Reclamation District 830
450 Walnut Meadows Drive
Oakley, California 94561
Phone: 925-625-2279
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October 28, 2015

U. S. Mail
BDCP/California WaterFix Comments
P.O. Box 1919
Sacramento, CA 95812

Email: BDCPComments@icfi.com

SUBJECT: Comments on the Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS)

Dear Representative:

Reclamation District 830 (RD 830) has reviewed the Partially Recirculated Draft Environmental Impact Report/Environmental Impact Statement (RDEIR/EIS) for the Bay Delta Conservation Plan/California WaterFix. Though the name of the project document has changed there are no substantive changes to the content of document that address our previous comments made to the DEIR/EIS for the Bay Delta Conservation Plant. Hence the comments previously made to the DEIR/EIS are still relevant and are our comments to the RDEIR/EIS. Our previous comments dated July 28, 2014 are attached for reference.

This concludes RD 830's response to the Partially Recirculated DEIR/DEIS. Please contact David Dal Porto, President of RD 830, if you have any questions. Thank you for your attention to this letter.

Sincerely,
RECLAMATION DISTRICT 830

David Dal Porto
President RD 830

Attachment

KEQRC 2426

Reclamation District 830
450 Walnut Meadows Drive
Oakley, California 94561
Phone: 925-625-2279
Fax: 925-625-0169

July 28, 2014

U. S. Mail
BDCP Comments
Ryan Wulff, NMFS
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Email BDCP.Comments@noaa.gov

SUBJECT: Comments on the BDCP DEIR/DEIS

Dear Mr. Wulff:

Reclamation District 830 (RD 830) is pleased to submit the following comments on the Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) for the Bay Delta Conservation Plan (BDCP).

Comment 1: Alternatives development in Chapter 3 of the Bay Delta Conservation Plan Draft EIR/EIS is inadequate, and failed to consider a full range of alternatives. A full range of statewide alternatives such as the increased use of recycled water, implementation of desalinization facilities, water conservation methods, and modified farming/cropping practices to reduce reliance on surface water supplies should have been included and analyzed in the range of alternatives developed.

Comment 2: The California Environmental Quality Act (CEQA) provides that the project description for the DEIR/DEIS for the BDCP must include all relevant parts of the BDCP, **including reasonably foreseeable future expansion or other activities that are part of the BDCP** (Emphasis added.) *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal. (1988) 47 C3d 376.* CEQA also requires that the lead agency, in this case the BDCP Proponents, may not split the BDCP, a single large project, into small pieces so as to avoid environmental review of the entire project. *Orinda Ass'n v Board of Supervisors* (1986) 182 CA 3d 1145, 1171. The DEIR/DEIS fails to meet this standard and therefore is inadequate because the project description does not include nor does the DEIR/DEIS analyze the 2014 Drought Emergency Temporary Rock Barriers, Steamboat and Sutter Sloughs and False River, California, DWR March 2014, Sheets 1 – 15 ("Barriers").

These Barriers are both reasonably foreseeable and part of the BDCP for several reasons, including: (1) during the 1976-77 drought, rock barriers were placed in several Delta

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channels, including Sutter Slough and Dutch Slough,[1] and (2) these barriers are addressed in DWR, Delta Drought Emergency Barriers, Administrative Draft, April 2009. Even if the Barriers are not explicitly included in the Project Description of the BDCP DEIR/DEIS, they are *de facto* an integral part of the BDCP. As the BDCP DEIR/DEIS acknowledges in Chapter 8 that increases in salinity at multiple locations within the Delta will occur as part of the project, the BDCP DEIR/DEIS must analyze the need for rock barriers as part of the project. Although sometimes described with the adjectives "temporary" or "emergency," unfortunately these barriers are likely to become, especially in the western Delta, permanent, routinely used defenses against salinity intrusion in response to implementation of the BDCP and California's cycle of recurring droughts. CEQA demands that the DEIR/DEIS analyze the Barriers because they are both reasonably foreseeable and activities that are part of the BDCP. To allow the Barriers to be analyzed separately in other CEQA documents constitutes impermissible piece-mealing.[2]

To state it in concrete terms, the authors of the BDCP DEIR/DEIS must revise Chapter 8: Water Quality in order to analyze the short and long term impacts on salinity in the western Delta of the installation of the Barriers. In particular, the BDCP DEIR/DEIS authors must analyze the impacts of the installation of barriers as a result of the implementation of the BDCP as well as how barrier installations in response to future droughts would change once the BDCP is implemented.

Comment 3: The DEIR/DEIS does not adequately analyze, in a focused, specific and coherent manner, the impact of the salinity intrusion which will be caused by the BDCP on groundwater wells on Jersey Island as wells as the riparian and appropriative water rights held by various entities in the western Delta. These entities include but are not limited to RD 830.

RD 830 maintains the levees on Jersey Island and is the holder of a riparian right to divert water from the San Joaquin and False Rivers, Piper, Taylor and Dutch Sloughs. The water right License No.1310, Face Value 14,560 acre-ft/year.

The DEIR/DEIS presents several discrete, disparate discussions on the subject of salinity intrusion in the western Delta. For example, Appendix 3E discusses Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies. In Appendix page 3E-3 in Section 3E.2.2, the DEIR/DEIS discusses Salinity/Seawater Intrusion. In Chapter 8, Water Quality, the DEIR/DEIS contains numerous references to EC (electrical conductivity) objectives as measured at Jersey Point. Chapter 8 at pages 8-562 and 563 discusses NEPA Effects and presents CEQA conclusions at pages 8-563 and 564.

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[1] Protecting Water Supplies and Delta Water Quality with Emergency Drought Barriers, DWR, March 2014, p.1.

[2] A lead agency may not split a single large project into small pieces so as to avoid environmental review of the entire project. *Orinda Ass'n v Board of Supervisors* (1986) 182 CA 3d 1145, 1171.

However, as previously noted the DEIR/DEIS does not adequately analyze the impact of the salinity intrusion caused by the BDCP on the riparian and appropriative water rights held by various entities in the western Delta.

Comment 4: At page 29-20, lines 12 through 21, the DEIR/DEIS states:

> **Resilience/Adaptation**
>
> The BDCP alternatives, with the exception of Alternative 9, would not add resiliency to existing levees; levee fragility would remain high and increase with time as in the No Action/No Project Alternative. However, BDCP Alternatives 1A–8 would provide additional adaptability to catastrophic failure of Delta levees. By providing an alternate conveyance route around the Delta, Alternatives 1A–8 provide a mechanism to continue making water deliveries to SWP/CVP contractors and local and in-Delta water users with conveyance interties even if the Delta were temporarily disrupted by a catastrophic levee failure. Alternative 9 adds additional resiliency to the Delta by strengthening and reinforcing levees critical to the through-Delta conveyance route, however, this alternative does not increase the adaptive capacity of the system.

RD830 does not dispute this statement. However, the DEIR/DEIS should, but unfortunately does not, analyze the impacts of "providing an alternate conveyance route around the Delta" on the availability and willingness of the state legislature and State Department of Water Resources (DWR) to provide funding to local reclamation districts for ongoing levee repair and maintenance. In other words, the availability of an alternative conveyance route around the Delta could potentially serve as a disincentive for DWR's funding of levee repair and maintenance because "worst case," in the event of levee failure and salinity intrusion into the Delta, there is an alternative means to route fresh water around rather than through the Delta.

Comment 5: The Draft EIR/EIS analysis assumes habitat restoration will be implemented and operating as fully intended under both the Early Long Term and Late Long Term scenarios. Even if the land is acquired for the proposed projects, habitat restoration is a time required process. Further, it is possible, if not probable, that North Delta Diversion (NDD) could be constructed and operate for an extended period of time without the habitat in place. The effects of NDD operations without habitat could have detrimental impacts, and should be quantified. For these reasons the BDCP should analyze the effects of the NDD to assess both the short term and long term impacts without the habitat in place. The BDCP should also analyze the effects of the NDD to assess both the short term and long term impacts without climate change. In the event the climate change assumptions are inaccurate for either timing or magnitude, the incremental impact of the NDD should be known. These analyses should be performed with updated CalSim II operations and DSM2 hydrodynamics models. Appendix A provides a Technical Memorandum prepared by MBK Engineers that further discusses this comment.

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This concludes RD 830's comments on the DEIR/DEIS. Please contact Tom Williams, President of RD 830, if you have any questions. Thank you for your attention to this letter.

Sincerely,
RECLAMATION DISTRICT 830

Tom Williams

Tom Williams
President RD 830

Attachment

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APPENDIX A

MBK ENGINEERS TECHNICAL MEMORANDUM

KCWRC246

MBK ENGINEERS

Water Resources • Flood Control • Water Rights

TECHNICAL MEMORANDUM

DATE: July 17, 2014

TO: Reclamation District No. 830, Jersey Island

FROM: Nate Hershey, Gary Kienlen, Patrick Ho, and Walter Bourez

SUBJECT: Technical Comments on Bay-Delta Conservation Plan Modeling

This technical memorandum is a summary of MBK Engineers' findings and opinions on the hydrodynamic modeling performed in support of the draft environmental document for the Bay-Delta Conservation Plan (BDCP) for Reclamation District No. 830. The results of that modeling are summarized in Appendix 5A to the draft BDCP EIR/EIS.

This review of the BDCP modeling focuses on water flow, stage, flow velocity, and water quality in the vicinity of Jersey Island.

No Action Alternative

Assumptions used in water operations modeling in CalSim II and in Delta hydrodynamics in DSM2 for the BDCP No Action Alternatives (NAA) are defined in the December 2013 Draft BDCP[1] and associated draft EIR/S. Those assumptions include changes to hydrology caused by climate change.

Climate Change

Analysis presented in the BDCP draft plan and draft EIR/EIS attempts to incorporate the effects of climate change at two future climate periods: Early Long Term (ELT) at approximately the year 2025; and Late Long Term (LLT) at approximately 2060. Although BDCP modeling includes both the ELT and LLT, the EIR/EIS relies on the LLT and only includes the ELT in Appendix 5. As described in the BDCP draft plan and draft EIR/EIS[2], other analytical tools were used to determine anticipated changes to precipitation and air temperature that is expected to occur under ELT and LLT conditions. Projected precipitation and temperature were then used to determine how much water is expected to flow into the upstream reservoirs. These time-series were then input to the CalSim II model to perform water operations modeling and determine Delta inflow, outflow, and exports.

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[1] The detailed assumptions are stated in BDCP draft EIR/EIS Appendix 5A.

[2] BDCP EIR/EIS Appendix 5A, Section A and BDCP HCP/NCCP plan Appendix 5.A.2

A second aspect of climate change, the anticipated amount of sea level rise, is incorporated into the CalSim II model by modifying a subroutine that determines salinity within the Delta based on flows within Delta channels. Sea level rise is evaluated in greater detail through use of DSM2 using output from CalSim II. Effects of sea level rise will manifest as a need for additional outflow when Delta water quality is controlling operations to prevent seawater intrusion. In this technical memorandum, we do not critique the climate change assumptions themselves[3], we instead focus on effects of BDCP by comparing with project modeling to without project modeling.

There are three without Project ("baseline" or "no action") modeling scenarios used for the BDCP modeling analysis: No Action Alternative (NAA)[4], No Action Alternative at the Early Long Term (NAA – ELT), and No Action Alternative at the Late Long Term (NAA –LLT). Assumptions for NAA, NAA-ELT, and NAA-LLT are provided in the Draft EIR/EIS's modeling appendix[5]. The only difference between these scenarios is the climate-related changes made for the ELT and LLT conditions (Table 1).

Table 1. Scenarios Used to Evaluate Climate Change

	Climate Change Assumptions	
Scenario	Hydrology	Sea Level Rise
No Action Alternative (NAA)	None	None
No Action Alternative at Early Long Term (NAA-ELT)	Modified reservoir inflows and runoff for expected conditions at 2025	15 cm
No Action Alternative at Early Long Term (NAA-LLT)	Modified reservoir inflows and runoff for expected conditions at 2060	45 cm

Description of the BDCP Project

The BDCP contemplates a dual conveyance system that would move water through the Delta's interior or around the Delta through an isolated conveyance facility. The BDCP CalSim II files contain a set of studies evaluating the projected operation of a specific version of such a facility. Each Alternative was imposed on two baselines: the NAA-ELT scenario and the NAA-LLT scenario. The BDCP Preferred Alternative, Alternative 4, has four possible sets of operational criteria, termed the Decision Tree. Key components of Alternative 4 ELT and Alternative 4 LLT are as follows:

> The same system demands and facilities as described in the NAA with the following primary changes: three proposed North Delta Diversion (NDD) intakes of 3,000 cfs each; NDD bypass flow requirements; additional positive OMR flow requirements and elimination of the San Joaquin River I/E ratio and the export restrictions during Vernalis Adaptive Management Program; modification to the Fremont Weir to allow additional seasonal inundation and fish passage; modified Delta outflow requirements in the spring and/or fall (defined in the Decision

[3] This should not be read to imply that climate change assumptions are reasonable or considered correct or incorrect; the limited review reflects the scope of this memorandum.
[4] NAA is also called the Existing Biological Conditions number 2 (EBC-2) in the Draft Plan.
[5] BDCP EIR/EIS Appendix 5A, Section B, Table B-8.

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Tree discussed below); relocation of the Emmaton salinity standard; redefinition of the E/I ratio; acquiring 25,000 acres and 65,000 acres of in-Delta lands for ELT and LLT environments respectively for habitat restoration; and removal of current permit limitations for the south Delta export facilities. Set within the ELT environment.

The changes (benefits or impacts) of the operation due to Alternative 4 are highly dependent upon the assumed operation of not only the NDD and the changed regulatory requirements associated with those facilities, but also by the assumed integrated operation of existing CVP and SWP facilities. The modeling of the NAA Scenarios introduces significant changes in operating protocols suggested primarily to react to climate change. The extent of the reaction does not necessarily represent a likely outcome, and thus the Reviewers have little confidence that the NAA baselines are a valid representation of a baseline from which to compare an action Alternative. However, a comparison review of the Alt 4 to the NAA illuminates operational issues in the BDCP modeling and provides insight as to where benefits or impacts may occur.

BDCP Alternative 4 has four possible sets of operational criteria, termed the Decision Tree, that differ based on the "X2" standards that they contemplate:

- Low Outflow Scenario (LOS), otherwise known as operational scenario H1, assumes existing spring X2 standard and the removal of the existing fall X2 standard;
- High Outflow Scenario (HOS), otherwise known as H4, contemplates the existing fall X2 standard and providing additional outflow during the spring;
- Evaluated Starting Operations (ESO), otherwise known as H3, assumes continuation of the existing X2 spring and fall standards;
- Enhanced spring outflow only (not evaluated in the December 2013 Draft BDCP), scenario H2, assumes additional spring outflow and no fall X2 standards.

While it is not entirely clear how the Decision Tree would work in practice, the general concept is that, prior to operation of the NDD, implementing authorities would select the appropriate decision tree scenario (from amongst the four choices) based on their evaluation of targeted research and studies to be conducted during planning and construction of the facility.

Our review examines the ESO (or H3) scenario (labeled Alt 4-ELT or Alt 4-LLT) because it employs the same X2 standards as are implemented in NAA-ELT and NAA-LLT. This allowed the Reviewers to focus the analysis on the effects of the BDCP operations independent of the possible change in the X2 standard.

Method of Review

Our approach extracts output from DSM2 and compares hydrodynamics and salinity of the alternative against the baseline, where Alt 4 ELT is compared to NAA ELT and Alt 4 LLT is compared to NAA LLT. DSM2 simulates from October 1974 to September 1991 and produces output at 15-minute intervals. Daily maximums, minimums, and averages are then calculated from the 15-minute data. To provide meaning to the data, daily exceedance charts were produced. Percent exceedance describes the portion of the dataset, expressed in percentages, that exceeds a specific level. For example, a 90% flow exceedance of 200,000 cfs means that 90% of the daily flow during the simulated period, October 1974 to September 1991 is greater than 200,000 cfs. Exceedances provide an overall view of the entire

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dataset in an ordered manner. When alternatives are plotted together, differences between the alternatives are easily distinguishable and potential project effects can be identified.

Conclusions

Effects to hydrodynamics were reviewed for the San Joaquin River at Jersey Point, False River, and Dutch Slough. Effects on salinity were reviewed at Jersey Point only. For all locations, changes in flow, stage, and velocity due to BDCP Alt 4 are similar. Figure 1 through Figure 9 illustrates simulated flows, stage, and velocities in the San Joaquin River at Jersey Point, False River approximately 9,000 feet west of Webb Tract, and Dutch Slough approximately 7,400 feet west of Bethel Island under the NAA ELT and Alt 4 ELT. Figure 10 through Figure 19 illustrates simulated flows, stage, and velocities at the same locations for NAA LLT and Alt 4 LLT.

In general, daily maximum flows decrease under the Alt 4 scenarios when compared to NAA scenarios, while the daily minimum flows increase. For example, the daily maximum flows in the San Joaquin River are reduced under Alt 4 ELT and Alt 4 LLT by 11 kcfs and 20 kcfs respectively compared to the NAA scenarios, while daily low flows increase by 15 kcfs under Alt 4 ELT and 23 kcfs under Alt 4 LLT. A similar pattern of effects are observed for stage and velocity at the other locations reviewed. This effect could be explained by the transport of flood and ebb tides into proposed habitat areas, which provides a dampening effect to the hydrodynamics in the Delta system. The dampening effects are much greater under Alt 4 LLT compared with Alt 4 ELT, likely due to larger habitat restoration area in the LLT (65,000 acres) versus ELT (25,000 acres).

Dampening effects of the habitat restoration can be illustrated in river stage. When tides are allowed to disperse over a larger area which will be created by the habitat projects, stage in the Delta system will be reduced, as illustrated in Figure 2, Figure 5, and Figure 8. Daily maximum stage around Jersey Island is reduced under Alt 4 ELT by approximately 0.2 feet and daily minimum stage is increased by approximately 0.2 feet when compared to NAA ELT scenario. Daily maximum stage around Jersey Island is reduced under Alt 4 LLT by approximately 0.3 feet and daily minimum stage is increased by approximately 0.4 feet when compared to NAA LLT scenarios as illustrated in Figure 11, Figure 14, and Figure 17.

Salinity at Jersey Point was extracted from DSM2 and average monthly Electrical Conductivity (EC) was calculated and then tabulated in Table 2.

The EIR/S did not analyze the NDD without habitat restoration. Therefore, the impacts of the project cannot be adequately assessed if the NDD were to begin operation while the project faces challenges in habitat land acquisition. Furthermore, habitat restoration will require time to operate at its intended functionality.

Recommendations

The EIR/S analysis assumes habitat restoration will be implemented and operating as fully intended under both the ELT and LLT scenarios. Even if the land is acquired for the proposed projects, habitat restoration is a time required process. Further, it is possible, if not probable, that NDD could be constructed and operate for an extended period of time without the habitat in place. The effects of NDD operations without habitat could have detrimental impacts, and should be quantified. For these

RESPONSE

reasons the BDCP should analyze the effects of the NDD to assess both the short term and long term impacts without the habitat in place. BDCP should also analyze the effects of the NDD to assess both the short term and long term impacts without climate change. In the event the climate change assumptions are inaccurate for either timing or magnitude, the incremental impact of the NDD should be known. These analyses should be performed with updated CalSim II operations and DSM2 hydrodynamics models.

No Action Alternative ELT and Alternative 4 ELT

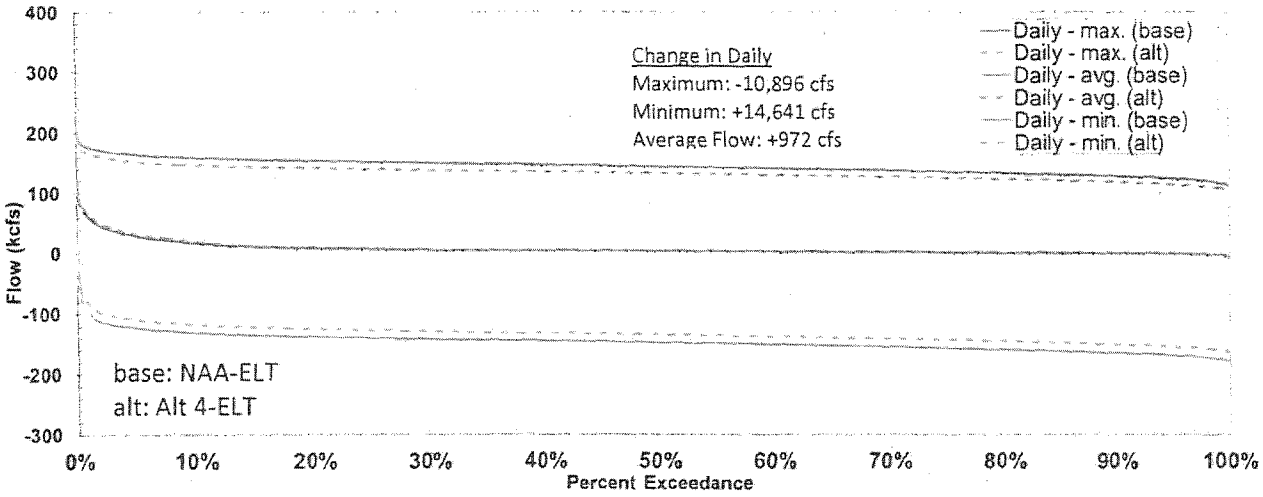

Figure 1. Daily Flow on the San Joaquin River at Jersey Point

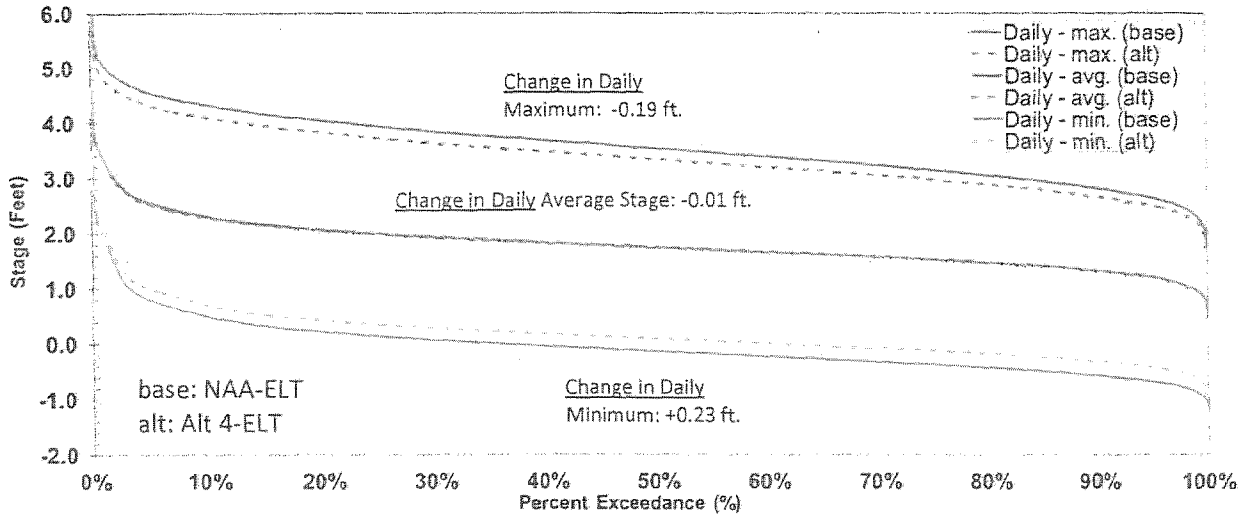

Figure 2. Daily Stage on the San Joaquin River at Jersey Point

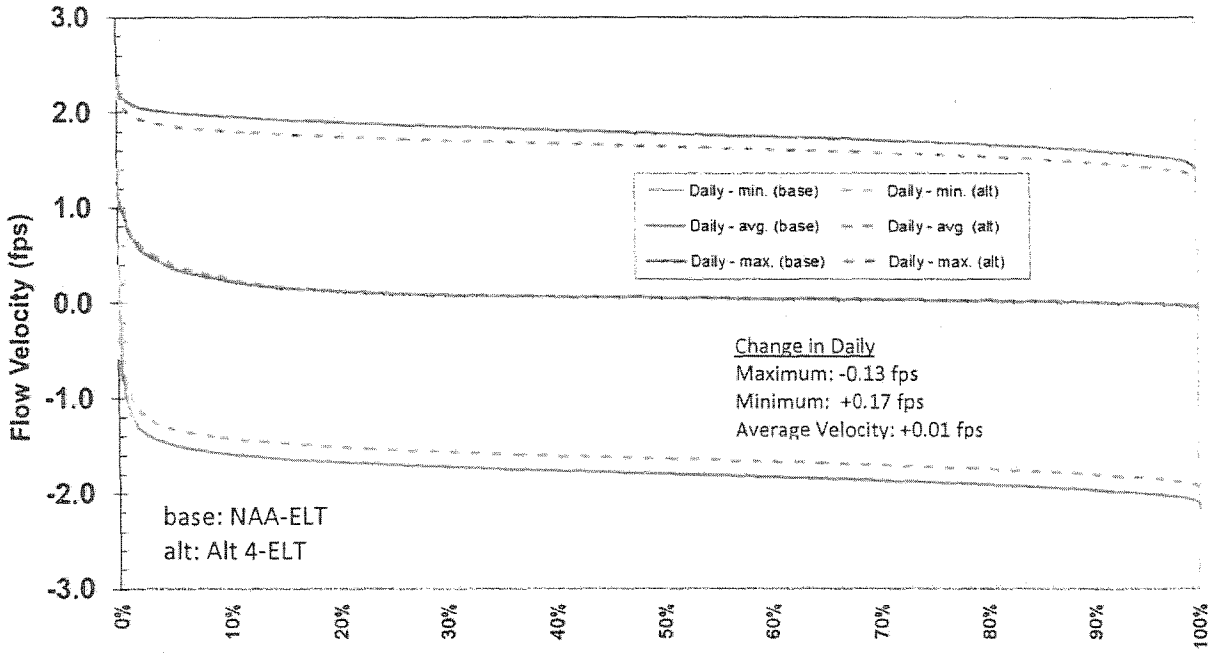

Figure 3. Daily Velocities on the San Joaquin River at Jersey Point

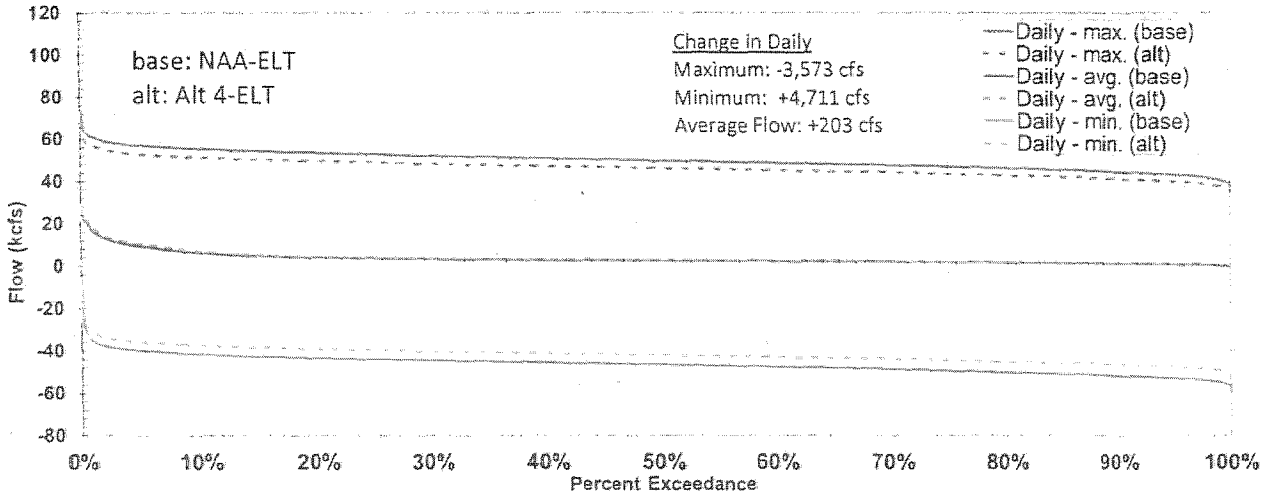

Figure 4. Daily Flow in False River (~9,000 feet west of Webb Tract)

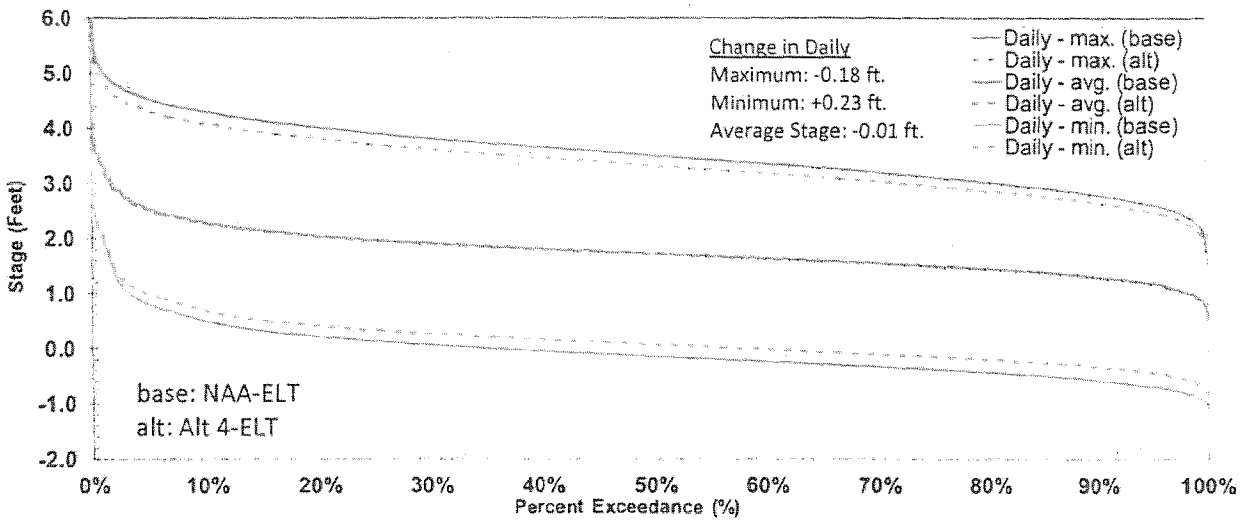

Figure 5. Daily Stage in False River (~9,000 feet west of Webb Tract)

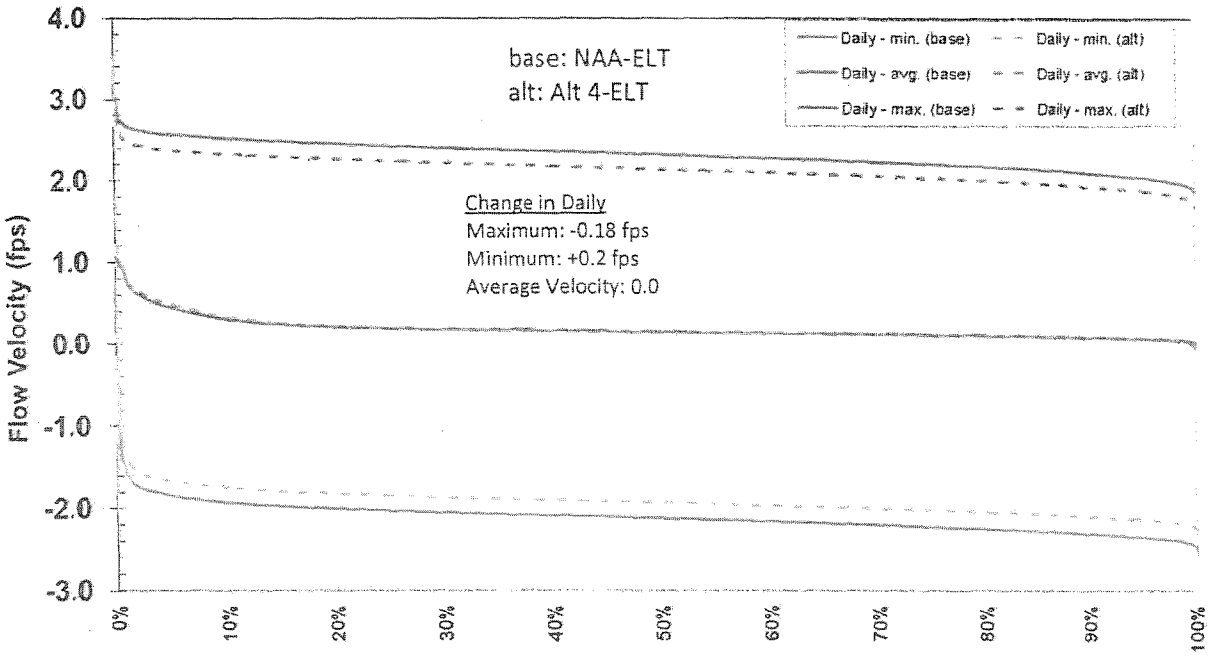

Figure 6. Daily Velocities in False River (~9,000 feet west of Webb Tract)

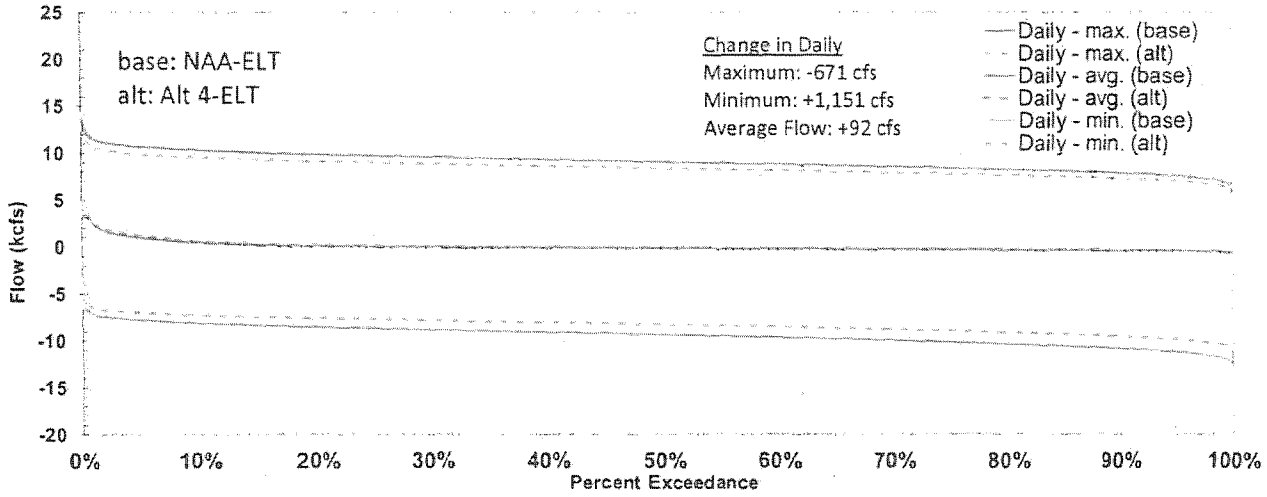

Figure 7. Daily Flow in Dutch Slough (~7,400 feet west of Bethel Island)

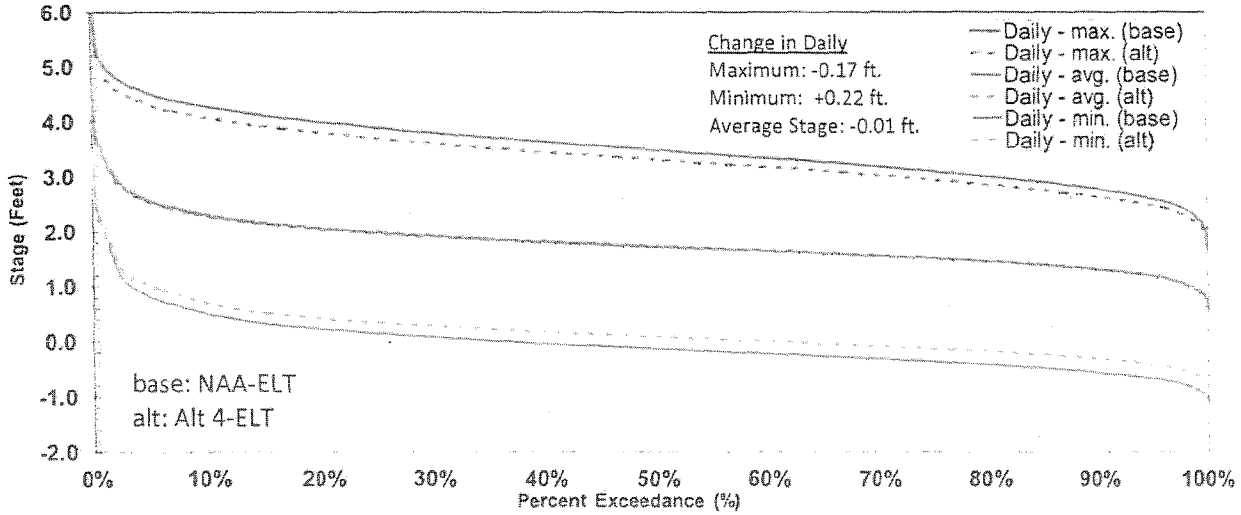

Figure 8. Daily Stage in Dutch Slough (~7,400 feet west of Bethel Island)

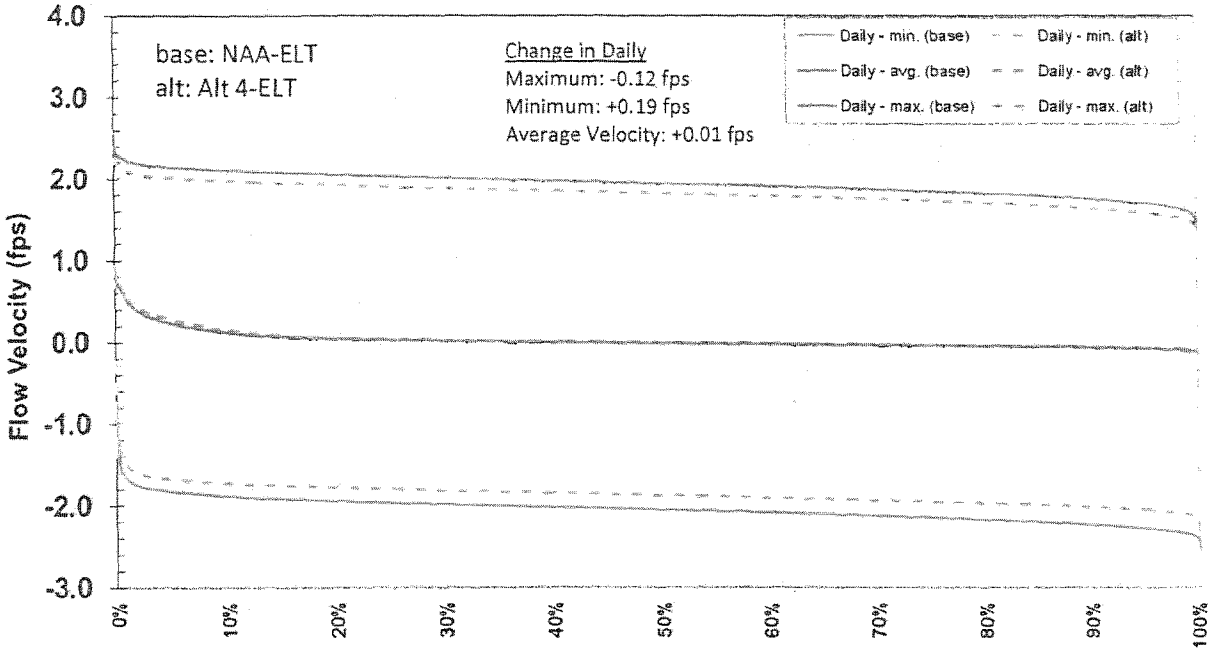

Figure 9. Daily Velocities in Dutch Slough (~7,400 feet west of Bethel Island)

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No Action Alternative LLT and Alternative 4 LLT

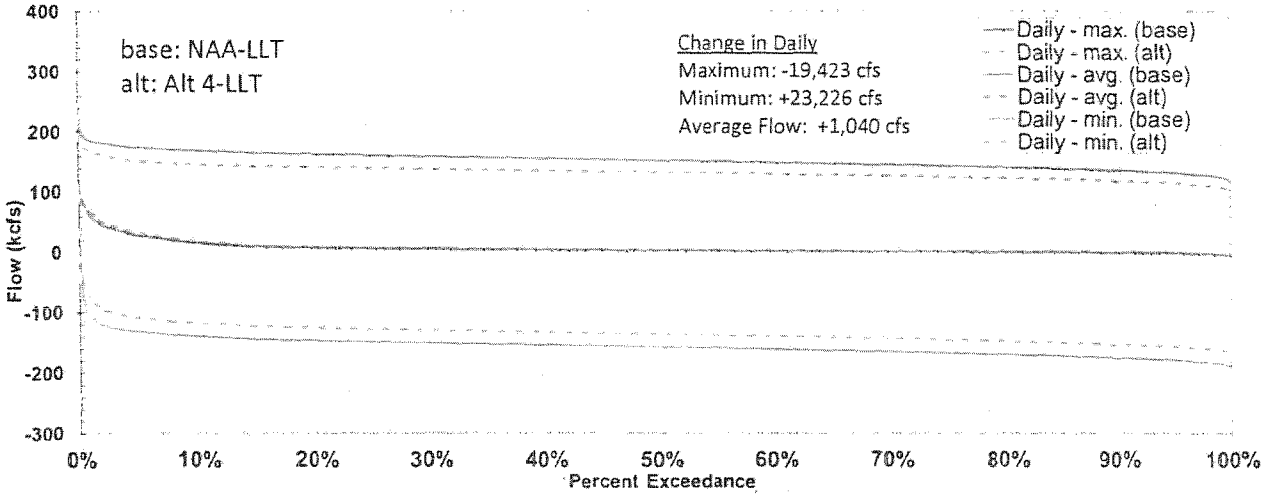

Figure 10. Daily Flow in the San Joaquin River at Jersey Point

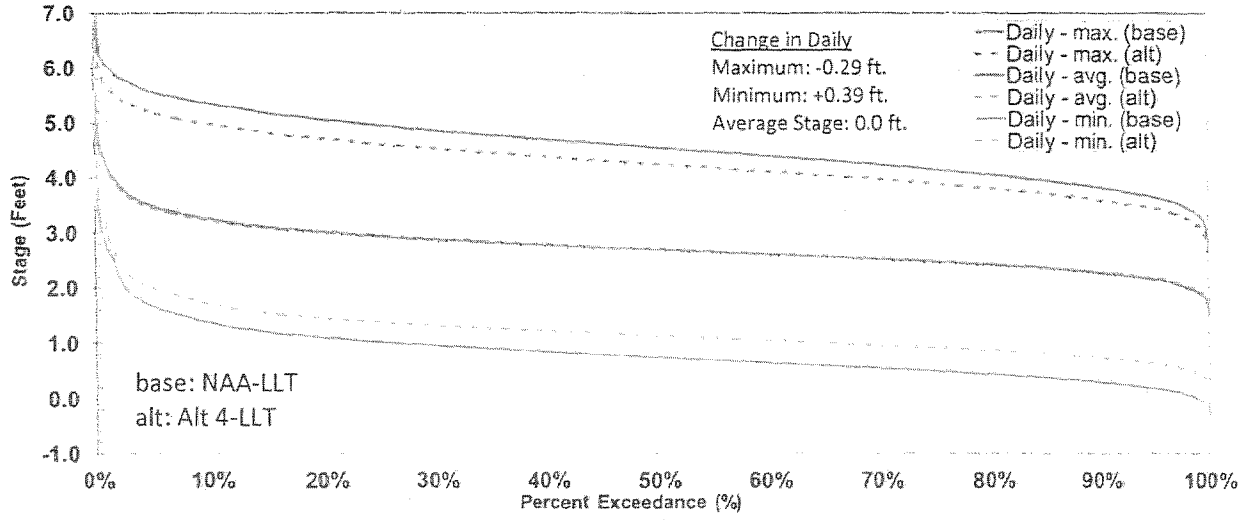

Figure 11. Daily Stage in the San Joaquin River at Jersey Point

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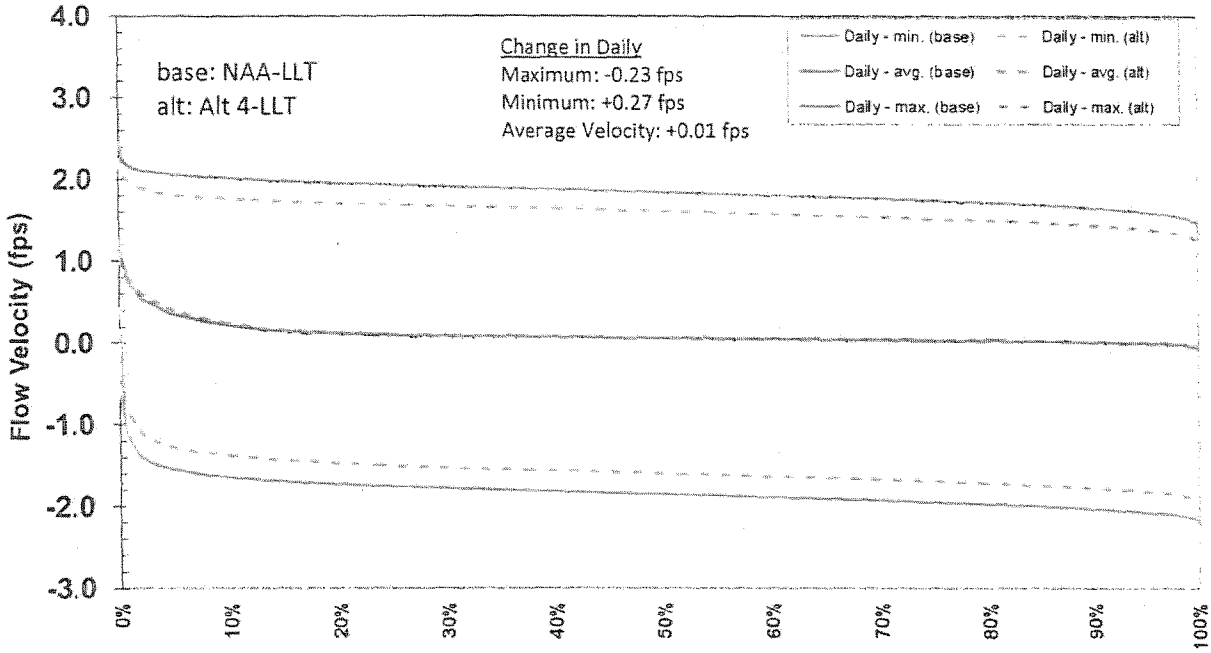

Figure 12. Daily Velocities in the San Joaquin River at Jersey Point

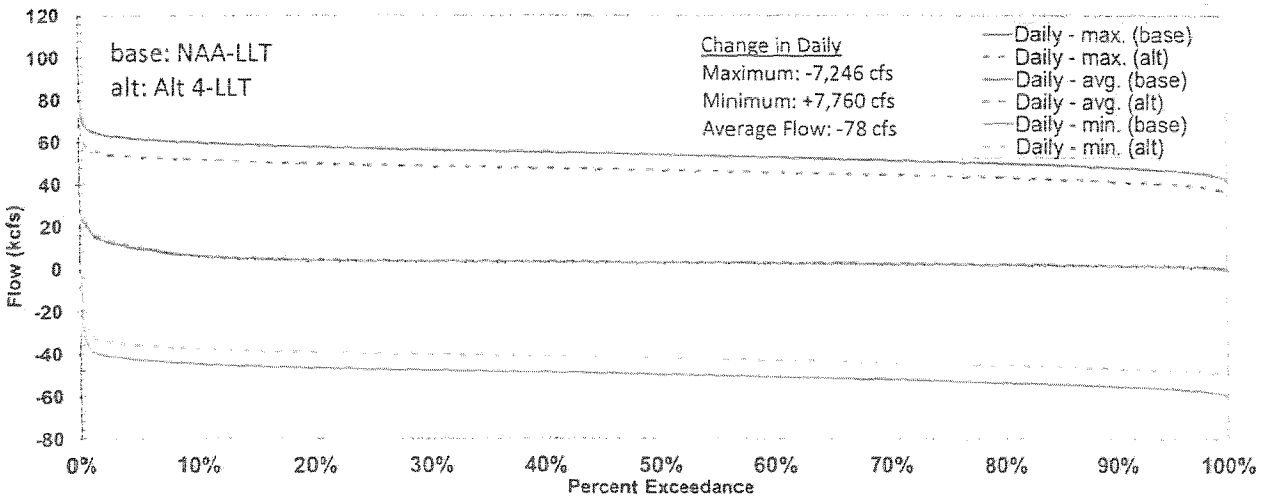

Figure 13. Daily Flow on False River (~9,000 feet west of Webb Tract)

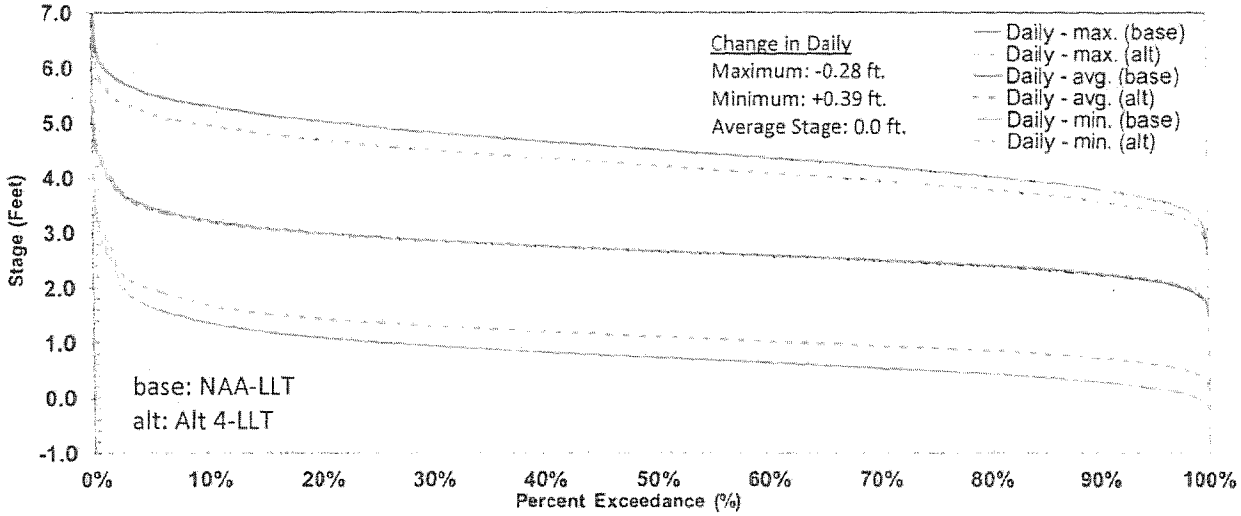

Figure 14. Daily Stage on False River (~9,000 feet west of Webb Tract)

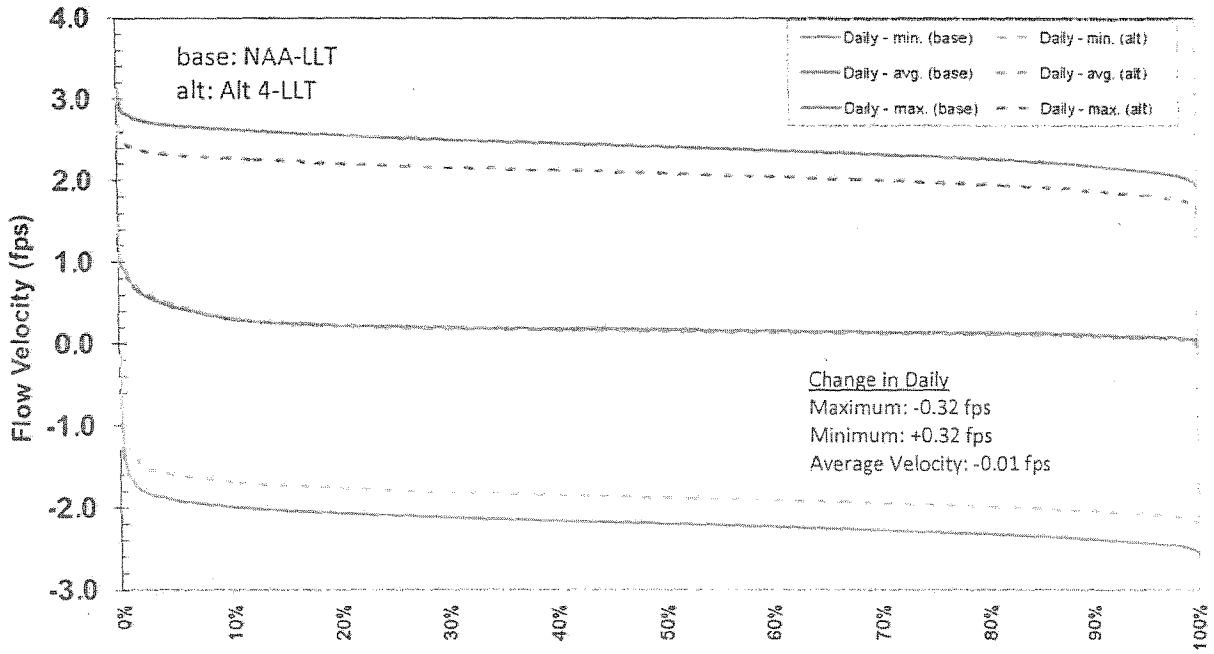

Figure 15. Daily Velocities on False River (~9,000 feet west of Webb Tract)

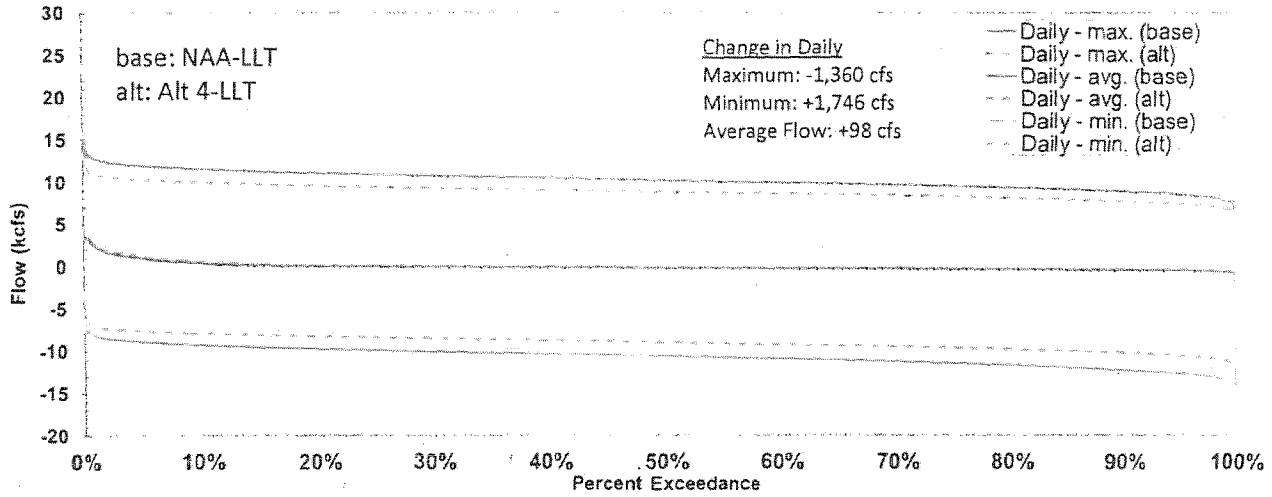

Figure 16. Daily Flow on Dutch Slough (~7,400 feet west of Bethel Island)

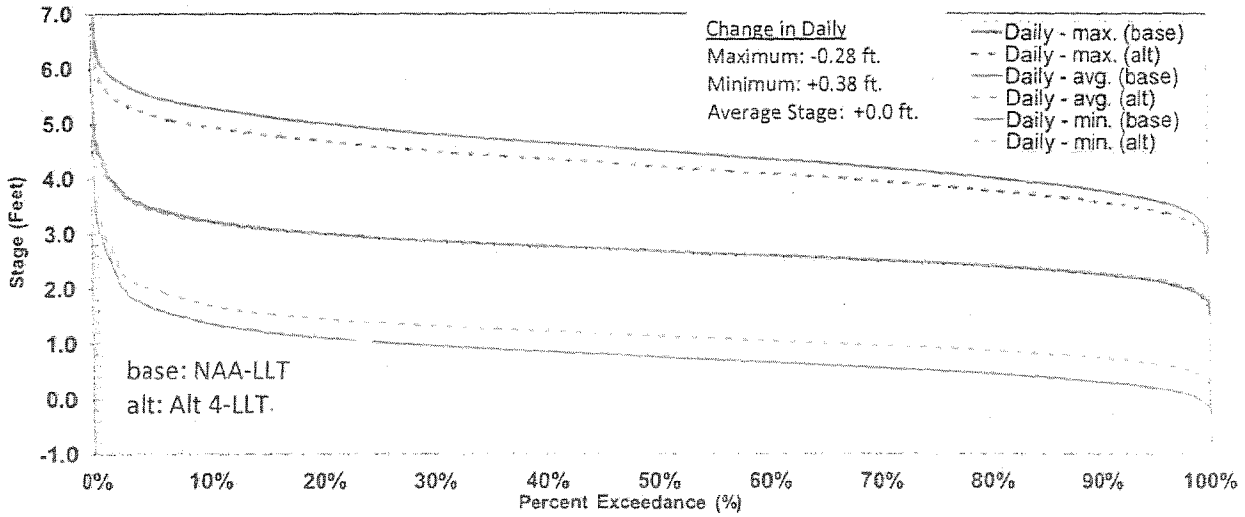

Figure 17. Daily Stage on Dutch Slough (~7,400 feet west of Bethel Island)

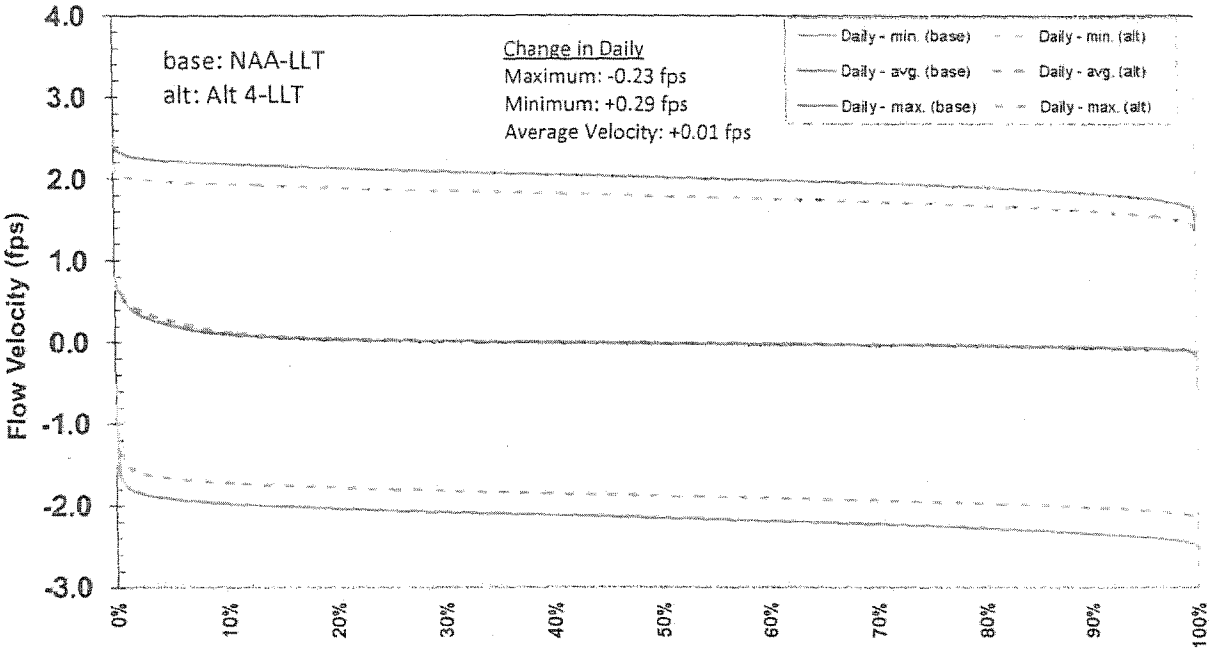

Figure 18. Daily Velocities on Dutch Slough (~7,400 feet west of Bethel Island)

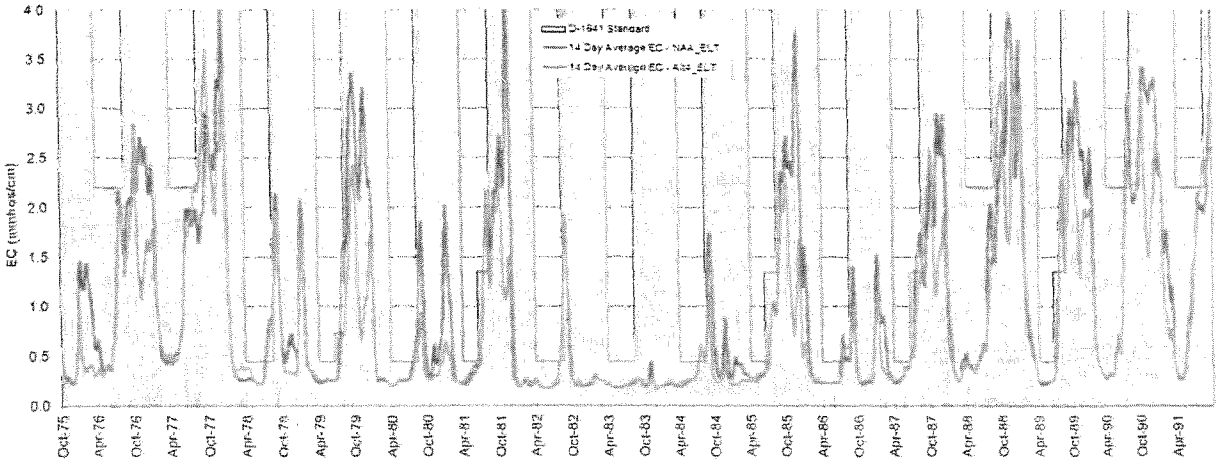

Figure 19. San Joaquin River at Jersey Point (NAA and Alt 4 ELT)

RECIRC 2426

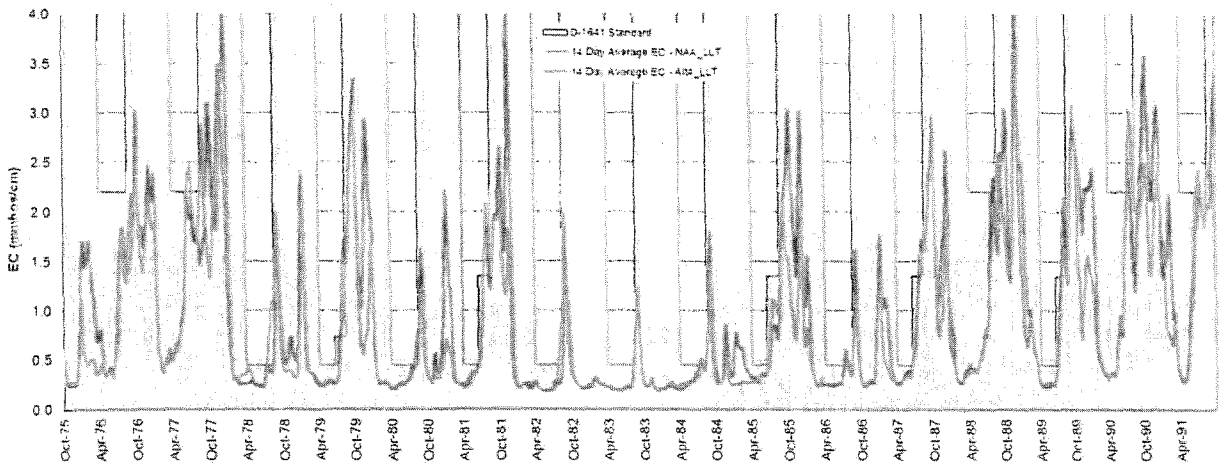

Figure 20. San Joaquin River at Jersey Point (NAA and Alt 4 LLT)

Table 2. Average Monthly Water Quality at Jersey Point (EC, mmhos/cm)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
NAA-ELT	1.55	1.77	1.46	0.85	0.45	0.31	0.28	0.35	0.55	1.27	1.47	1.77
Alt 4-ELT	1.54	1.76	1.48	1.05	0.50	0.33	0.28	0.33	0.49	1.12	1.39	1.78
Alt 4-ELT minus NAA-ELT	-0.01	-0.01	0.02	0.20	0.05	0.02	0.00	-0.02	-0.06	-0.15	-0.09	0.01
NAA-LLT	1.19	1.48	1.40	0.86	0.48	0.33	0.30	0.39	0.61	1.15	1.36	1.84
Alt 4-LLT	1.34	1.35	1.43	1.03	0.54	0.35	0.30	0.36	0.55	1.05	1.24	1.80
Alt 4-LLT minus NAA-LLT	0.15	-0.13	0.03	0.17	0.06	0.02	0.00	-0.03	-0.06	-0.10	-0.11	-0.04

RECIRC 4406

From: Jenny Skrel <skrel@isd.us.com>
Sent: Wednesday, October 28, 2015 12:01 PM
To: BDCPcomments
Subject: RD 830 REIR/EIS comments
Attachments: RD 830 Comments on REIR EIS 102815.pdf

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SACRAMENTO STORMWATER QUALITY PARTNERSHIP

October 27, 2015

150448:EC

BDCP/WaterFix Comments
P.O. Box 1919, Sacramento, CA 95812

Email to: BDCPComments@icfi.com

Subject: Sacramento Stormwater Quality Partnership Comments on the California Water Fix Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement

To Whom It May Concern:

The Sacramento Stormwater Quality Partnership (Partnership) appreciates this opportunity to provide comments on the July 10, 2015 Bay Delta Conservation Plan (BDCP)/California Water Fix Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS), collectively referred to here as "California Water Fix documents". The Partnership's review and comments focus on issues that may affect operation of the Partnership's stormwater management programs, including those that impact water quality and the science and governance entities that have an important role in protecting the Sacramento River – San Joaquin River Delta (Delta). The Partnership previously submitted comments on the BDCP on July 24, 2014, many of which are unresolved because to date we have not been provided a response to comments. We incorporate our previous comments in this comment letter and request that they be addressed and responded to in the final environmental documents.[1]

The Partnership is comprised of the County of Sacramento and the incorporated municipalities that are co-Permittees in the municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System permit (NPDES No. CAS082597, Order No. R5-2015-0023). This letter specifically addresses the proposed Conservation Measure 19 (urban stormwater treatment) and other issues that would have significant

[1] Sacramento Stormwater Quality Partnership. *Comments on BDCP and BDCP DEIR/EIS.* Submitted to Ryan Wulff, NMFS July 18, 2014

impacts on our municipal stormwater programs and water quality upstream of the proposed project.

The high quality of the American and Sacramento Rivers is a primary reason why the proposed North Delta diversion is located in the Sacramento River, which is adjacent to the Partnership permitted area. The Partnership's management programs described in our Stormwater Quality Improvement Plan (SQIP)[2] are highly effective in improving urban runoff quality. The partnering agencies have strong working collaborations with each other as well as with neighboring communities. Examples of this cooperative regional approach include the Partnership's participation in the development of the region-wide municipal separate storm sewer system (MS4) permit, the Delta Regional Monitoring Program (RMP), the Central Valley Drinking Water Policy, and numerous other regional programs and information sharing. For example, the Partnership supports and participates in initiatives to address regional pesticides issues, including support of the "Our Water, Our World" program to provide integrated pest management resources to our residents and leading California Stormwater Quality Association (CASQA) efforts to encourage the USEPA Office of Pesticide Programs and the California Department of Pesticide Regulation to improve pesticide regulation and protect water quality.

While we recognize that a project of this size is complex and resource intensive, we have identified several presumptions and assertions within the California Water Fix documents, especially related to urban runoff and water quality, which are inaccurate or insufficiently supported. These issues could have profound effects on our stormwater management programs, local communities, and local environmental resources. The following key comments are discussed in this letter and are supported and expanded upon with the detailed attached comments:

1. CM19 Is Not Adequately Revised (CM19)
2. Water Quality Impacts Not Adequately Addressed (WQ)
3. Insufficient Plan to Adaptively Manage Exports and Water Quality (AM)
4. Lack of Clarity of Document, Errors, and Omissions (ERROR)

The Partnership has reviewed the water quality analysis and related materials included in the California Water Fix documents and found numerous issues and deficiencies, which are generally discussed in this letter. These are supported by the specific comments provided in Attachment A, which is included and incorporated in our comments.

CM19 IS NOT ADEQUATELY REVISED

The BDCP and California Water Fix (Alternative 4A) continue to incorporate Conservation Measure 19 (CM19, BDCP Chapter 3.4.19), as it has not been removed through the published changes, list of significant changes, or other discussion. CM19 is repeatedly included in general discussions of CM2-22 without adequate distinction from

[2] Sacramento Stormwater Quality Partnership. Stormwater Quality Improvement Plan. Submitted to Central Valley Regional Water Quality Control Board. November 2009. http://waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2010-0017_2009sqip.pdf

the other types of conservation measures. CM19 in the RDEIR/SDEIS was not revised to address the major comments provided by the SSQP on the BDCP documents, and it is unclear whether the project intends to implement CM19 as part of the proposed project, California EcoRestore, or indirectly through other existing or planned programs. MS4 agencies already have significant investment in control strategies, monitoring, and adaptive management programs, including participation in the Delta RMP.

CM19 Inaccuracies Are Not Corrected

CM19 was described in seven pages of the BDCP with little detail, numerous inaccuracies on urban runoff contaminants and water quality regulations, and without any evidence that CM19 control measures could provide any measurable benefits to the covered species. CM 19 (BDCP Section 3.4.19) intends to decrease urban runoff contaminant discharge to support BDCP Objective L2.4 to provide water quality to "help restore native fish habitat". However, there is no technical analysis demonstrating the potential benefits of CM19 aside from incomplete descriptions of pyrethroid research in upstream urban tributaries; this research has not demonstrated relevance to impacts on covered species in the Delta. As proposed in the BDCP, CM19 provides no new benefits to downstream covered species. The California Water Fix does not correct these errors and inaccurate characterizations of urban runoff control measures. We are concerned that without adequate revisions or complete removal of CM19, these errors will persist and propagate in future documents.

The Partnership requests that CM19 be specifically removed from the BDCP and California Water Fix documents unless it is significantly revised with coordination from MS4 agencies and full funding is provided by the proposed project funding for the long-term implementation costs of CM19.

Inaccurate Grouping of Conservation Measures

The California Water Fix inaccurately draws conclusions for groups of conservation measures by grouping them together without adequate distinction of effects. The California Water Fix continues to refer to CM19 when referring to multiple conservation measures (e.g., CM2-CM22) and never clearly states that CM19 will not be included. In fact, the California Water Fix essentially takes credit for all future conservation measures, including CM19, without revising these conservation measures to correct inaccuracies and significant flaws. For example, the Executive Summary includes a table with identified impacts, and on numerous occasions includes CM2-CM21 or CM2-CM22, without distinguishing differences or the relative contribution to the evaluated effect from the different conservation measures. There are many specific examples of this issue, such as Potential Impact WQ-14 (page ES-44) that shows "Effects on mercury concentrations resulting from implementation of CM2–CM22" with "significant and unavoidable" impacts. This implies that CM19 would have a significant impact on mercury concentrations, which is unsupported based on the known negligible relative contribution (0.4%) from urban runoff to Delta methylmercury loading[3].

[3] Central Valley Regional Water Quality Control Board. Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury Staff Report. page 80, Table 6.2 April 2010

The Partnership requests that the conservation measures be more accurately evaluated, characterized, and grouped when discussed and presented in the context of benefits, impacts, and costs.

WATER QUALITY IMPACTS NOT ADEQUATELY ADDRESSED

In our previous comments we identified several key areas of water quality impacts and insufficiently evaluated water quality degradation, which others including USEPA[4] have echoed. Based on our review of the California Water Fix documents, these concerns have not yet been addressed through more robust evaluation and proposed mitigation.

The California Water Fix documents identify areas of water degradation and numerous significant and unavoidable impacts.[5] Electrical conductivity (EC) exceedances at Sacramento River at Emmaton (New Alternatives: Alternatives 4A, 2D, and 5A Alternative 4A Water Quality, page 4.3.4-24, lines 15-18) are also notable:

> *Modeling results indicated that the Emmaton EC objective would be exceeded more often under Alternative 4A than under Existing Conditions and the No Action Alternative (ELT), and that increases in EC could cause substantial water quality degradation in summer months of dry and critical water years*

The number of exceedances in this case is four times the current condition and nearly double the No Action Alternative (NAA, Appendix 8H, page 6, Table EC-4). Potential upstream impacts are completely ignored, and there is clear potential for water quality impacts on water resources upstream from this location. Though significant impacts to EC at Sacramento River at Emmaton are identified, the California Water Fix documents state that the proposed mitigation is expected to make this impact less than significant:

> *Page 2-10, Line 42-44, Alternatives 2D, 4A, and 5A did not contain significant impacts for EC related to objective exceedance in the Sacramento River at Emmaton, did not contain substantial degradation in the western Delta due to increased chloride concentrations, had less water quality effects in the western Delta related to EC, and fewer exceedances of the fish and wildlife EC objective between Prisoners Point and Jersey Point, such that it was feasible to introduce mitigation that would prevent significant impacts related to EC increases. After introduction of these mitigation measures, Alternatives 2D, 4A, and 5A contained less than significant impacts for EC. Alternatives 2D, 4A, and 5A contained less than significant impacts for chloride as well.*

While we appreciate the efforts to identify mitigation measures, the measures proposed for the Sacramento River are insufficiently described as "Adaptively Manage Diversions at the North and South Delta Intakes to Reduce or Eliminate Water Quality Degradation in Western Delta." It is not sufficiently specified how existing management approaches

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[4] Kathleen Martyn Goforth, Manager Environmental Review Section EPA Region 9 (ENF-4-2). *Draft Environmental Impact Statement for the Bay Delta Conservation Plan, San Francisco Bay Delta, California (CEQ# 20130365)*. August 26, 2014

[5] Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures

will reduce all additional exceedances relative to existing conditions and the no action alternative (NAA) as required by the Federal Antidegradation Policy. Nor is it demonstrated through the water quality modeling that proposed operational changes would not reduce exceedances significantly. The California Water Fix documents also include the significant and unavoidable impact of microcystis, but provide no meaningful mitigation measures.

All of the alternatives evaluated in the California Water Fix documents include significant export of water out of the Sacramento and American River watersheds. The cumulative impacts of the proposed North Delta diversion and the coordinated upstream water management system are not adequately characterized or mitigated. Full mitigation of the impacts is not evaluated, though this is required by Federal and State Antidegradation Policies. A thorough evaluation would provide a better and more informative indicator of the actual impacts and cost to fully mitigate. It is important that the final document provides full mitigation of the impacts to prevent costs from being passed on to local agencies that are not the proposed project beneficiaries. Moving forward with the California Water Fix without full mitigation would reinforce the current and historic reactive approach to ecological management that is inconsistent with the Delta Plan Co-equal Goals.

The water quality impacts are not adequately summarized for the purpose of evaluating the impact of the proposed North Delta diversion. The mass of any constituent (e.g., flow volume, salts, metals, etc.) exported under the proposed scenarios should be compared to the mass exported under the current and baseline conditions. If the exported mass decreases under the proposed diversions, the proposed project is increasing the mass remaining in the Delta. When both are normalized or averaged for the flow volume, the overall concentration increase could be quantified. This relatively simple approach would provide the context necessary to identify cumulative impacts.

The Partnership requests that full mitigation be evaluated, including specific plans for the relied-upon adaptive management, consistent with antidegradation requirements.

Upstream Water Quality Impacts

There are numerous cases where the proposed project refers to upstream effects and provides some operational changes, especially as it relates to fish passage. For example, Section 4 (page 4.1-13, lines 19 through 25) states:

> *The RTO Team in making operational decisions that depart from the criteria used in the modeling will take into account upstream operational constraints, such as coldwater pool management, instream flow, and temperature requirements.*

This acknowledgement that upstream effects are likely, and will require Real Time Operations (RTO) management, also indicates a clear potential impact to upstream water quality. However, the Section 8 Water Quality analysis (page 8-93, lines 8 through 10) states that without the proposed project upstream EC effects would not degrade:

> *An effect on salinity (expressed as EC) would not be expected in the rivers and reservoirs upstream of the Delta.*

This acknowledges that there are EC increases due to the proposed project that would result in more tidal (i.e., salinity gradient) influences on upstream rivers. The water quality analysis of Alternative 4A does not make any specific findings or quantifications regarding EC changes upstream of the proposed North Delta diversion, and the Appendix 8H modeling results do not include sites upstream from Emmaton, despite the significant degradation expected at that location. This evaluation is an example of the insufficient and incomplete assessment regarding the significant effects on the upstream rivers from the proposed project, which will be amplified by climate change and sea level rise.

Degradation due to salinity, temperature, and possible higher loads of metals liberated from reservoir releases operated at lower water surface elevations may increase downstream concentrations in the American and Sacramento Rivers. These effects are not considered in the California Water Fix or BDCP documents.

The Partnership requests a more detailed quantitative (modeled) assessment of water quality conditions upstream from the proposed North Delta diversion.

Insufficient Assessment of Spatial Extent of Microcystis Impacts

Table 8-60a (Section 8, page 8-83) presents the significantly increased residence times during the fall in the North Delta under Alternative 4 H3 (57 days) in comparison to Existing Conditions (49 days) and the No Action Alternative (50 days). Increases in average residence time are predicted in the North Delta year-round with significant increases in the fall. Cache Slough, East Delta, West Delta, and South Delta had increases for every season except Cache Slough in the fall. Temperature and residence time increases are the most critical factors driving microcystis blooms in the Delta.[6] Given the predicted increases in Delta water temperatures due to climate change and proposed project effects modeling, the increased residence times associated with the proposed project may lead to increased occurrence, spatial distribution, and magnitude of Microcystis blooms in the Delta. The residence time analysis did not evaluate the impacts further upstream. There is the potential for these blooms to migrate upstream due to tidal action under low flow conditions in the Sacramento and American Rivers. This is in the vicinity of numerous municipal water supply intakes and a highly utilized recreational and wildlife habitat area. These impacts are not evaluated in the California Water Fix documents or BDCP document revisions.

The Partnership requests that the residence times upstream of the proposed North Delta diversion be evaluated to determine if microcystis blooms will migrate upstream.

Removal of Conservation Measures and Lack of Water Quality Mitigation

The Section 2 Substantive Revisions consider the "removal" of conservation measures and other water quality model "improvements", and conclude for electrical conductivity and chloride (Section 2, page 2-10, lines 40 and 41) that "although the impacts remain significant and unavoidable, the magnitude of the impacts is substantially less than was indicated in the BDCP documents." It is not clear if the "substantial improvement" is due

[6] Cyanobacteria white paper prepared for Central Valley Regional Water Quality Control Board science effort on Delta water quality problems and nutrient water quality objective evaluation.

to the removal of the conservation measures or the modeling revisions. The conservation measures are cited in the cumulative analysis as future activities for the many benefits they would provide, especially restoration areas and infrastructure investment; however, as stated in Section 2 it may be inferred that their inclusion would then cause "substantial degradation" in the context of the electrical conductivity and chloride cumulative analysis.

The Section 5 "Revisions to Cumulative Impact Analyses" does not clearly evaluate the impacts of the Conservation Measures and refers to the BDCP documents without clarifying the limit of their applicability. For example, Section 5 (page 5-16, lines 18-21) states that:

> *Concurrent implementation of CM1 with CM2–CM21 under Alternatives 1A–5 is not expected to result in more adverse/significant impacts than described for the separate conservation measures, because the mercury conditions in water and fish resulting from CM1 would be similar to Existing Conditions.*

If the case is CM2-CM21 will occur outside of the project, then the cumulative impact analysis should consider the impacts from the restoration areas (e.g., methylmercury generation). The California Water Fix analysis assumes only the beneficial outcomes of these future activities, which results in segmenting and masking the overall proposed project impacts. Moreover, the cumulative impacts of future restoration actions intended to mitigate the impact of the California Water Fix should consider the relevant water quality regulations, including consistency with Total Maximum Daily Loads (TMDLs). Our previous comments on the BDCP documents identified a number of technical issues and significant cumulative water quality impacts for a range of water quality constituents; these have not been adequately addressed with the segmentation of the California Water Fix from the related restoration and mitigation measures.

The Partnership requests that California EcoRestore and all associated mitigation plans evaluate consistency with water quality regulation and allow a review period before the California Water Fix is finalized.

The California Water Fix economic analysis does not identify significant economic impacts on local agencies; nor does it include evaluation of the cost of eventual implementation of CM2-CM21 through California EcoRestore or other programs used to mitigate the impacts of the California Water Fix. The water quality and habitat degradation caused by the California Water Fix and its mitigation could require local agencies to perform their own mitigation to protect natural resources for aquatic life protection and other beneficial uses (e.g., MUN, REC, and AGR). Degradation caused by the North Delta diversion and related restoration activities should be fully mitigated by the project proponents.

The Partnership requests that the California Water Fix documents include significant and reliable water quality improvement funding assurances specific to the Delta and tributary watersheds.

Insufficient Evaluation of Water Quality Regulations

The Partnership previously provided extensive comments on consistency with the Federal Antidegradation Policy. There is no indication that these issues were addressed in the

California Water Fix documents, which is required according to the requirements of the Clean Water Act and the Federal Antidegradation Policy. Therefore, the original comments are still applicable to the California Water Fix documents. The BDCP documents and California Water Fix documents do not address the consistency of the proposed project with those requirements, which are an important element of water quality standards. Specifically, the documents fail to address the identified significant degradation of 303(d) listed waters that would result from the proposed project, including the aforementioned increases in salinity (EC) and other constituent violations. Thus, the documents insufficiently address the requirements of the Federal Antidegradation Policy.

The Partnership requests that a full Antidegradation Analysis be performed for any/all cases where the proposed project may cause or worsen a water quality impairment or otherwise substantially reduce the available assimilative capacity.

Insufficient Demonstration of Delta Plan Consistency

The California Water Fix documents do not demonstrate a commitment to meet the Delta Reform Act and Delta Plan co-equal goals. The California Water Fix documents (Appendix G-4A, page G-1, lines 17-19) specify, "…Alternative 4A will not be incorporated into the Delta Plan and will follow a different process to demonstrate consistency with the Delta Plan." However, the Appendix G-4A analysis does not sufficiently demonstrate consistency with the Delta Plan co-equal goals. Measures are not adequately developed to mitigate the "far-field" impacts of the California Water Fix in the North Delta and in upstream locations. Appendix G-4A refers to the Executive Summary (Table ES-9) for a list of these measures; however, Table ES-9 does not provide mitigation for a number of significant water quality impacts. The California Water Fix documents then refer to the "Mitigation, Monitoring and Reporting Program (MMRP) that will be available with the Final EIR/EIS." (page G-4, lines 9-10). The California Water Fix documents are incomplete, and it is not possible to evaluate consistency with the Delta Plan without allowing sufficient time to review the MMRP. Appendix G-4 and the California Water Fix documents do not adequately evaluate key science questions previously identified in our review and in the Independent Science Board review[7]. Appendix G-4 and the California Water Fix documents do not provide a clear commitment to collaborative science and adaptive management that is required under the Delta Plan. The California Water Fix documents do not specifically include any demand management measures as required by the Delta Plan. Demand management and regional water supply self-reliance are key elements of the Delta Plan, but these are inadequately presented in the California Water Fix documents without commitments to key implementation targets.

As described in the California Water Fix documents, the project purports to meet the co-equal goals of the Delta Reform Act and Delta Plan by providing flexibility in managing water diversions between the North and South locations. However, in practicality the proposed project incurs risk. This includes risk of the continued decline of habitat with the hydrodynamic changes, and additional species that may go extinct or no longer be

[7] Delta Independent Science Board. Environmental Documents for California WaterFix. September 14, 2015 http://deltacouncil.ca.gov/docs/delta-isb-s-review-rdeirsdeis-bdcpcalifornia-waterfix

present in the Delta and tributary systems. The California Water Fix documents should provide assurance that all reasonable circumstances and conditions were reviewed and considered for risk and the opportunity for mitigation. Full commitment to meet the co-equal goals should include a plan to fund the necessary monitoring and mitigation to protect the Delta's beneficial uses.

The Partnership requests that complete documentation of Delta Plan consistency (i.e., the MMRP, the response to comments on the BDCP documents, and revisions to the California Water Fix documents) be circulated for public review with adequate time for review and revision prior to circulation of the final California Water Fix documents.

Insufficient Evaluation of Long-Term Effects

The proposed project permit period is shortened from fifty years to fifteen years in the California Water Fix documents; and, the scope of impacts evaluated is constrained to the fifteen years. Construction and ongoing operation of the proposed North Delta diversion has significant long-term impacts that are not adequately evaluated. When the next permitting cycle begins, the proposed California Water Fix will be the new baseline, and shortening the permit periods could effectively set up a cycle of incremental impacts that do not consider the overall long-term impact of the proposed project. Incremental changes may be small compared to the baseline, but the baseline is already an impaired condition.

The Partnership requests that the California Water Fix documents include an analysis of long-term effects from the proposed project, including cumulative effects with associated projects such as CA EcoRestore.

INSUFFICIENT PLAN TO ADAPTIVELY MANAGE EXPORTS AND WATER QUALITY

The proposed California Water Fix relies on future, non-specific adaptive management to mitigate its impacts without providing clear and specific goals, outcomes, and timelines. While the Partnership is encouraged by the participation of the Independent Science Board and other "third-party" entities, there are no clear commitments to fund sufficient science and modeling. Although efforts to adaptively manage environmental systems to minimize impacts on covered species and beneficial uses are important, the historical adaptive management program has failed and must be fundamentally changed to achieve collaborative partnerships to meet the co-equal goals. The proposed project construction, mitigation, and operations could provide opportunities for adaptive management, both for the benefit of the project as well as for Delta ecosystem recovery. However, such a specific roadmap has not been presented. The BDCP documents and California Water Fix documents defer specific planning actions and governance to a later time to adaptively address issues as they arise (Executive Summary, page ES-17, lines 7 through 9):

> *An adaptive management and monitoring program will be implemented to develop additional scientific information during the course of project construction and operations to inform and improve conveyance facility operational limits and criteria.*

This reactive approach will not be effective, because ecological systems and species may collapse completely before correction actions are taken. The California Water Fix documents should include specific commitments and schedules for monitoring, assessment, engagement of local agencies, and implementation of actions before thresholds of beneficial use impairments are realized. The California Water Fix documents and BDCP documents defer details on how adaptive management will be made to work. The California Water Fix documents appear to weaken commitments to any Delta Adaptive Management Team that is broad based and implements the co-equal goals. The sections on collaborative science (ES.4.2 and 4.1.2.4) of the California Water Fix documents cite recent progress toward truly collaborative efforts in monitoring and synthesis in support of adaptive management in the Delta; however, more specific commitments and funding to implement adaptive management and collaborative science are necessary. The current level of assurance falls short of the serious attention to adaptive management that would be consistent with the Delta Reform Act. We have noted this shortcoming before and it is echoed by others, including the Independent Science Board.

The lack of impact assessment to upstream areas in the California Water Fix documents and BDCP documents suggests that these potential impacts will not be considered as part of the adaptive management and science programs that are referenced. These potential beneficial use impacts to the upstream water bodies include water quality related (MUN), biological (COLD, WARM), recreational (REC), and agricultural (AGR).

Insufficient Commitment to Collaborative Adaptive Management and Science Funding

The Partnership and other Delta stakeholders have participated in the successfully operating Delta RMP. Technical and information gathering stakeholder groups like this should have defined roles in a collaborative Delta science framework. Because of potential significant water quality impacts of the proposed North Delta diversion, the Delta Plan requires a commitment for long-term monitoring and a transparent adaptive management program. By deferring to future plans and actions, the California Water Fix documents and BDCP documents insufficiently describe the Adaptive Management Program and Monitoring Program.

The Partnership requests that at a minimum, more information be provided on key components of these collaborative adaptive management programs, including an outline of their structure and the types of evaluations and studies that will be completed, as well as an implementation schedule and any required benchmarks that are linked to operations and species recovery.

The proposed North Delta diversion construction, mitigation, and operation plans provide many opportunities for adaptive management, both for the benefit of the project as well as for the Delta ecosystem. The BDCP documents and California Water Fix documents defer specific planning actions and governance to a later time to adaptively address issues as they arise:

> *A management and monitoring program will be implemented to develop additional scientific information during the course of project construction and*

> *operations to inform and improve conveyance facility operational limits and criteria." (p. ES-17)*

This reactive approach will not be effective, because ecological systems and species may be significantly impacted or unrecoverable before correction actions can be taken.

The Partnership requests that the California Water Fix documents include specific commitments to monitoring, assessment, engagement of local agencies, and implementation of actions before thresholds of beneficial use impairments are realized.

The project documents are tens of thousands of pages, and the collaborative science and adaptive management discussion is less than four pages in length. A review of key components of these four pages is provided below as examples of the insufficient descriptions provided. The discussion within the California Water Fix documents initially limits the collaborative group to historic partners as described in the following text:

> *To address this uncertainty, DWR, Reclamation, DFW, USFWS, NMFS, and the public water agencies will establish a robust program of collaborative science, monitoring, and adaptive management. (page 4.1-18, line 18-20)*

We agree that a robust collaborative program is necessary. The collaborative science program does not include a diverse group of members, and it resembles the current approach to management. While greater participation of the Independent Science Panel (ISP) is an improvement (discussed elsewhere in the California Water Fix documents), alternative structures should be considered to improve the focus of the science to develop solutions to water quality impacts created by water diversions. A "robust program" would consider multiple points of view in a comprehensive, transparent, and public process.

The Partnership requests that the stakeholder group be broadened to consider the interests of other stakeholders and beneficial uses impacted by the BDCP/California Water Fix project in the Delta and the upstream and downstream waters.

In the following text the California Water Fix documents suggest that the AMMP is a tool to inform operations, but not an action that has any environmental impact by itself:

> *For the purposes of analysis, it is assumed that the Collaborative Science and Adaptive Management Program (AMMP) developed for Alternative 4A would not, by itself, create nor contribute to any new significant environmental effects; instead, the AMMP would influence the operation and management of facilities and protected or restored habitat associated with Alternative 4A. (page 4.1-18, lines 20-25)*

As previously commented, the project proposes to mitigate EC water quality impacts with adaptive management. The intent by the project proponents is then to use the AMMP as a process and planning document for mitigation of the Delta diversions. While this is not a specific action, it is a planning document for a series of interrelated actions that should be considered individually as well as a cumulative whole for impacts. The AMMP should be considered as part of the cumulative impact assessment and to demonstrate the overall benefit of the Delta diversion mitigation measures.

The Partnership requests that the AMMP provide the detail and a demonstration of how such a program could reasonably assure compliance with water quality regulations (i.e.,

water quality standards). The Partnership requests that the California Water Fix documents include a discussion of the specific tasks and tools that will be developed through adaptive management. These tools should be available to a wide range of stakeholders to improve broad-based collaborative science and coordination. The collaborative science approach should be inclusive at the "base" where the science is performed as well as at the "top" where the ISP provides review and direction.

The California Water Fix documents' description of the forthcoming AMMP provides little detail on how and when the AMMP will be applied, without consideration for a wider range of reasonable mitigation measures:

> *Specifically, collaborative science and adaptive management will, as appropriate, develop and use new information and insight gained during the course of project construction and operation to inform and improve:*
>
> - *the design of fish facilities including the intake fish screens;*
> - *the operation of the water conveyance facilities under the Section 7 biological opinion and 2081b permit; and,*
> - *habitat restoration and other mitigation measures conducted under the biological opinions and 2081b permits. (page 4.1-18, lines 28-35)*

The type of actions listed above are too limited to address the range of possible water quality impacts that are already identified, and they do not address the potential benefit of other measures required by the Delta Plan such as demand management.

The Partnership requests that the AMMP consider a broader range of mitigation and operational activities, including demand management.

In the following text, the California Water Fix documents summarize the overall goals of the AMMP:

> *In summary, the broad purposes of the program will be to: 1) undertake collaborative science, 2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and 3) apply new information and insights to management decisions and actions. (page 4.1-18, lines 36-40)*

The purposes presented are beneficial, but they are only aspirational without commitments to more thoroughly evaluate the effectiveness of management actions as part of this planning process.

The Partnership requests that California Water Fix documents provide a reasonable assurance that the high quality water in the Sacramento and American Rivers can be maintained. The Partnership requests that the AMMP be circulated for review prior to release of the final BDCP documents and California Water Fix documents.

In the following text, the California Water Fix documents describe the sources of funding, without committing sufficient resources to collaborative science and monitoring related to the proposed North Delta diversion:

> *Collaborative science and monitoring conducted to support the proposed project will be implemented, when feasible, using existing resources from state, federal,*

and other programs, and the mitigation program of the water conveyance facility. The mitigation program of the water conveyance facility has money dedicated to the monitoring necessary to support effective implementation of mitigation actions. (page 4.1-20, lines 1-4)

The project proponents and the State of California should provide funding guarantees to address collaborative science relative to the overall health of the Delta, including operation of all diversion and conveyance facilities. Because there is "uncertainty" in many of the effects of the project on other stakeholders, the project proponents should also develop a specific list of tools and activities that will be performed (e.g., Delta water quality model) so that the uncertainty of the proposed adaptive management does not persist.

The Partnership Requests that these tools be developed so that all stakeholders have access to the data and model elements, as well as peer review opportunities.

Collaborative science is not easy, but the choices made for the welfare of all of California and its natural resources should not be based on convenience and too narrow of an approach.

The Partnership requests that the adaptive management and monitoring program structure and discussion be updated to encourage and incorporate consensus science through coordination and participation in regional scientific and monitoring programs. Long-term funding guarantees for the Delta RMP and Delta water quality modeling tools should be specified.

Insufficient Inclusion of Local Coordination

The BDCP documents and California Water Fix documents (Alternative 4A) do not adequately coordinate with local agencies in and around the Delta to develop solutions that will meet the Delta Plan co-equal goals and mitigate the impacts from the California Water Fix. The California Water Fix documents provide no assurances that local agency input on adaptive management will be considered through a meaningful process.

The Partnership and the ratepayers it represents, as well as other north-of-Delta agencies, have a significant financial and natural resource stake in the outcome of the BDCP/California Water Fix. Therefore, local Northern California agencies need to be afforded a more significant role in BDCP/California Water Fix implementation and assessments.

While the Partnership appreciates the modification to the BDCP documents (Appendix D, Substantial BDCP Revisions, page D.3-141, Table 3.6-2) to include the SSQP as a "Potential Partner for the Monitoring and Adaptive Management Program", the role is limited to "Community involvement" and "landowner access", which is not responsive to the local agency concerns nor commensurate with the potential impact of the proposed project on local agencies. The major input opportunity described in these revisions to the BDCP documents appears to be participation in developing the "Decision Trees". However, that participation ends when the North Delta diversion is operational (page D.3-138, lines 7-9), "Unlike the other focus areas, the Decision Trees focus area has a deadline, terminating when the new north Delta diversions become operational."

The Substantial BDCP Revisions (page D.3-85, lines 30-31) also state that "The Adaptive Management Fund will also support changes to conservation measures CM2-21 as determined by the BDCP adaptive management program." If CM19 is implemented or changed, local MS4 agencies should be allowed participation in the process to change and implement conservation measures.

The Partnership requests the creation of a state-funded local agency liaison commission with representation on the adaptive management team to allow adequate adaptive management participation from local agencies upstream of the proposed North Delta diversion.

LACK OF CLARITY OF DOCUMENT, ERRORS, AND OMISSIONS

The BDCP documents and California Water Fix documents attempt to balance complex scientific analysis while satisfying the environmental planning processes. However, the complexity of the presentation results in reduced public transparency and inhibits informed decision-making. The sheer volume of documents for public review is inconsistent with State and Federal environmental review guidelines, reducing the public decision-makers' ability to understand the actions and implications of government decisions with environmental consequences. There are well-acknowledged facts that are diluted by the volume and complexity of the documents. Many of these facts were noted in previous comments on the BDCP documents; however, to date there has not been any comprehensive response to key comments made by the Partnership and repeated by others during the review period.

There are a number of cases where the "gaps" between the BDCP documents and California Water Fix documents cannot be evaluated with only "assurances" that future versions and efforts will cover this scope. For example, key issues such as where and how habitat restoration will be effective to achieve BDCP/California Water Fix goals, where and how additional flows will be provided for fish habitat improvement, how water supply demand management in the export areas will address the Delta Plan goals, and how and where land, water quality, and biological impacts will be mitigated, are given only casual consideration compared to the presentation of complex operational scenarios. Deferring these major issues and comments to the final documents is a significant omission in the review process and undermines transparency in how the final documents will be composed.

The BDCP documents and California Water Fix documents have numerous technical errors and omissions in evaluation of the impacts of the Alternatives related to water quality and related issues. Specific comments and references are provided in Attachment A. One particular reference that should be corrected is the description of the Partnership, which is edited below for clarification:

> *The Sacramento Stormwater Quality Partnership is a multi-jurisdictional program made of Sacramento County and the incorporated cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova to improve urban runoff quality and protect ~~ensure~~ water quality ~~and quantity for cities~~. (page D.3-144, lines 13-17)*

We appreciate the opportunity to provide these comments on the California Water Fix documents and look forward to providing input on the Adaptive Management Program and Monitoring Program documents when they are available. Please contact Sherill Huun (City of Sacramento, 916.808.1455) or Dana Booth (916.874.4389) if you have questions regarding this letter.

Sincerely,

On behalf of the Sacramento Stormwater Quality Partnership

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Cc:
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Sarah Staley, City of Folsom
Bill Forrest, City of Galt
Albert Stricker, City of Rancho Cordova

Attachment A: SSQP Specific Comments on California Water Fix RDEIR/SDEIS

Section	Page	Line	Type	Key Document Text	Comment
ES.1.1	ES-2	34-46	Omission	Many commenters argued that, because the proposed project would lead to significant, unavoidable water quality effects, DWR could not obtain various approvals needed for the project to succeed (e.g., approval by the State Water Resources Control Board of new points of diversion for north Delta intakes). Yet others suggested that DWR should pursue a permit term shorter than 50 years due to the levels of uncertainty regarding both the future effects of climate change and the long-term effectiveness of habitat restoration in recovering fish populations. Still other comments suggested that the proposed conveyance facilities should be separated from the habitat restoration components of the BDCP, with the latter to be pursued separately.	The summary omits the significant comments from us and others, such as USEPA, that an alternative should be proposed that does mitigate all water quality degradation. Please provide response to comments prior to issuance of the final project documentation and allow for a reasonable comment period.
ES.1.1	ES-3	31-33	Alternatives, WQ	Although Alternatives 4A, 2D, and 5A include only those habitat restoration measures needed to provide mitigation for specific regulatory compliance purposes, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta.	The document insufficiently describes the ability of the project to precisely determine which measures are "needed" for specific compliance purposes. The significant impact of the diversions is not mitigated, nor are the cumulative impacts.
ES.1.2	ES-4	19-22	WQ	This RDEIR/SDEIS has been prepared to provide the public and interested agencies an opportunity to review and comment on revisions and additional information added to the Draft EIR/EIS that was circulated for public review on Dec 13, 2013. Key revisions are listed below. • Updated environmental analysis that addresses certain issues raised in the more than 12,000 comments received on the Draft EIR/EIS. One example of such updated analysis is an updated discussion of Water Quality effects, which have been reduced compared with how they were described in the Draft EIR/EIS.	Characterizing the changes as "reductions" in water quality impacts is misleading because 1) some changes were computational and do not actually indicate that real impacts have been reduced, 2) many minor changes do not necessarily mean that the project as a whole will have a minor impact, rather than a major one, on water quality at many locations, and 3) the removal of the restoration areas accounts for many of these changes, especially those where there is uncertainty in the water quality projections. While removing the restoration areas may reduce water quality impacts for some constituents, their removal also takes away all the benefits they provide for habitat and water quality. It is recommended that this statement more clearly states that water quality effects from CM-1 are not changed, but the removal of some of the other conservation measures and modeling refinements provide benefits for some constituents.

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Section	Page	Line	Type	Key Document Text	Comment
ES.1.2.2.3	ES-7	2-6	Alternatives, WQ	The anticipated effects of climate change will result in elevated sea levels, altered hydrological cycles, changed salinity and water temperatures in and around the Delta, and accelerated shifts in species composition and distribution. These changes add to the difficulty of resolving the conflicts in the Delta. Anticipating, preparing for, and adapting to these changes are key underlying drivers for the proposed project.	The proposed approach and modifications to Alternative 4 suggest that management of the conveyances can resolve or substantially mitigate the effect of diversions. However, this assessment inadequately evaluates the benefits of demand management, which is required by the Delta Plan.
ES.1.3	ES-9	25-27	Alternatives, WQ	Range of Alternatives. The range and adequacy of alternatives is an issue of concern to the public as well as to governmental agencies. In response, the RDEIR/SDEIS proposes three new sub-alternatives.	There are a number of suggested alternatives as mentioned in similar comments that have not been adequately addressed. The summary omits the significant comments from us and others, such as USEPA, that an alternative should be proposed that does mitigate all water quality degradation. The limited number of alternatives evaluated provides a biased evaluation of potential project impacts. Please provide response to comments prior to issuance of the final project documentation and allow for a reasonable comment period.
ES.1.3	ES-9	30-32	Alternatives, WQ	Separating the water conveyance plan from the HCP/NCCP and accelerating environmental restoration through EcoRestore may alleviate some of these concerns.	The revised alternatives do not provide assurances of effective restoration or protection for covered species. There are no suggested alternatives that would mitigate water quality degradation, as requested by the USEPA and from our review.
ES.1.3	ES-10	8-12	Scope, Omission	Water quality is an issue of concern because of uncertainties regarding activities associated with conveyance facilities and restored habitat that could lead to discharge of sediment, possible changes in salinity patterns, and water quality changes that could result from modifications to existing flow regimes. This RDEIR/SDEIS in Section 4 addresses all of these water supply, surface water and water quality issues.	This is another example of a summary conclusion where antidegradation, water quality impacts and reasonable mitigation, among other significant comments from our review and USEPA, are not adequately discussed or identified as issues that will be addressed. The statement that water quality impacts are adequately addressed is not supported by revisions to Section 4.

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Section	Page	Line	Type	Key Document Text	Comment
ES.1.6	ES-14	12-16	Clarity	New public comments made during the public review period for the RDEIR/SDEIS should be specific only to the newly circulated information contained in the RDEIR/SDEIS and should not address issues not directly included in the RDEIR/SDEIS. The Lead Agencies intend to only respond to comments that address analysis included within this RDEIR/SDEIS and not those related solely to the original Draft EIR/EIS.	The complexity of the project and reliance on BDCP and associated DEIR/DEIS documents makes it impossible to limit comments solely to "information contained in the RDEIR/SDEIS". Moreover, because the response to comments is not available, it is not clear whether previously commented issues have been adequately addressed. As presented, the documents inadequately represent the current proposed project.
ES.3.2	ES-25	33-35	WQ, Omission	Section 2.2, Water Quality Revisions, of this RDEIR/SDEIS describes additional analyses undertaken to more accurately characterize the potential for exceedances of water quality standards and summarizes associated...	The documents do not adequately address consistency with water quality regulation, including the Federal and State Antidegradation Policy.
ES.3.2.2	ES-28	36-40	WQ	Because of the combined effects of increased temperatures due to climate change (not related to the project alternatives) and increased residence times in the Delta (due primarily to the effects of the conveyance facility and tidal restoration), effects of project alternatives 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9 on Microcystis were considered adverse (under NEPA) and significant and unavoidable (under CEQA).	As noted in the comments on the revised Chapter 8, we have concerns about the potential of the revised reservoir operations to impact the hydrodynamic conditions in the rivers upstream of the Delta, which may contribute to algal growth due to increased temperatures. We request that this be reviewed and reconsidered.

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Section	Page	Line	Type	Key Document Text	Comment
ES.4.2	ES-37	29-39	AM, WQ	Collaborative science and adaptive management will support the proposed project by helping to address scientific uncertainty where it exists, and as it relates to the benefits and impacts of the construction and operations of the new water conveyance facility and existing CVP and SWP facilities. Specifically, collaborative science and adaptive management will, as appropriate, develop and use new information and insight gained during the course of project construction and operation to inform and improve: • the design of fish facilities including the intake fish screens; • the operation of the water conveyance facilities under the Section 7 biological opinion and 2081(b) permit; and • habitat restoration and other mitigation measures conducted under the biological opinions and 2081(b) permits.	The Adaptive Management and Monitoring Plan (AMMP) scope does not adequately address water quality impacts for all beneficial uses or ecological protection for the Delta and upstream watershed. The AMMP scope should be determined by a wide stakeholder group that includes local agencies to more transparently set goals consistent with the Delta Plan and other regulations.
ES.5	ES-43	Table ES-9	WQ, Omission	Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures Water Quality Potential Impact: WQ-7: Effects on chloride concentrations resulting from facilities operations and maintenance (CM1)	Chloride and salinity would tend to increase in the vicinity of the North Delta intakes, and there are other localized effects that may be significant. The analysis does not adequately evaluate these effects.
ES.5	ES-44	Table ES-9, multiple entries	CM19	Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures Water Quality Potential Impact: WQ-14: Effects on mercury concentrations resulting from implementation of CM2–CM22 Alternatives: 2D, 4, 4A, 5A Impact Conclusions Before Mitigation (CEQA): Significant (S) Proposed Mitigation (CEQA and NEPA): No available mitigation to address this impact Impact After Mitigation: Significant and Unavoidable (CEQA) as well as Adverse (NEPA)	It is a broad and inaccurate generalization to assume that the effects from CM19 will have significant and unavoidable impacts on mercury concentrations. There is no evidence suggesting that stormwater controls generate methylmercury or increase total mercury concentrations. This table is confusing when referencing CM2-CM22 and option 4A is included. This implies that CM19 may be added to Option 4A later, which is not justified.

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Section	Page	Line	Type	Key Document Text	Comment
ES.5	ES-44	Table ES-9	CM19, Clarity	Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures Water Quality Potential Impact: WQ-12: Effects on electrical conductivity concentrations resulting from implementation of CM2–CM22	There are numerous cases in the table where CM2-CM22 are grouped together for a combined effect. While this is convenient for presentation, it inaccurately implies that these conservation measures act in the same way.
ES.5	ES-44	Table ES-9	CM19	Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures Water Quality Potential Impact: WQ-14: Effects on mercury concentrations resulting from implementation of CM2–CM22 Alternatives: 2D, 4, 4A, 5A Impact Conclusions Before Mitigation (CEQA): Significant (S) Proposed Mitigation (CEQA and NEPA): No available mitigation to address this impact Impact After Mitigation: Significant and Unavoidable (CEQA) as well as Adverse (NEPA)	CM19 would not cause significant and unavoidable impacts based on methylmercury. The analysis inaccurately presents CM19 as generating methylmercury, when many studies have demonstrated the benefit of stormwater controls in reducing methylmercury.
ES.5	ES-45	Table ES-9	WQ, Alternatives	WQ-32: Effects on Microcystis Bloom Formation Resulting from Facilities Operations and Maintenance (CM1). Before Mitigation: 1A-2C, 3, 4, 5, 6A-9 - Significant (S) 2D, 4A, 5A - Less Than Significant (LTS). Proposed mitigation: WQ-32a: Design Restoration Sites to Reduce Potential for Increased Microcystis Blooms WQ-32b: Investigate and Implement Operational Measures to Manage Water Residence Time	Both ALT 4 and ALT 4A would lead to increased residence time, and the ALT 4A finding of LTS before mitigation is not justified. Moreover, the proposed mitigation measures for both cases rely on operational plans that are not provided for evaluation and may not be effective. A more detailed operational plan should be provided that also includes a discussion of operation changes if algal blooms or macrophyte growth threaten any beneficial uses due to the residence time increase. Please provide this more detailed operation plan specific to this mitigation for review prior to issuance of the final CA Water Fix documents.
ES.5	ES-45	Table ES-9	CM19, WQ	Table ES-9. Summary of BDCP/California WaterFix RDEIR/SDEIS Impacts and Mitigation Measures Water Quality Potential Impact: WQ-33: Effects on Microcystis Bloom Formation Resulting from Other Conservation Measures (CM2–CM21).	CM19 was not demonstrated to cause significant and unavoidable impacts based on microcystis. Moreover, the increased residence time expected due to CM1 and Alternative 4A would be expected to increase the occurrence of microcystis.

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Section	Page	Line	Type	Key Document Text	Comment
ES.5	ES-54	Table ES-9	WQ, Alternatives	AQUA-78: Effects of water operations on migration conditions for Chinook salmon (fall-/late fall–run ESU); Proposed Mitigation: AQUA-78D: Slightly adjust the timing and magnitude of Shasta, Folsom, and/or Oroville Reservoir releases, within all existing regulations and requirements, to ameliorate changes in instream, slows that would cause an adverse effect to fall-run Chinook salmon. Significant (S) effect before mitigation, less than significant (LTS) effect after mitigation for ALT 4 and ALT 4A	There is no demonstration that the suggested mitigation (AQUA-78) related to "slight" adjustments in reservoirs release will be sufficient. There exist so many release and flow requirements that it does not seem reasonable that there would be enough flexibility to manage salmon migration in all critical years. Moreover, if "slight" modifications can have such a sufficient effect to mitigate impacts, it is reasonable to assume that "slight" modifications can also have negative effects on migration. Given the amount of uncertainty included in the analysis of this mitigation measure, there is no assurance that "high resolution" management is possible or certain to be effective. Please develop sufficient evaluation and technical justification for the LTS finding after mitigation for any of these species where "slight" adjustments are primary mitigation.
ES.5	ES-103	Table ES-9	WQ, Alternatives	PH-2: Exceedances of water quality criteria for constituents of concern such that there is an adverse effect on public health as a result of operation of the water conveyance facilities. Proposed Mitigation: WQ-5: Avoid, minimize, or offset, as feasible, adverse water quality conditions. Impact After Mitigation: LTS (for ALT4A) and SU (for ALT4).	There is no provided analysis that demonstrates that the proposed mitigation measure can reduce the number of EC exceedances below the Existing Conditions or NAA for Alternative 4A. Additional mitigation should be provided and assessed or the finding should be changed to significant.
ES.5	ES-103	Table ES-9	WQ, Alternatives	PH-8: Increase in Microcystis Bloom Formation as a Result of Operation of the Water Conveyance Facilities. Proposed Mitigation: WQ-32a: Design Restoration Sites to Reduce Potential for Increased Microcystis Blooms. WQ-32b: Investigate and Implement Operational Measures to Manage Water Residence Time.	No assurances are provided that operational measures will be effective. Reasonable mitigation, including remediative actions when a bloom threatens recreational, aquatic life, or water supply beneficial uses, should be developed and evaluated. An evaluation of the potential conditions upstream of the North Delta intake should be provided.
1.4	1-34	3-5	Clarity	The Lead Agencies have identified a number of additional issues raised in public and technical review of the Draft EIR/EIS that do not warrant inclusion in the RDEIR/SDEIS but would be explained or addressed in the Final EIR/EIS revisions.	We continue to support our comments made on the DEIR/DEIS and the BDCP, as applicable. As a result of not receiving response to comments, it is difficult to prepare these comments, and the revision process becomes overly complicated.

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Section	Page	Line	Type	Key Document Text	Comment
2.2.4	2-13	39-43	WQ, Omission	It is not expected that the level of tidal restoration proposed under Alternatives 2D, 4A, and 5A would cause fish tissue concentrations to increase, at a measurable level, outside of the immediate localized area of the tidal restoration sites. However, habitat restoration has the potential to increase water residence times and increase accumulation of organic sediments that are known to enhance methylmercury bioaccumulation in biota in the vicinity of the restored habitat areas.	Please provide the justification that methylmercury bioaccumulation would not expand the scope of impacts outside of localized areas.
2.2.4	2-14	1-7 and 17-20	WQ, Omission	Fish tissue concentrations in the Delta already frequently exceed the Water Quality Control Plan (Basin 1 Plan) for the Sacramento River and San Joaquin River Basins objective of 0.24 mg/kg for trophic level 4 fish in the Delta. The proposed tidal restoration may cause or contribute to increased fish tissue concentrations at a local level, though the magnitude of the increase is not quantifiable. The Basin Plan also includes methylmercury allocations for wetlands for various areas of the Delta. Because the proposed tidal restoration acreage is very small, it is possible that, relative to the allocations, the increased loading would be very small. However, it is still unknown how and if the allocations can be attained....Although this would constitute a potential environmental impact, these increases would not be expected to cause injury to downstream water rights holders or other downstream water users, because effects would be localized to the restoration sites. Nor would such localized impacts adversely affect any other downstream beneficial users.	This is another example of a summary conclusion where antidegradation and water quality impacts, among other significant comments from our review and USEPA, are not adequately discussed or identified as issues that will be addressed. Additionally, the proposed project(s) should also be considered in the Delta Methylmercury TMDL. The California Water Fix documents fail to provide an assessment of how the proposed project(s) would be consistent with the Delta Methylmercury TMDL if there is any potential to increase fish tissue concentrations in the Delta or to not meet the required Delta area reductions.
2.2.5	2-14	27-31	WQ	Due to the combined effects of increased temperatures due to climate change (not related to the project) and increased residence times in the Delta (due primarily to the project related effects of CM1 and CM4), effects of project alternatives 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9 on Microcystis were considered adverse (under NEPA) and significant and unavoidable (under CEQA).	As noted in the comments on the revised Chapter 8, the potential of the revised reservoir operations to impact the hydrodynamic conditions in the rivers upstream of the Delta, which may contribute to algal growth due to increased temperatures, needs to be addressed.

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Section	Page	Line	Type	Key Document Text	Comment
2.2.5	2-14	33-36	WQ, Alternatives, Error	Because the new alternatives (2D, 4A, and 5A) contain a lower acreage of tidal restoration, residence times are not expected to increase as substantially as under the other alternatives, and thus significant impacts with regards to Microcystis are not expected under these alternatives, relative to the No Action Alternative.	Alternative 4A does increase residence times and would likely result in microcystis occurrences in a number of locations. Please reevaluate and address this concern.
2.4	2-21	14-17	Alternatives, CM19	The RDEIR/SDEIS includes a number of revisions to the project description and an enhanced level of detail for Alternative 4. These include more explanation regarding the analysis of water conveyance facilities, updates to CM2–CM21, clarification on the role of the Bureau of Reclamation, and the use of CM3–CM11 to offset impacts related to CM1.	There is an inadequate discussion of how individual conservation measures and the groups of conservation measures address specific mitigation needs. Please clarify the relative role of individual conservation measures in addressing impacts.
3.1	3-1		Alternatives	Section 3: Conveyance Facility Modifications to Alternative 4	Section 3 does not adequately characterize the removal of conservation measures. The section should be modified to accurately reflect that changes to Alternative 4 are more than just physical changes to the diversion structure.
3.3.5	3-7	4-7	WQ	Chapter 8, Water Quality, of the Draft EIR/EIS was revised to describe the potential for water quality effects associated with construction of water conveyance facilities—such as those related to discharges from work sites or changes to stormwater drainage and runoff patterns—to occur in different locations as a result of the revised facility footprints.	The water quality evaluation does not adequately address water quality impacts upstream of the proposed North Delta intakes or identify reasonable mitigation measures to address upstream impacts.
4	*entire section*		Alternatives	Omission	To evaluate water quality degradation, it is necessary to consider an alternative where there are no exported diversions, at the point in time when the previous antidegradation analysis was performed, or at the point when antidegradation considerations became a requirement.
4.1.1	4.1-3	17-19	Omission, Clarity	NEPA and its implementing regulations specifically require federal officials to consider the recommendations of other government entities and the public who present reasonable solutions or alternative approaches that may improve a proposed action.	We, as well as many others, previously submitted suggested alternative approaches including more distributed portfolio approaches, but have not been advised of whether the "reasonable solutions" were addressed or incorporated.

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Section	Page	Line	Type	Key Document Text	Comment
4.1.2.1	4.1-4	14-15 and Table 4.1-1	WQ, Clarity	Table 4.4-1 provides a brief summary comparison of the elements between Alternatives 4A and 4.	The justification for the relevant regulatory descriptions is not clear within the section and should be provided. In particular, the removal of the Section 10 element does not seem appropriate. While the summary is appreciated, it is not comprehensive in evaluating water quality impacts and relevant requirements of the Clean Water Act and federal and state Antidegradation Policy elements. The baseline for any Antidegradation analysis should also be included.
4.1.2.2	4.1-13	17-25	AM	RTO Team decisions are expected to be needed during at least some part of the year at the Head of Old River gate and the north and south Delta diversion facilities. The RTO Team in making operational decisions that depart from the criteria used in the modeling will take into account upstream operational constraints, such as coldwater pool management, instream flow, and temperature requirements. The extent to which real time adjustments that may be made to each parameter related to these facilities shall be limited by the criteria and/or ranges is set out in Table 4.1-2. Any modifications to the parameters subject to real time operational adjustments or to the criteria and/or ranges set out in Table 4.1-2 shall occur only through the adaptive management, as discussed below.	The AMMP should be developed more fully so that the process to make the suggested changes can be adequately reviewed.
4.1.2.3	4.1-15	1-4	Alternatives, WQ, Omission	The RDEIR/SDEIS describes and analyzes Environmental Commitments 3, 4, 6–12, 15, and 16 at a level of detail consistent with that applied to these activities under other alternatives in the Draft EIR/EIS. (See CEQA Guidelines, § 15126.4[a][1][D] [EIRs must discuss significant effects of mitigation measures, "but in less detail than the significant effects of the project as proposed"];	Please provide additional details for all alternatives on upstream water quality. This has been omitted from the analysis.

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Section	Page	Line	Type	Key Document Text	Comment
4.1.2.4	4.1-18	36-40	AM	In summary, the broad purposes of the program will be to: 1) undertake collaborative science, 2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and 3) apply new information and insights to management decisions and actions.	The specific purposes are too general and lack a clear means to evaluate the effectiveness. The collaborative science program does not include a diverse group of members, and it resembles the current approach to management. While greater participation from the Independent Science Panel (ISP) is an improvement, alternative structures should be considered to improve the focus of the science to develop solutions to water quality impacts created by the diversion of water. The RDEIR/SDEIS should include a discussion of the specific tasks and tools that will be developed. These tools should be available to a wide range of stakeholders to improve broad-based collaborative science and coordination. The collaborative science approach should be inclusive at the "base" where the science is performed as well as at the "top" where the ISP provides review and direction.
4.1.2.4	4.1-20	28-32	AM	Collaborative science and monitoring conducted to support the proposed project will be implemented, when feasible, using existing resources from state, federal, and other programs, and the mitigation program of the water conveyance facility. The mitigation program of the water conveyance facility has money dedicated to the monitoring necessary to support effective implementation of mitigation actions.	The project proponents should provide funding guarantees to address collaborative science relative to the overall health of the Delta. Because there is "uncertainty" in many of the effects from the project on other stakeholders, the project proponents should also develop a specific list of tools and activities that will be performed (e.g., Delta water quality model) so that the uncertainty of the proposed adaptive management does not persist. These tools should be developed so that all stakeholders have access and peer review to the data and model elements.
4.1.2.4	4.1-21	11-14	AM	Adaptive management uses a process to clearly articulate objectives, identify management alternatives, predict management consequences, recognize key uncertainties in advance, and monitor and evaluate outcomes.	While the general objectives and discussion of scientifically based adaptive management is appropriate, there are no provisions for accountability for additional Delta water quality and ecosystem degradation. Any proposed project in the BDCP, California Water Fix, or EcoRestore should state the specific goals that are consistent with the relevant biological opinions and water quality law.

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Section	Page	Line	Type	Key Document Text	Comment
4.2.7	4.2-18,19	39-41, 1-3	WQ	The analysis of effects of the No Action Alternative (ELT) on boron, bromide, chloride, DOC, EC, and nitrate in the Delta and SWP/CVP Export Service Areas is based on modeling conducted for the No Action Alternative in the ELT, which assumed no implementation of Yolo Bypass improvements or tidal habitat restoration. However, as described in Section 4.1.6, Assumptions for Purpose of Analysis, of the RDEIR/SDEIS, enhancements to the Yolo Bypass and 8,000 acres of tidal habitat restoration areas would be developed under the No Action Alternative (ELT).	The use of existing model runs to approximate impacts to revised alternatives does not seem to be sufficient for comparison of alternatives, determination of impact analysis, and identification of required mitigation. These numeric approximations lack computational rigor sufficient for quantitative assessments. The analysis inadequately makes quantitative assessments and should be expanded to consider computational modeling of the target constituents.
4.2.7	4.2-44	14-22	WQ	The effects of the No Action Alternative (ELT) on Microcystis levels, and thus microcystin concentrations, in surface waters upstream of the Delta relative to Existing Conditions would be similar to those described for the No Action Alternative in Chapter 8, Water Quality, Section 8.3.3.1 of the Draft EIR/EIS. This is because factors that would affect Microcystis levels in these areas would be the same in the ELT and the LLT. In the rivers and streams of the Sacramento River watershed, watersheds of the eastern tributaries (Cosumnes, Mokelumne, and Calaveras Rivers), and the San Joaquin River upstream of the Delta, under Existing Conditions, bloom development is limited by high water velocity and low residence times. These conditions are not expected to change under the No Action Alternative (ELT).	The Draft EIR/EIS does not discuss Microcystis in detail. The areas upstream of the Delta have not been adequately assessed for potential impacts due to changing hydrodynamic and temperature impacts. We request that this be reevaluated.
4.2.24	4.2-67	39-42	WQ	Any modified reservoir operations under the No Action Alternative (ELT) are not expected to promote Microcystis production upstream of the Delta since large reservoirs upstream of the Delta are typically low in nutrient concentrations and phytoplankton outcompete cyanobacteria, including Microcystis.	The potential impacts to areas upstream of the Delta have been inadequately assessed with regard to potential for Microcystis growth.

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Section	Page	Line	Type	Key Document Text	Comment
4.2.24	4.2-70	9-13	WQ	Because it is possible that under the No Action Alternative (ELT) increases in the frequency, magnitude, and geographic extent of Microcystis blooms in the Delta would occur due to increased water temperatures associated with climate change, as well as increased water residence times related to restoration activities, long-term water quality degradation may occur in the Delta and water exported from the Delta to the SWP/CVP Export Service Areas.	The potential for increases in Microcystis blooms in the areas upstream of the Delta should be investigated further.
4.3.4	4.3.4-1	1	WQ	Water Quality	The water quality evaluation for Alternative 4A ELT for many constituents is stated as similar to Alternative 4 LLT for areas upstream of the Delta. We would like to reference our applicable previous comments on Alternative 4 LLT in the DEIR/DEIS, specifically those in Chapter 8 (8.4.3). We continue to request water quality evaluations for areas upstream of the Delta.
4.3.4	4.3.4-24	15-18	WQ	Modeling results indicated that the Emmaton EC objective would be exceeded more often under Alternative 4A than under Existing Conditions and the No Action Alternative (ELT), and that increases in EC could cause substantial water quality degradation in summer months of dry and critical water years.	This is indicative of the significant impact that is not mitigated, and is the site closest to the upstream areas that are of concern to the City. The document does not adequately address upstream impacts and should be revised.

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4.3.4	4.3.4-66	21-31	WQ	Adverse effects from Microcystis upstream of the Delta have only been documented in lakes such as Clear Lake, where eutrophic levels of nutrients give cyanobacteria a competitive advantage over other phytoplankton during the bloom season. Large reservoirs upstream of the Delta are typically characterized by low nutrient concentrations, where other phytoplankton outcompete cyanobacteria, including Microcystis. In the rivers and streams of the Sacramento River watershed, watersheds of the eastern tributaries (Cosumnes, Mokelumne, and Calaveras Rivers), and the San Joaquin River upstream of the Delta under Existing Conditions, bloom development is limited by high water velocity and low residence times. These conditions are not expected to change under Alternative 4A or the No Action Alternative (ELT and LLT). Consequently, any modified reservoir operations under Alternative 4A are not expected to promote Microcystis production upstream of the Delta, relative to Existing Conditions and the No Action Alternative (ELT and LLT).	The potential impacts to areas upstream of the Delta have been inadequately assessed with regard to potential for Microcystis growth, and should be evaluated in more detail.
4.3.7, ES.5	4.3.7-372, ES-59	Entire page; Table ES-9	Alternatives	AQUA-201: Effects of water operations on entrainment of noncovered aquatic species of primary management concern; No proposed mitigation	There are significant and unavoidable findings for striped bass and American shad. There are adverse effects on striped bass. According to Table ES-9, it appears that no mitigation may be planned. However, improved screening operations in the South Delta diversion could provide benefit and mitigation of new losses in the North Delta and should be evaluated.

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4.3.11, ES.5	4.3.11-1, ES-83	Entire page; Table ES-9	Alternatives	REC-2: Result in long-term reduction of recreation opportunities and experiences as a result of constructing the proposed water conveyance facilities; Proposed Mitigation: REC-2: Provide alternative bank fishing access sites BIO-75: Conduct preconstruction nesting bird surveys and avoid disturbance of nesting birds AES-1a: Locate new transmission lines and access routes to minimize the removal of trees and shrubs and pruning needed to accommodate new transmission lines and underground transmission lines where feasible Impact Conclusions Before Mitigation: Significant (S) Impact After Mitigation: Significant and Unavoidable (SU) and Less Than Significant (LTS)	The long term adverse effects and significant and unavoidable reduction of recreation opportunities could be mitigated with more extensive alternate bank fishing locations or modification to intake design that should be considered. Additional mitigation measures should be proposed for full mitigation.
4.3.21	4.3.21-9	34-41	WQ	NEPA Effects: Any modified reservoir operations under Alternative 4A are not expected to promote Microcystis production upstream of the Delta relative to the No Action Alternative (ELT and LLT) since large reservoirs upstream of the Delta are typically low in nutrient concentrations and phytoplankton outcompete cyanobacteria, including Microcystis. Further, in the rivers and streams of the Sacramento River watershed, watersheds of the eastern tributaries (Cosumnes, Mokelumne, and Calaveras Rivers), and the San Joaquin River upstream of the Delta, bloom development would be limited by high water velocity and low hydraulic residence times. These conditions would not be expected to change under Alternative 4A relative to the No Action Alternative (ELT and LLT)	The potential impacts to areas upstream of the Delta have been inadequately assessed with regard to potential for Microcystis growth, and should be evaluated in more detail.
5.1	5-1	7-9	Scope, Alternatives, WQ	"Cumulatively considerable" means that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (CEQA Guidelines, § 15065[a][3]).	The analysis does not adequately incorporate the cumulative effect of historic diversions and exports out of the Delta. Moreover, the scope of CM1 is not adequately incorporated into the cumulative impact analysis so as to identify where "tipping points" of impacts may occur, such as the continued decline of covered species. If these types of outcomes are not addressed through the most significant impact, the effects are effectively segmented and not adequately identified.

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5.1.2.2	5-3	21-24	Scope	California EcoRestore will be led by the Delta Conservancy as the lead state agency, and will accelerate and implement a suite of Delta restoration actions prescribed in the 2014 California Water Action Plan by 2020. Under EcoRestore, the state will pursue restoration of more than 30,000 acres of fish and wildlife habitat.	The document does not sufficiently specify the components of EcoRestore. Please provide more detail on how EcoRestore would be adaptively managed in relation to the California Water Fix and how the impacts from these cumulative actions will be considered.
5.2.1	5-6	1-4	Omission	Alternatives 4A, 2D, and 5A do not have the same kind of concurrent project effects as described for the other alternatives because the interim restoration implementation actions are not part of these new alternatives but instead would be implemented separately under the California Water Action Plan/California EcoRestore program.	There is no certainty or commitment to complete the "separately" implemented projects. We suggest the following revision: "...the interim restoration implementation actions are not part of these new alternatives but instead MAY be implemented separately..."
5.2.1.2	5-10	7-9	WQ	Implementation of Alternatives 1A, 1B, 1C, 2A, 2B, 2C, 2D, 3, 4 (H1, H3), 4A, 5, 5A, and 9 would result in more negative flows in Old and Middle Rivers in April and/or May as compared to Existing Conditions and the No Action Alternative.	The evaluation should also consider both the reverse flow conditions and the tidal amplification in the Sacramento River near to the North Delta intakes. The results should be made available for review.
5.2.1.4	5-14	14-17	Clarity	In areas upstream of the Delta, the conservation measures or components of these measures that would be implemented in addition to the water conveyance facilities would be: 1) the Yolo Bypass Fishery Enhancement (CM2), 2) Conservation Hatcheries (CM18), and 3) Urban Stormwater Treatment (CM19).	The project scope is inadequate as to how activities are included for the purposes of the cumulative analysis. Are CM19 measures only limited to those funded through Water Bond, Proposition 84, or future funding programs? There are a large number of other water quality based programs in the upstream areas that are not considered. Also, the cumulative analysis does not evaluate how the project will affect growth patterns statewide. The cumulative analysis also does not adequately evaluate the relative contributions of water quality constituents from the major sources, including the contributions due to the CA Water Fix Project and its operation and mitigation. At a minimum, a conceptual model with seasonal load estimates is necessary for assessment of this project.

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5.2.1.4	5-15	29-31	Alternatives, WQ	The assessment of bromide, chloride, and EC conditions in the Delta concluded that CM1 plus the hydrodynamic effects associated with CM2 and CM4 under Alternatives 1A–9 would result in an adverse effect/significant and unavoidable impact, to varying degrees.	The document does not provide sufficient alternatives for mitigating water quality degradation that is expected from the project and related follow-up projects.
5.2.1.4	5-16	18-21	Omission, WQ	Concurrent implementation of CM1 with CM2–CM21 under Alternatives 1A–5 is not expected to result in more adverse/significant impacts than described for the separate conservation measures, because the mercury conditions in water and fish resulting from CM1 would be similar to Existing Conditions.	The cumulative impacts evaluation of mercury effects is inadequate as it does not provide an assessment of overall compliance with the Delta Methylmercury TMDL. Sediment release and water management are known to be the greatest contributors to the Delta methlymercury flux. The assessment should evaluate whether the proposed CM1 operations would result in an increase in sediment flux upstream and in the Delta, and provide mitigation if it does.
5.2.1.4	5-16	39-43	Alternatives, WQ	The assessment of Microcystis conditions in the Delta concluded that CM1 plus the hydrodynamic effects associated with CM2 and CM4 under Alternatives 1A–9 would result in an adverse effect/significant impact. Effects of CM2–CM21, beyond the increase in residence time and localized water temperature described in the separate impacts assessments, would not present new, previously unidentified impacts.	The document does not provide sufficient alternatives for mitigating water quality degradation that is expected from the project and related follow-up projects.
5.2.1.7	5-19	13-15	WQ	Conversely, Alternatives 1 through 5 are not expected to result in any adverse operational effects associated with contaminants.	To avoid redundancy, we reference the comments we have made related to water quality impacts from reservoir operation at lower stages as well as the inadequate assessment of effects upstream of the North Delta diversions.
5.2.1.11	5-23	2-5	WQ	Construction of the water conveyance facilities under all action alternatives except Alternatives 4A, 2D, and 5A would have a wide range of significant adverse impacts on recreation occurring within the Plan Area.	Any reduction in summer releases from Folsom Dam would lead to recreational impacts. The frequency of reduced flow periods would reduce boating and swimming uses. Alternative 4A has the potential to reduce flows, which is not adequately discussed.

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5.2.2.7	5-119	13-19	CM19	The implementation of CM19 Urban Stormwater Treatment, under the BDCP, would provide an additional source of funding for grants to entities such as the Sacramento Stormwater Quality Partnership, and area cities and counties, whose stormwater contributes to Delta waterways under NPDES MS4 stormwater permits. These grants would help to implement actions from, and in addition to, their respective stormwater management plans. Reducing the amount of pollution in stormwater runoff entering Delta waterways will benefit delta smelt, white sturgeon, steelhead, and Chinook salmon (Essex Partnership DRERIP 2009).	The assessment of CM19 is insufficient in that the relative loading of pollutant stressors was not evaluated, not even in a conceptual model. The effect of low-level pesticides on covered species or how concentrations improve between urban runoff discharges and covered species habitat is not well understood. A better understanding of all sources, the fate and transport in the system, and specific beneficial use impacts would allow more effective control measures rather than wide-scale implementation of projects that could be ineffective. Grant programs only fund a small percentage of projects such that it will take decades to have a substantial effect on urban runoff loads. Pesticide registration by EPA Office of Pesticide Programs and the California Department of Pesticide Regulation allow use of pesticides that local agencies have no authority to restrict.
5.2.2.7	5-120	15-17	CM19	The implementation of CM19 Urban Stormwater Treatment under the BDCP, would provide an additional source of funding for these and other entities in the Plan Area to implement these programs.	The document does not adequately describe funding assurances. The BDCP only states that funding may be available through existing and future grant programs. However, these grant programs (Propositions 84 and 1) are not specific to "Plan Area" entities and now require preparation of SB985 stormwater resource plans.
5.2.4.11	5-162	34-36	CM19	Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing CM2–CM21 under Alternatives 1A–2C, 3–5, and 6A–9, or Environmental Commitments under Alternatives 4A, 2D, and 5A	The analysis inadequately assesses the cumulative impact of CM19 on local agencies, as the suggested grant funding is inadequate to make any measurable change in Delta water quality and benefit to covered species. The financial burden to demonstrate measureable changes in the Delta could then be passed on to local government.
A.6.3.1	6-1	16-18	WQ	Therefore, surface water resources on many of the tributaries of the Sacramento River and San Joaquin River that are not affected by SWP and CVP operations would not be affected by implementation of the alternatives.	It is not presented how reverse flow conditions in the South Delta and North Delta would be impacted by the proposed project. These conditions, especially during extreme events (drought, flood, fire, etc.), may in turn affect operation of other water supply infrastructure on tributaries. Please present the technical justification for the conclusion that upstream tributaries are not affected by the alternatives.

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A.8.0	8-3	14	WQ	San Francisco Bay	The areas upstream and near to the North Delta intakes should also be included in the assessment of water quality.
A.8.1.3.7	8-15	26-32	WQ	Water quality in the southern Delta downstream of Vernalis is influenced primarily by San Joaquin River inflow; tidal action; agricultural return flows; and channel capacity. The Delta water supply operations have relatively little influence on salinity levels at these locations, and the elevated salinity in south Delta channels is affected substantially by local salt contributions discharged into the San Joaquin River downstream of Vernalis as evidenced by the comparatively lower EC levels at Vernalis and the Banks and Tracy export locations.	This statement is misleading and should be revised. The South Delta intakes are known to draw significant North Delta lower salinity water, which would improve water quality compared to San Joaquin River at Vernalis during some periods. The text implies that exceedances on Old River are not caused or influenced by the South Delta intakes, but rather local discharges.
A.8.1.3.8	8-19	32-35	WQ	WTPs are not specifically designed to treat and remove CECs, and the WTP industry is just beginning to examine their ability to treat for EDCs, with an encouraging some degree of success (e.g., Snyder 2008; Benotti et al. 2009; Contra Costa Water District 2009); however, our understanding of treatability for CECs is incomplete.	This text is confusing, because the intention of the author is unclear. Water or wastewater treatment plants needs to be clarified, and the references need to be reviewed to ensure that they support the intended treatment facility.
A.8.1.3.10	8-22	13-20	WQ	The Central Valley Water Board has embarked on a Nutrient Study Plan, that will be closely coordinated with the San Francisco Bay study effort, to determine whether separate nutrient criteria for the Delta are necessary. The Nutrient Study Plan is considered a necessary prerequisite for any decisions about creating NNEs for the Delta and determining how they would be implemented. The Nutrient Study Plan consists of four topical study areas (i.e., macrophyte, cyanobacteria, nutrient concentrations-forms-ratios, and modeling tools) to assess the fundamental question of whether there is evidence that nutrients contribute to Delta problems associated with macrophytes and algae.	The NNE Stakeholder and Technical Advisory Group (STAG) has also developed a charter that should be referenced as a key process document to develop the desired outcomes. Also, there is a fifth subcommittee that is evaluating drinking water impacts related to Delta nutrients. Please add reference to this subcommittee in the discussion.

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A.8.1.3.11	8-25	13-22	WQ, Clarity	The Central Valley Water Board recently (July 2013) amended the Drinking Water Policy in the Basin Plan to include new directives to ensure that risks to drinking water quality associated with organic carbon from Delta source water does not increase over current levels. The Basin Plan narrative chemical objective (i.e., "Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.") was amended to include a new footnote stating "This includes drinking water chemical constituents of concern, such as organic carbon." The revised policy requires the Central Valley Water Board to consider the necessity for inclusion of monitoring of organic carbon, salinity, and nutrients when renewing waste discharge requirements based on the discharge loading, proximity to drinking water intakes, and trends in ambient conditions for these constituents.	The Drinking Water Policy covers the Delta and the upstream tributaries, and this text needs to be revised to include all source waters included in the Policy.
A.8.1.3.12	8-27	10-13	WQ	The Central Valley Water Board recently (July 2013) amended the Drinking Water Policy in the Basin Plan to include new directives to ensure that risks to drinking water quality associated with pathogens from Delta source water does not increase over current levels.	The Drinking Water Policy covers the Delta and the upstream tributaries, and this text needs to be revised to include all source waters included in the Policy.
A.8.1.3.16	8-38	32-36	WQ	The concentrations of these metals can be substantially elevated above background levels during watershed runoff events that transport high-suspended sediment loads. However, in general, a large majority of the metals are stable within the mineral matrices of the suspended particles and not available to interact chemically with other compounds or otherwise cause adverse water quality effects.	There are other causes and sources of metals (both dissolved and total) which are not discussed or presented here (reservoirs, agriculture, mines, etc.). This presentation should be expanded to include all sources. Supporting studies related to speciation of metals or stability in the source waters have not been included. This statement should be supported with water quality data specific to the Central Valley sources. We request that the supporting studies be provided and adequately referenced.
A.8.1.3.16	8-40	17-20	WQ	Based on water quality criteria and objectives, and typical levels in surface waters, it is generally the case that aluminum, arsenic, iron, and manganese are of primary concern for drinking water, while aluminum, cadmium, chromium, copper, lead, nickel, silver, and zinc are of concern because of potential toxicity to aquatic organisms.	Although aluminum, iron, and manganese were added to the trace metals discussion, the data tables for metals were not expanded. We request the inclusion of aluminum, iron, and manganese in the data tables.

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A.8.3.1.1	8-46 to 8-53	28-30 and other occurrences	WQ, Clarity	"models were used to assess compliance with water quality objectives for EC and chloride in the Delta, ..."	The section consistently refers to "compliance with water quality objectives", which implies that all water quality objectives were considered. For clarity, references in this section should be to "salinity related water quality objectives".
A.8.3.1.1	8-53	12-17	WQ, Clarity	At times, negotiations with the State Water Resources Control Board occur in order to effectively maximize and balance protection of beneficial uses and water rights. These activities are expected to continue to occur in the future. Thus, it is likely that some objective exceedances simulated in the modeling would not occur under the real-time monitoring and operational paradigm that will be in place to prevent such exceedances.	The last sentence is misleading by implying that the "real-time monitoring and operational paradigm" will necessarily reduce exceedances compared to modeling. Modeling may bias (favor high or low) the number of water quality exceedances compared to observed conditions. Real-time management has historically been used to maximize water export while attempting to minimize water quality impacts in key locations.Without a more detailed evaluation of historical performance of the models against observed conditions that demonstrates the "high-bias" of the models, the last sentence should be omitted.
A.8.3.1.3	8-56	3-7	WQ, AM	Finally, it must be noted that no formal validation studies have been performed to validate the mass-balance method that was used for boron, mercury, methylmercury, nitrate, or selenium. The validation studies performed to date on conservative constituents (e.g., EC, chloride, bromide) have validated the approach for using DSM2 to evaluate changes in mixing of Delta source waters on water quality constituents.	The shortcomings of the mass balance approach used (fate and transport effects, time-scales for assumptions, time-scales for water quality objective comparisons, etc.) might be better understood if an analysis of the net increase in loads of constituents was evaluated. This could be done by looking at historical water quality conditions in the North and South Delta and applying the proposed alternative export compared to the baselines. In other words, what was the historical load and volume exported and what is the expected load and volume exported under the alternatives? Monthly time scales would provide a good indicator of the overall water quality impacts.

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A.8.3.1.7	8-71	30-33	WQ, AM	Furthermore, there are several factors related to the modeling approach that may result in modeling artifacts that show objective exceedance, when in reality no such exceedance would occur in reality. Sensitivity analyses and further other analyses were performed to evaluate whether exceedances were indeed modeling artifacts or were potential project related impacts that may actually occur.	See previous comment on model water quality exceedance bias. The text suggests that the model will identify false positive exceedances. The model should be used to evaluate the trends and problematic areas. It was not demonstrated that the model introduces "false-negative" exceedance errors. Please provide a clearer quantification or range of the magnitude of the impacts modeled (e.g., volume diverted differences, changes in total loads passing key locations, etc.).
A.8.3.1.7	8-73	19-21	WQ	Further, since the Delta is thought to be light limited and nutrients are in excess relative to algal growth requirements, these types of changes would not be expected to measurably change the quantity or composition of algae in the Delta.	Recommended edits: Further, since the Delta is thought to be light limited and nutrients are in excess relative to algal growth requirements, these types of changes would not be expected to measurably change the quantity or composition of algae in the Delta. Increased retention time in the Delta and increased temperature are more strongly tied to algal and macrophyte growth enhancement.
A.8.3.1.7	8-82	21-24	WQ	Minimal changes in water clarity would result in minimal changes in light availability for Microcystis under the project Alternatives. As such, the project alternatives' influence on Microcystis production in the Delta, as influenced by the project alternatives' effects on Delta water clarity, is considered to be negligible.	The project Alternatives will increase residence times in some areas, which would tend to increase clarity and enhance microcystis production. Because water clarity is a limiting factor, even small changes should be evaluated for the potential to increase microcystis occurrence.
A.8.3.3.17	8-453	17-19	WQ	In addition, the frequency, magnitude, and geographic extent of Microcystis blooms in Delta waters may increase in the future as Delta water temperatures increase due to climate change.	The impact of microcystis blooms on the Lower American River (upstream of the Delta) needs to be evaluated as impacting the NAA and the other project alternatives (1-9) and may need to be added here.
A.8.3.3.17	8-456	39-40	WQ	Water diverted from the Sacramento River in the North Delta is expected to be unaffected by Microcystis and microcystins.	Insufficient data was presented to support this claim. Insufficient analysis was done to review climate change and Alternative implementation impacts on waters upstream of the Delta.

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A.11.3.5.4	11-189	8-14	Alternatives, WQ	This impact discussion is new and is divided by Alternatives 1-5 (Alternatives 1A, 1B, 1C, 2A, 2B, 2C, 8 3, 4, 5); Alternatives 4A, 2D, and 5A; and Alternatives 6-9 (Alternatives 6, 7, 8, and 9). Residence time changes are shown for Alternatives 1-9 in Table 8-60a of Section 8.3.1.7. The effects of contaminants on aquatic resources associated with implementation of water operations will depend on how operations change the composition or concentration of contaminants, how contaminant bioavailability is affected, and how those changes might impact aquatic resources.	The impact evaluation should be expanded to include cumulative effects of the proposed project and its mitigation activities that can contribute contaminants.
A.11.3.5.4	11-189	27-40	WQ, Alternatives	The operational impacts of new flows under CM1 Water Facilities and Operation on mercury and methylmercury concentrations were evaluated both qualitatively in the context of a conceptual model for mercury in the delta, and quantitatively using a numerical model; details on these analyses are described in Appendix 8I, Mercury. These two lines of analyses must be considered together, since a very high level of uncertainty is associated with both approaches, as further described below. Based on the conceptual model, since the Sacramento River is a larger contributor of mercury loading to the Delta system relative to the San Joaquin River, a reduction of the flow from the Sacramento River entering the Delta (due to some of the flow being exported) and an increase in the flow from the San Joaquin River entering the Delta (as opposed to being exported) would be expected to result in an overall decrease in mercury loading to the Delta under CM1 water operations. However, since the concentrations of mercury in San Joaquin River are sometimes higher than the Sacramento River, there could be increases in mercury concentrations at certain locations, depending on the specific operations at any given time.	The increase in methylmercury concentration resulting from the proposed project may lead to higher fish tissue concentration and further impairment due to methylmercury. While there is uncertainty with modeling, if the impact is reasonably expected, it should be reasonably mitigated.

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A.11.3.5.4	11-193	10-18	WQ, Alternatives	NEPA Effects: Based on the above discussion, the effects of mercury and methylmercury in comparison to the No Action Alternative are not considered to be adverse to all fish species evaluated for Alternatives 2D, 4A, and 5A because the modeled changes are within the range of uncertainty and no substantive change is indicated. CEQA Conclusion: Alternatives 2D, 4A, and 5A would not increase levels of mercury by frequency, magnitude, and geographic extent such that the affected environment would be expected to have measurably higher body burdens of mercury in aquatic organisms, thereby substantially increasing the health risks to wildlife (including fish). This impact is considered to be less than significant for Alternatives 2D, 4A, and 5A. No mitigation is required.	This is a sample excerpt to support the concern that cumulative contaminant impacts for mercury and selenium are insufficiently evaluated in the revised environmental document. Also, Alternative 4A does have the potential to cause significant impacts, and reasonable mitigation for methylmercury should be included. There are numerous other parts of the California Water Fix documents where this is applicable.
A.25.3.3.1	25-27	21-24	WQ	Any modified reservoir operations under the No Action Alternative are not expected to promote Microcystis production upstream of the Delta since large reservoirs upstream of the Delta are typically low in nutrient concentrations and phytoplankton outcompete cyanobacteria, including Microcystis.	As noted above, we are concerned about the potential for varying river flows due to revised reservoir release operations and increased temperatures expanding the geographic extent of Microcystis.
A.28.5.8.7	28-16	15-18	WQ	Consequently, it is possible that increases in the frequency, magnitude, and geographic extent of Microcystis blooms in the Delta would occur due to the operations and maintenance of the water conveyance facilities and the hydrodynamic impacts of restoration under CM2 and CM4.	As noted previously, we are concerned with potential for Microcystis presence in areas upstream of the Delta and believe that this mitigation effort should be expanded to include tracking of the rivers below the major upstream reservoirs during late summer/fall. We are concerned that revised reservoir operations may lead to significant seasonal changes in river hydrodynamics that could support Microcystis growth.

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A.31.4	31-4		WQ, omission	WQ-18: Effects on pesticides concentrations resulting from implementation of CM2 - CM21	It is unclear why this impact was removed from the Significant and Unavoidable list. There are no revisions to the text, which supports significance - even after mitigation. Moreover the grouping of CM2-CM21 in this case confuses the causes of impacts. For example, CM19 would not increase pesticide concentrations; however, conservation measures such as restoration efforts or flow modifications could reasonably increase Delta pesticide concentrations.
A.8H-1	8H-3		WQ	Even though the sensitivity analyses were performed at LLT, the factors identified to explain modeled salinity exceedances at LLT are expected to be valid similarly at Early Long-term (ELT) conditions.	It is unclear why it is valid to apply the results of the sensitivity analysis to the ELT. Please expand on the rationale.
D.3.4.1.5	D.3-29	Table 3.4.1-5, Row 3	WQ	To what extent does CM1 change the abundance and distribution of Microcystis? Assess abundance and distribution of Microcystis using field studies such as those of Lehman et al. (2005, 2010). Summer months following implementation of CM1 (i.e., after north Delta intakes are completed and diversions at the south Delta export facilities decrease). Multiple year study to capture hydrological and operational variability.	Similar to previous comments, the potential impacts to areas upstream of the Delta have been inadequately assessed with regard to potential for Microcystis growth. This assessment should be expanded to include areas upstream of the Delta to determine if the presence of Microcystis is changing.
D.3.6.4.3	D.3-138	1-9	AM	Decision Trees: This focus area includes all monitoring and research needed to resolve which branch of the Decision Trees is chosen for initial operations (see Section 3.4.1.4.4, Decision Trees for a description of the Decision Trees). Potential partners for monitoring and research in this focus area include the IEP, Delta Science Program, Ecosystem Restoration Program, Central Valley Water Board, Sacramento Stormwater Quality Partnership, State Water Contractors, USGS, San Francisco Estuary Institute, Central Valley Joint Venture, CDFW Bay-Delta Office, Ecological Species Recovery Program, and UC Davis Research Programs. Unlike the other focus areas, the Decision Trees focus area has a deadline, terminating when the new north Delta diversions become operational.	It is not clear why the decision tree focus group should terminate efforts after the proposed North Delta diversion is operational. Are the decision trees then static? Please provide more information on this focus group and the justification for not including this group on the adaptive management team.

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D.3.6.4.4	D.3-141	Table 3.6-1 2.	AM	Sacramento Stormwater Quality Partnership	The SSQP role is limited to only "community involvement" and "landowner" access and should be expanded to allow more direct feedback on water quality issues and other impacts to local agencies.
D.3.6.4.4.12	D.3-144	13-17	Error	Sacramento Stormwater Quality Partnership The Sacramento Stormwater Quality Partnership is a multi-jurisdictional program made of Sacramento County and the incorporated cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova to ensure water quality and quantity for cities. The Partnership may be a stakeholder and monitoring or research partner in CM19 implementation.	The Sacramento Stormwater Quality Partnership is not a drinking water partnership and does not "ensure … quantity".
D.6.3.5.2	D-243	17-19	Scope, WQ	The fifth five-year review (i.e., the 25-year review) will include a comprehensive assessment of whether the timing and magnitude of observed environmental and ecosystem changes attributable to climate change have been consistent with Plan expectations.	Since the term of the ELT is 15 years (2025), it is warranted to conduct the climate change assessment at a time consistent with the assumptions. We recommend conducting this review in 2025 to validate ELT assumptions and revise LLT assumptions to support the ESA Section 7 and CESA incidental take authorization.
G Introduction	G-1	15-19	Scope, Omission	The revised proposed project, identified in the Partially Recirculated Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS), no longer includes a HCP/NCCP (see Section 1, Introduction, of the RDEIR/SDEIS for more information); therefore, Alternative 4A will not be incorporated into the Delta Plan and will follow a different process to demonstrate consistency with the Delta Plan.	Although the CA Water Fix claims to not technically need to meet the requirements of Delta Reform Act Water Code section 85320, there are elements of the content and intent of this regulation that should be addressed in the California Water Fix.
G.4.1	G-3	14-15	Alternatives	Reduce Reliance on the Delta through Improved Regional Water Self-Reliance (23 CCR Section 5003)	The RDEIR/SDEIS lacks an alternative with a portfolio approach that examines the role of regional water self-reliance.

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Section	Page	Line	Type	Key Document Text	Comment
G.4.1	G-4	9-10	Clarity, Omission	DWR is preparing a Mitigation, Monitoring and Reporting Program (MMRP) that will be available with the Final EIR/EIS.	It is a concern that more information is not available in the RDEIR/SDEIS for comment during the public review period. The following comment is based on the limited language provided in the RDEIR/SDEIS. The key components of the monitoring program should be included in the final environmental document. There should be a more detailed explanation of how the monitoring program will be a component of a long-term adaptive management program and how the monitoring information will be used to inform decisions on mitigation efforts. Consideration should be given to coordination and funding of other stakeholder monitoring programs such as the Delta RMP rather than isolated programs solely within state agencies.
G.4.1	G-4	9-10	Clarity, Omission	DWR is preparing a Mitigation, Monitoring and Reporting Program (MMRP) that will be available with the Final EIR/EIS.	This is a significant item that is not adequately covered in the RDEIR/SDEIS. The RDEIR/SDEIS is then insufficient in that it is not substantially complete and is missing key elements to allow for a complete Public Review. Furthermore, we request that the MMRP engage local agency stakeholders and the Delta RMP.
G.4.2	G-4	19-21	Clarity	All of the documents, studies, administrative drafts, and meeting materials – more than 3,000 documents – have been posted online since 2010 in an unprecedented commitment to public access and government transparency.	While we agree significant effort and detailed thought has gone into the tens of thousands of pages of documents that are publicly available, the science process has not been transparent in that comments and responses to comments on the BDCP documents and RDEIR/SDEIS were not circulated. Further, the City and others have requested specific science items that have not yet been provided or responded to. The quantity of documents is high, but the attention to key science questions has been inadequate.

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G.4.3	G-5	8-11	Clarity, Omission	The proposed project (Alternative 4A) will include an adaptive management plan that describes the approach to be taken, which, to the extent feasible, will be consistent with the adaptive management framework in Appendix 1B of the Delta Plan	The nine step process as described in Appendix 1B of the Delta Plan should be discussed in the RDEIR/SDEIS in sufficient detail to provide readers with an understanding of the key components and focus areas of the planned adaptive management program. Insufficient detail is provided to assure allocation of sufficient resources, coordination with other programs, and adequacy to address project impacts.
G.4.3	G-5	27-30	AM, Omission	In summary, the broad purposes of the program will be to: (1) undertake collaborative science, (2) guide the development and implementation of scientific investigations and monitoring for both permit compliance and adaptive management, and (3) apply new information and insights to management decisions and actions.	The CA Water Fix does not commit funding and support to collaborative science that includes all stakeholders including local agencies. Sufficient description and information on the Adaptive Management Plan is not provided, therefore, the RDEIR/SDEIS is insufficient.
G.4.4	G-6	10-14	Alternatives	While the DMMs (Demand Management Measures) are not proposed as part of any alternative, Appendix 1C of the Draft EIR/EIS is intended to provide information on the important contribution made by DMM towards reducing demands in areas served by water exported from the Delta. By reducing long-term water demand in the areas served by the SWP and CVP contracting agencies, demand management efforts complement the environmental objectives of the proposed project.	One or more project alternatives should be provided to include demand management and resulting environmental benefits with regards to the project.

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From:	Elissa Callman <ECallman@cityofsacramento.org>
Sent:	Wednesday, October 28, 2015 3:47 PM
To:	BDCPcomments
Cc:	Sherill Huun; Booth. Dana; cfallbeck@citrusheights.net; Bfragiao@elkgrovecity.org; sstaley@folsom.ca.us; AStricker@cityofranchocordova.org; Forrest, William (WForrest@ci.galt.ca.us)
Subject:	Sacramento Stormwater Quality Partnership Comments on CA Water Fix Documents
Attachments:	Sacramento Stormwater Quality Partnership Comments on CA Water Fix RDEIR-SDEIS Oct 2015.pdf

To Whom it May Concern:

This email transmits the Sacramento Stormwater Quality Partnership's comments on the CA Water Fix RDEIR/SDEIS. If you have any questions on the comments, please contact Sherill Huun of the City of Sacramento Department of Utilities at 916-808-1455 or Dana Booth of the Sacramento County Department of Water Resources at 916-874-4389.

Please confirm receipt of this transmittal.

Thank you.

Sincerely,
Elissa Callman
Senior Engineer
City of Sacramento Dept of Utilities
1395 35th Avenue
Sacramento, CA 95822
916-808-1424

From: Barry Williams <wcstriper@gmail.com>
Sent: Monday, October 26, 2015 7:35 PM
To: BDCPcomments
Subject: BDCP Comment 2

"Delta Fix" Comment – General Comments

The BDCP should not go forward until current issues and problems are fixed

1. The delta is in a state of disrepair. Fish populations are steadily decreasing. The CVPIA law enacted has not been complied with. Water Resource Board continues to violate the provisions by failing to increase fish populations, violate water temperate standards, violate salinity standards but continue to increase the exports to water contractors. No BDCP should proceed without flow requirements and penalties if violations occur.
2. No new conveyance system should be proposed without the outflow requirements to keep the Delta heathy be determined by scientific method. The current plan has no maximum limit the established.
3. This last year over 800,000 af of water was exported, even though it was considered a dry year. Before the year 2000 exports exceed 600,000 af only once. Increased water exports have to stop, there is only so much water.
4. Current water rights need to be revised. Current water rights exceed 4 times the annual rainfall in California! This is stupid!
5. This system will cost billions of dollars yet funding is not secured. The conservation measures have not been funded and we be paid by taxpayers. Why should we pay to fix the damage caused by others who benefit? Conservation measures should be funded and completed first before any conveyance goes forward.
6. This system will provide a reliable source of water to mainly a few very powerful water districts. Some of these districts lye within the salt and selenium laced Tulare basin. The farm land within this basin, roughly 190,000 arces has naturally occurring salts and selenium with no natural out drainage. It is predicted that in 40 years this land will be unproductive yet billions of dollars and the possible destruction of the Delta is being invested to keep these poisoned land going. Wouldn't it be wiser to take this land out of production to save money, water and the Delta?
7. The BDCP is a dual conveyance project. The destruction of fish at the south delta pumps will continue yet no new fish screens are proposed. No project should go forward without the current screens being replaced by modern screens. Over 40 million fish were killed at the pumps that last year. This needs to stop!
8. This project does not create any new water or replenish ground water supplies. Corporate farmers continues to plant permanent crops despite it being against the original CVP agreements. Over 415,000 acres of permanent crops have been planted with a 68,000 acre increase between 2008 and 2012. Additional almond and pistachio orchards have been planted recently to take advantage of high export prices, despite current dry conditions. These practices of planting for profit then bullying to get the water needed needs to stop!

From: Barry Williams <wcstriper@gmail.com>
Sent: Monday, October 26, 2015 7:36 PM
To: BDCPcomments
Subject: BDCP Comment 3

BCDC Comment – Alternate 4 – fish protection

It is my understanding that Alternate 4 would be a dual conveyance system that would draw an additional 9000 cfs from the Sacramento River and also allow exports from the current south delta pumps.

The Delta is currently in a state of possible destruction and has been in a downhill spiral since the implementation of the CVP. Increase exports have caused the steady decline of fish species and, based on studies by the CAL FED project, are the number one stressor on listed species.

Currently the south delta pump operations are killing millions of fish each year. Last year there were over 11 million fish "salvaged" at the pumps. It is estimated that at least 4 times that amount are not salvaged and killed by the pumps. This is largely due to the existing fish diversions are outdated and 50 year old technology. Current diversions only run at 45% efficiency and are not fish screens.

No implementation of any new conveyance project should proceed without the removal and reconstruction of the existing louvers and replaced with state of the art fish screens. The current plan does not include any conservation measure to address the fish screens.

I spoke with the fisheries people at the public meeting in Walnut Grove and there comment was that a more efficient screen was not possible. I do not believe this is the case. Channels could be redirected to create continuous flow to avoid entrapment against the screen. It is obvious this measure is not included due to cost and not possibility.

No new conveyance system should proceed without the current problems within the Delta and fish populations increased.

Barry Williams

From: Barry Williams <wcstriper@gmail.com>
Sent: Monday, October 26, 2015 7:37 PM
To: BDCPcomments
Subject: BDCP Comment 4

Delta Fix" Comment – Alternate 4 – Selenium

The current draft EIR contains no mitigation of the toxic selenium created when irrigating land within the Tulare Basin. Discussions with officials at the public meeting indicated that the current tunnel project has no impact on the creation of Selenium. The tunnels will create a way to export more water from the Delta, possibly opening up more land to irrigate, thus creating more toxic run off that the Federal Government will have to deal with.

No EIR should be accepted without listing the effects of increased irrigation of land that within 40 years will not be sustainable.

Barry Williams

From: Barry Williams <wcstriper@gmail.com>
Sent: Monday, October 26, 2015 7:42 PM
To: BDCPcomments
Subject: BDCP Comment 5

"Delta Fix" Comment – Farm Acquisition

It was announced that the state plans to condemn 300 parcels containing Delta family farms so the tunnel project can move forward. This makes no since to condemn land that has been in production for over 100 years with senior water rights to favor land that has been in production since the 1960's with junior rights. This land exists only because of the creation of the Central Valley conveyance system. Wouldn't it make more since to condemn and fallow the Westlands farms due to their destruction of the Delta and the creation of toxic selenium waste? Then there would be enough water and no need for the 15 Billion dollar tunnels.

From: Barry Williams <wcstriper@gmail.com>
Sent: Monday, October 26, 2015 7:56 PM
To: BDCPcomments
Subject: BDCP Comment 7

"Delta Fix" Comment – Old River Barriers

The "conservation measure", which are now not conservation measures, state that a permanent barrier will be installed at the mouth of Old River. The EIR does not address the economic loss to Delta businesses and marinas due to the restricted navigation. Pleasure boats and fishing boats would not be able to access major businesses and restaurants when this barrier is closed. The only route from Bethel Island to the main San Juaquin River would be through the narrow Fisherman's Cut or way south through Middle River. This will also restrict migratory paths of regulated game fish such as striped bass and american shad. Putting band aids on the problem will not fix the decline of Delta Smelt. The smelt need water and natural flows not artificial barriers. The smelt and other listed species, as well as all legally introduced species need state of the art fish screens at the south delta pumps, not barriers that would effect the economic lives of many.

Barry Williams