016, I corresponded with Department of Water Resources (DWR)
14 representatives multiple times to ensure modeling data produced by DWR related to
15 the WaterFix change petition hearing was electronically transferred to the State Water
16 Board. I needed to ensure DWR modeling data was posted correctly on the State
17 Water Board's WaterFix change petition hearing website. These conversations were
18 strictly about posting information DWR generated on the State Water Board's website;
19 I did not provide comments based on the substance of these files. These
20 communications were disclosed on December 18, 2017, and are available on the State
21 Water Board's WaterFix change petition website:
22 [https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california
23 waterfix/water_right_petition.shtml](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/water_right_petition.shtml).
- 24 b. During July of 2016, I exchanged email correspondence with Brian Heiland from
25 DWR. Mr. Heiland requested to reserve a room in the California Environmental
26 Protection Agency Headquarters Building (CalEPA building) for DWR's use during
27 the WaterFix change petition hearing. Since the State Water Board could not offer the
28 same opportunity to use office space in the CalEPA building to all hearing parties, I
denied his request. These communications were disclosed on December 18, 2017, and
are available on the State Water Board's WaterFix change petition website:
[https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california
waterfix/water_right_petition.shtml](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/water_right_petition.shtml).
7. To the best of my recollection, I attended meetings with DWR staff and individuals from the
CEQA consulting firms retained by DWR on the following days: April 21, May 26, June 10,

1 June 16, June 24, July 14, September 22, and October 4, 2016. I attended these meetings in
2 my capacity as a staff person carrying out the State Water Board's role as a CEQA
3 responsible agency for the California WaterFix project proposed by DWR.

4 8. At these meetings, I and other State Water Board staff in attendance stated that DWR's CEQA
5 document may not be adequate for the State Water Board's consideration as part of its
6 responsibilities as a CEQA responsible agency because it did not appear to analyze a
7 sufficient range of alternatives. Specifically, I and other State Water Board staff opined that
8 the range of project alternatives did not include project alternatives with operating conditions
9 that would maximize water quality protection in the Bay-Delta without adversely affecting
10 water quality upstream. To address potential impacts to fish and flow, State Water Board staff
11 requested that DWR's CEQA document analyze a modeling scenario that included higher
12 Bay-Delta outflow with no impacts to water stored in upstream reservoirs needed for river
13 temperature management. State Water Board staff in attendance also indicated that if this
14 type of analysis was not included, the State Water Board may need to prepare a supplemental
15 CEQA document that analyzed this type of alternative as part of its CEQA review process.

16 9. At each of the meetings identified above, staff from the State Water Board, DWR, and the
17 CEQA consulting firms discussed CALSIM II modeling scenarios with the aim of providing a
18 CEQA analysis adequate to support a range of potential State Water Board conditions with
19 minimal impact to water quality. DWR staff and the CEQA consultants ran and analyzed
20 certain modeling scenarios requested by State Water Board staff and requested feedback.
21 These follow-up requests and this feedback prompted further meetings between State Water
22 Board staff, DWR staff, and the CEQA consultants, culminating in the preparation by DWR
23 and the consultants of the modeling and analysis which is now referred to as "Appendix 5E
24 Supplemental Modeling Related to the State Water Resources Control Board" in the 2016
25 Final Bay-Delta Conservation Plan/California WaterFix Environmental Impact
26 Report/Environmental Impact Statement.

27 10. The boundary analysis approach used by DWR in its case-in-chief in Part 1A of the WaterFix
28 change petition hearing and later included in Appendix 5E of the CEQA document was a


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surprise to me. The first time I learned about the boundary analysis approach was reading DWR's written testimony submitted in Part 1A of the hearing.

11. At the above referenced meetings, none of the participants discussed the key hearing issues in the water right change petition hearing for the WaterFix project. Nor did any of the meeting participants discuss any aspect of the preparation or submittal of exhibits or testimony in WaterFix change petition hearing. State Water Board staff did not discuss or provide any indication regarding what the hearing officers or the State Water Board more generally would find acceptable or preferable. We did not discuss the change petition or its associated water right hearing. I did not share the substance of these meetings, or any handouts, with hearing officers or State Water Board Members.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: 02/06/2018



Kyle D. Ochendusko, P.E.
Supervising Water Resource Control
Engineer
Division of Water Rights
State Water Resources Control Board