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BDCP/WaterFix Comments
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Subject: City of Sacramento Comments on the California Water Fix Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement

To Whom It May Concern:

The City of Sacramento (Sacramento) appreciates the opportunity to provide comments on the July 10, 2015 California Water Fix Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Sacramento previously submitted comments on the Bay Delta Conservation Plan (BDCP) and associated Draft Environmental Impact Report and Draft Environmental Impact Statement (DEIR/DEIS).¹ No response to these comments was provided, and a majority of our significant comments were not addressed in the RDEIR/SDEIS. We incorporate these previous comments into this comment letter.

Sacramento provides a potable water supply primarily from surface waters tributary to the Delta that serves more than 136,000 customer accounts, and over 480,000 residents. Sacramento's diversions of surface water are made pursuant to pre-1914 rights, five water right permits, and a permanent water right settlement contract with the U.S. Bureau of Reclamation. In addition, Sacramento provides the following critical services that benefit City residents and businesses as well as the Delta:

- Municipal separate storm sewer system (MS4) services that include a management program, compliance with the National Pollutant Discharge Elimination System permit (NPDES No. CAS082597, Order No. R5-2015-0023), and participation in the Sacramento Stormwater Quality Partnership (SSQP). The SSQP is a multi-jurisdictional program comprised of Sacramento County and the incorporated cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova (Permittees) to provide education and outreach to reduce pollution and to standardize pollution best management practices for development projects across the region. The SSQP and Permittee programs have supported water quality improvements in local creeks and rivers for more than 25 years.

¹ City of Sacramento Comments on the Bay Delta Conservation Plan (BDCP) Draft DEIR/EIS and the BDCP. July 22, 2014.

The Stormwater Quality Program includes construction, industrial, illicit discharge, new development, municipal, and public outreach elements and target pollutant efforts that are designed to improve water quality.

- A combined sewer system (NPDES No. CA0079111, Order No. R5-2015-0045) that treats wastewater and more than 99.5% of the stormwater drainage from an 11.3 square mile area in Sacramento's Downtown, East Sacramento, and Land Park areas, providing secondary treatment for approximately 97% of the total wastewater and stormwater flows.

Sacramento values environmental resources and is committed to the protection of our waterways, biological species and habitat, and other environmental resources. Preservation of these environmental resources and maintenance of their quality is not only beneficial to current residents but is crucial to the sustainability and quality of life of future generations. Sacramento has been a major participant in the Sacramento Area Water Forum in support of regional water supply reliability and protection of the Lower American River environmental values. Sacramento supports the co-equal goals of restoring the ecological health of the Delta and creating a reliable water supply for all of California.

Sacramento is also participating with the North State Water Alliance (NSWA) and the American River Water Agencies (ARWA) in preparing and submitting comments on the CA Water Fix documents. The comments by these two groups largely focus on the deficiencies in the documents relative to water supply and hydrologic and fisheries analysis. Sacramento incorporates those comment letters by reference into this comment letter. For the reasons set forth in those comment letters, and in this comment letter, the RDEIR/SDEIS is inadequate and would violate CEQA if adopted as a final EIR. To comply with CEQA, the proposed project's environmental analysis must be revised to address the numerous fundamental flaws that have been identified in the RDEIR/SDEIS and the previous DEIR/DEIS, and circulated for public review and comment prior to the release of any final BDCP and California Water Fix documents and before any decisions are made regarding permitting or implementing the proposed project.

The SSQP is also submitting comments on the CA Water Fix documents, and Sacramento supports the comments made by the SSQP.

There are many noteworthy concerns Sacramento has on the CA Water Fix documents. One outstanding issue is the inclusion of Conservation Measure 19 (CM19) Urban Stormwater Treatment. CM19 in the RDEIR/SDEIS was not revised to sufficiently address the major comments provided by Sacramento and the SSQP on the BDCP and the DEIR/DEIS, and it is unclear whether CM19 is intended to be implemented as part of the proposed project, California EcoRestore, or indirectly through existing programs. Municipal separate storm sewer system (MS4) agencies already have significant investment in control strategies, monitoring, and adaptive management programs, including participation in the Delta Regional Monitoring Program (RMP).

The RDEIR/SDEIS and appendices that include BDCP revisions² (California Water Fix documents) and the BDCP and DEIR/DEIS³ (BDCP documents) supporting the proposed project are complex, both technically and organizationally. Our comments here are based on the California Water Fix documents; however, it is impossible to not incorporate references to the BDCP documents because it is not always clear: 1) what portions of the BDCP documents are applicable to the California Water Fix and 2) whether previous comments on those documents were adequately addressed. This unnecessarily complicates commenting and reduces the level of public transparency.

²http://baydeltaconservationplan.com/2015PublicReview/PublicReviewRDEIRSDEIS/PublicReviewRDEIRSDEIS_Links.aspx

³ <http://baydeltaconservationplan.com/EnvironmentalReview/EnvironmentalReview/2013-2014PublicReview/2013PublicReviewDraftBDCP.aspx>

Major concerns on the California Water Fix documents are as follows:

1. Insufficient and Inadequate Description of Scope of Project (Scope)
2. Water Quality Impacts Not Adequately Addressed (WQ)
3. Insufficient Scope of Project Alternatives and Environmental Review (Alternatives)
4. Insufficient Plan to Adaptively Manage Exports and Water Quality (AM)
5. CM19 Is Not Adequately Revised (CM19)
6. Lack of Clarity of Document, Errors, and Omissions (Clarity, Error, or Omission)

Sacramento 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. The specific comments identify the major comment areas to which they are applicable.

1. INSUFFICIENT AND INADEQUATE DESCRIPTION OF SCOPE OF PROJECT

The recirculated California Water Fix documents inadequately describe the scope of the project, which has significant influence both upstream and downstream of the proposed North Delta diversions. The limited Plan Area and Study Area do not match the entire area of influence of the proposed actions in the water quality evaluation and cumulative analysis. Moreover, the cumulative analysis does not consider the relative importance of all factors, including diversions in recent years that have led to the decline of covered species.

The California Water Fix documents limit the effects analysis to construction phases and the cumulative impact analysis to downstream areas only. However, impacts from the proposed project actually extend to the entire watershed, up to the reservoirs as a result of changes to reservoir releases to compensate for North Delta diversion of higher quality water out of the Delta. For example, much of the Section 4 Alternative Analysis refers to changed reservoir operations and the resulting impacts on reservoir storage (page 4.3.1.3, lines 1 – 4):

A comparison with storages under the No Action Alternative provides an indication of the potential change due to Alternative 4A and the results show that average annual end of September Shasta Lake storage could remain similar or decrease under Alternative 4A as compared to the conditions without the project.

Lower levels in the reservoirs would likely degrade water quality as temperatures increase and more sediment-bound constituents are liberated from reservoir sediments. Upstream of the proposed North Delta diversion, Sacramento relies on American River water managed by reservoir releases that will be directly impacted by the proposed project. These effects would also likely occur in the Sacramento River, which is also managed by reservoir releases. The California Water Fix documents do not adequately incorporate these areas in the assessment. This lack of specific detail on the Project Area masks and prevents identification of expected effects. If the proposed project causes changes, the project area should include all of the impacted areas. Moreover, the 2013 Delta Plan (Chapter 6, Page 230) includes recommendation WQ R2 that “Covered actions should identify any significant impacts to water quality.” All Project actions and combinations of their cumulative and triggered effects should therefore be evaluated for all impacts. To meet the Delta Plan recommendations as well as CEQA/NEPA requirements, a reasonable evaluation of the implementation schedule for adaptive management actions, identification of the most critical conservation measures, and an overall

assessment of water quality impacts including upstream and downstream effects should be performed and clearly presented.

The Project scope definition insufficiently and unclearly describes the specific details on how related projects will be incorporated consistent with CM2-21 and the Avoidance and Minimization Measures associated with those (CM22). The California Water Fix documents refer to the BDCP documents on several occasions, including the range of possible conservation measures. The preferred California Water Fix alternative (Alternative 4A) does not include these conservation measures, and the RDEIR/SDEIS only proposes a limited number and scope of "Environmental Commitments" (New Alternatives, Section 4, page 4.1-5, Table 4.1-1) that do not attempt to mitigate the identified impacts of the operation of the proposed project. The California Water Fix documents should evaluate the range of reasonable mitigation measures. Historical operations, including in this current drought, have not been consistent with the regulatory operating requirements, and it is important to explain how the environment and beneficial uses will be protected during all hydrologic and operational conditions, including these periods of exceptions.

In addition to lacking clear definitions of the project area extending beyond the construction footprint, the BDCP documents and California Water Fix documents also lack clear descriptions of milestones and/or compliance schedules. The proposed Project relies heavily on adaptive management, but it lacks clear definitions of the target endpoints or "decision points." For example, the RDEIR/SDEIS should include clear goals and timelines for species population stability and recovery. If these goals are not met according to the timeline, mitigation measures should be triggered.

The CA Water Fix must provide a clear explanation of the project scope and area for both the construction and operation of the project.

2. 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 have echoed⁴. 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. The justifications for the allowed impacts focus on specific locations and relative changes to the current condition and the no action alternative (NAA). All these cases include the significant export of water out of the watershed. The cumulative impact 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 in some cases this is required by federal and state Antidegradation Policy. A thorough evaluation would provide a better and more informative indicator of the actual impacts and cost to fully mitigate. The project must provide 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

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

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.

There are a number of significant impacts that are identified in the analysis, most notably including the electrical conductivity 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):

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 (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.

Full mitigation of water quality impacts must 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 rivers upstream of the proposed project, which will be amplified by climate change and sea level rise.

A more detailed quantitative (modeled) assessment of water quality conditions upstream from the proposed North Delta diversion must be provided.

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.⁵ Given the predicted increases in Delta water temperatures due to climate change and proposed project effects based on the modeling provided in California Water Fix documents and BDCP documents, 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.

The residence times upstream of the proposed North Delta diversion must 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 Draft EIR/EIS.” It is not clear if the “substantial improvement” is due 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 RDEIR/SDEIS 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).

California EcoRestore and all associated mitigation plans must 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, including water supply.

⁵ 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.

Degradation caused by the North Delta diversion and related restoration activities should be fully mitigated by the project proponents.

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

Lack of Support for All Beneficial Uses

The California Water Fix documents inadequately evaluate the impacts to all drinking water sources (MUN) and recreational (REC) beneficial uses in the American River and Sacramento River. The analysis fails to examine the water quality impacts on existing and future water intakes upstream of the proposed North Delta diversion. Degradation due to salinity, temperature, and possible higher loads of metals liberated from reservoir releases may increase the water treatment requirements on the American and Sacramento Rivers. The Lower American River is part of the National Wild and Scenic River system and provides recreation, habitat, and drinking water supply. This 23 mile stretch of river from Nimbus to the confluence with the Sacramento River is the most heavily used recreation river in California.⁶ These specific resources and current beneficial uses are not identified in the Appendix A - Section 8 (Water Quality) or Appendix A – Section 15 (Recreation) documents. The Sacramento and American Rivers provide these beneficial uses to a large population of Northern California residents, and their further impairment from the proposed project should be fully mitigated.

Potential impacts to beneficial uses of the affected water bodies, including the reduced opportunities for recreation, aquatic life impacts, and health risks to humans related to the California Water Fix and related mitigation efforts, must be evaluated to identify reasonable mitigation actions and their costs.

Insufficient Evaluation of Water Quality Regulations

Sacramento previously provided extensive comments on consistency with the Federal Antidegradation Policy. There is no indication that these issues were addressed in the RDEIR/SDEIS, which is required according to the requirements of the Clean Water Act and the Federal Antidegradation Policy; therefore, the original comments are 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.

A full Antidegradation Analysis must be performed for any 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 (Appendix G-4A, page G-1, lines 17-19) specifies that "...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 upstream locations. Appendix G-4A refers to the Executive Summary (Table ES-9) for a list of

⁶ <http://www.rivers.gov/rivers/american-lower.php>

these measures; however, Table ES-9 does not provide mitigation for a number of significant water quality impacts. The RDEIR/SDEIS then refers to the "Mitigation, Monitoring and Reporting Program (MMRP) that will be available with the Final EIR/EIS." (page G-4, lines 9-10). The RDEIR/SDEIS is 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 (ISB) review⁷. The California Water Fix documents, including the Appendix G discussion of Delta Plan consistency, 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 RDEIR/SDEIS, 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 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.

Complete documentation of Delta Plan consistency (i.e., the MMRP, the response to comments on the BDCP and DEIR/DEIS, and revisions to the California Water Fix documents) must be circulated for public review with adequate time for review, comment, and revision prior to release of any final BDCP and 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 RDEIR/SDEIS must include an analysis of long-term effects from the proposed project, including cumulative effects with associated projects such as CA EcoRestore.

3. INSUFFICIENT SCOPE OF PROJECT ALTERNATIVES AND ENVIRONMENTAL REVIEW

The RDEIR/SDEIS provides an insufficient range of reasonable alternatives. This issue was previously identified by Sacramento in comments on the BDCP documents as well as in comments by many reviewers including U.S. EPA Region IX. This is important to ensure that there are alternatives that "would avoid or substantially lessen any of the project's significant effects" (CEQA Guidelines §15126.6, subd. (a).).

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

The California Water Fix documents add additional alternatives and “sub-alternatives”, but still do not provide a true alternative approach that would distribute the system management in a “portfolio” approach that reduces the needs for Delta diversions. Examples of alternatives that are not discussed or not discussed in sufficient detail include improved South Delta fish screening, demand management, water reuse, and desalinization. To provide the appropriate context for the proposed North Delta diversions, analysis of the cost and benefits of these alternatives is necessary. Conceptual models and evaluations could effectively demonstrate the relative importance of a range of supply volume options, the benefits to water quality in the Delta (i.e., as a load reduction or concentration improvement that could benefit covered species), and the costs of such actions.

The proposed alternatives do not evaluate the upgrade of fish screens in the South Delta diversion. No technical infeasibility is provided for this omission. With the continued operation of the South Delta diversion, it is not clear that the full benefit to the covered species will be achieved.

The Delta Plan requires that demand management be evaluated and included as part of a covered action. The analysis of demand management in the California Water Fix documents includes only a brief discussion of existing conservation programs on the statewide and local scale without providing specifics on target conservation requirements. To balance the co-equal goals, the demand on the Delta should be reduced.

The proposed alternatives do not evaluate mitigation opportunities with water reuse, groundwater recharge projects, and stormwater infiltration, though they are identified as effective measures to increase water supply in key strategy documents in the California Water Plan⁸.

Desalinization projects will not cost effectively satisfy all of California’s scarcity issues, but this is another example of an alternative that should be considered within a portfolio approach to meet the co-equal goals of improving reliability of water supply and improving the Delta ecosystem.

The RDEIR/SDEIS suggests that unnamed “other programs” that are “separate from the proposed project” will use elements of the BDCP to implement long-term conservation measure efforts that are not part of California Water Fix (Section 1, page 1-3, lines 24 through 26). The proposed North Delta diversion should include assurances for funding of these measures.

Separate from the adequacy of the alternatives themselves, the dispersion of the alternatives analysis throughout thousands of pages, the over-simplified conclusions about tradeoffs, and the incomplete consideration of uncertainty, each frustrate the ability of any decision-maker or RDEIR/SDEIS reviewer to consider if the preferred action is indeed the best approach for meeting the project purposes.

There are many environmental impacts described as significant before and after mitigation that are compiled in the Attachment A specific comments, without any specific mitigation being proposed or evaluated. Adaptive management and the need for flexibility should not be used as the rationale to omit this important information during the Public Review process.

The necessary mitigation to meet environmental mitigation obligations, including descriptions and commitments on how the mitigation will be conducted, must be circulated for public review with adequate time for review, comment, and revision prior to the release of any final BDCP and California Water Fix documents .

4. 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 Sacramento is

⁸ http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/03_Vol1_Ch02_Imperative_to_Invest_in_Innov_and_Infrastr.pdf
page 2-16

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 for all stakeholders. 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 is not developed. The BDCP and RDEIR/SDEIS 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 RDEIR/SDEIS sections on collaborative science (ES.4.2 and 4.1.2.4) cite recent progress toward truly collaborative efforts in monitoring and synthesis in support of adaptive management in the Delta. However, it is necessary to provide more specific commitments and funding to make adaptive management and collaborative science function properly. 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 suggest 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).

California Water Fix must include specific commitments to monitoring, assessment, engagement of local agencies, and implementation of actions before thresholds of beneficial use impairments are realized.

A stakeholder group must be broadened to consider the interests of other stakeholders and other beneficial uses impacted by the CA Water Fix project in the Delta and the tributary upstream and downstream waters.

Insufficient Commitment to Collaborative Adaptive Management and Science Funding

The described collaborative science includes only a limited group with limited commitment for funding. Due to the potential significant impacts of the proposed project, it is important that there be commitment for long-term monitoring to ensure that the necessary information be available to inform selection of the most effective mitigation efforts. The document provides an inadequate description of an Adaptive Management Program and Monitoring Program. At a minimum, more information should be provided on key components of these programs, including an outline of their structure and the types of evaluations and studies that will be considered, as well as an implementation schedule. Sacramento and other Delta stakeholders have participated in the Delta RMP. Technical and information gathering stakeholder groups like this should have defined roles in a collaborative Delta science framework.

At a minimum, more information must 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 considered, as well as an implementation schedule and any required benchmarks that are linked to operations and species recovery.

The adaptive management and monitoring program structure and discussion must be updated to encourage and incorporate consensus science through coordination and participation in regional scientific and monitoring programs. Funding for the Delta RMP and Delta water quality modeling tools must be specified.

Adaptive Management Relied On But Insufficiently Evaluated for Potential Impacts

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 may not be considered individually or 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 proposed AMMP must provide more detail and a demonstration of how such a program could reasonably assure compliance with water quality regulations (i.e., water quality standards), including 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 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 do not address the potential benefit of other measures required by the Delta Plan such as demand management. The AMMP must 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 are only aspirational without commitments to more thoroughly evaluate the effectiveness of management actions as part of this planning process.

The California Water Fix documents must provide a reasonable assurance that the high quality water in the Sacramento and American Rivers can be maintained. The AMMP must be circulated for public review with adequate time for review, comment, and revision prior to the release of any final BDCP and California Water Fix documents.

Operational Framework is Not Sufficiently Described

The alternatives and sub-alternatives do not have a clearly presented and understandable framework for operation (i.e., rule-set or flow chart describing the approach). While it is understandable that a complex approach is necessary and that it must be “adaptively managed”, the range of operational conditions is then widened significantly, and it is not possible to ascertain which assumptions or operational controls could have significant effects. These effects will be more significant in times of scarcity or extreme events, and the document should address environmental protections during all conditions, including drought, floods, and other significant watershed events. For example, page 4.1-7, Table 4.1-2 includes the following description of operations criteria:

December through June: post-pulse bypass flow operations will not exceed Level 1 pumping unless specific criteria have been met to increase to Level 2 or Level 3 as defined in the Section 3.6.4 of the Draft EIR/EIS. If those criteria are met, operations can proceed as defined in Table 3.4.1-2 in the BDCP Public draft. The specific criteria for transitioning between and among pulse protection, Level 1, Level 2, and/or Level 3 operations, will be developed and based on real-time fish monitoring and hydrologic/behavioral cues upstream of and in the Delta. During operations, adjustments are expected to be made to improve water supply and/or migratory conditions for fish by making real-time adjustments to the pumping levels at the north Delta diversions. These adjustments would be managed under Real Time Operations (RTO).

This does not adequately identify how the upstream and Delta “cues” will be interpreted as threshold values requiring action. Under extreme conditions it is not clear that RTO can adequately adjust to meet all demands, especially for biological conditions.

A clear presentation of the operations framework for the California Water Fix with a clear presentation of the expected sensitivity of the system in response to operations for a full range of hydrology and watershed events must be provided, as well as the expected level of error.

Insufficient Inclusion of Local Coordination

The BDCP documents and California Water Fix documents do not adequately address coordination 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.

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

The California Water Fix only refers to monitoring and science necessary to adaptively manage the proposed North Delta diversion along with continued operation of the South Delta diversion. The California Water Fix does not provide details on the governance, participation, intent, and commitment

to funding a collaborative effort. Section ES.4.2 states that “Proponents of the collaborative science and monitoring program will agree to provide or seek additional funding when existing resources are insufficient.” The proponents of the BDCP and California Water Fix should provide commitments to funding collaborative science including the Delta RMP and a Delta water quality modeling center. Specifics to these plans and commitments are necessary to have a transparent and effective effort.

While Sacramento appreciates the modification to the BDCP (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 the BDCP revisions in the California Water Fix 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.

Specific assurances to fund local activities and ensure adequate representation must be built into the BDCP and California Water Fix (Alternative 4A). These assurances should include funding of the Delta RMP, establishing and maintaining a Delta Water Quality Modeling Center, and providing the opportunity for review and input by local agency representation.

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 should be provided.

5. CM19 IS NOT ADEQUATELY REVISED

The BDCP documents and California Water Fix documents 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 included in general discussions of CM2-22 without adequate distinction from the other types of conservation measures.

CM19 Inaccuracies Are Not Corrected

CM19 is described in seven pages of the BDCP documents 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. Conservation Measure 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. No technical justification is provided for the primary inclusion of urban runoff sources as a conservation measure over all other contaminant stressor sources that are described throughout the BDCP documents but are absent as Conservation Measures. 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. Without adequate revisions or complete removal of CM19, these errors will persist and propagate in future documents.

CM19 must be specifically removed from the BDCP and California Water Fix unless it is significantly revised with coordination from MS4 agencies and full funding is provided 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 documents essentially take credit for all future conservation measures, including CM19, without committing to 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. For example, Potential Impact WQ-14 (page ES-44) specifies "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 loading⁹.

The conservation measures must be more accurately grouped when discussed and presented in the context of benefits, impacts, and costs.

6. LACK OF CLARITY OF DOCUMENT, ERRORS, AND OMISSIONS

The complexity of the BDCP and California Water Fix documents 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. For example, a transparent and direct statement of the project goals and impacts could be summarized in a much smaller document with well developed visual presentations (see September 14, 2015 comments from ISB). There are well-acknowledged facts that are obfuscated 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 Sacramento and repeated by others during the review period.

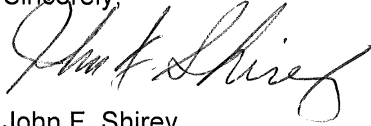
There are a number of cases where the "gaps" between the BDCP documents and California Water Fix documents cannot be evaluated with only "assurances" that future versions and efforts will cover this scope. For example, key issues such as where and how habitat restoration will be effective to achieve BDCP 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 REIR/SDEIS has numerous technical errors and omissions in its evaluation of the impacts of the Alternatives related to water quality and other issues. Specific comments and references are provided in Attachment A that must be addressed.

⁹ Central Valley Regional Water Quality Control Board. Sacramento – San Joaquin Delta Estuary TMDL for Methylmercury Staff Report. pp 80, Table 6.2 April 2010

If you have any questions please call Jim Peifer, Supervising Engineer at (916) 808-1416.

Sincerely,

A handwritten signature in cursive script, appearing to read "John F. Shirey".

John F. Shirey
City Manager

cc: Mayor and City Council Members

Attachment A - City of Sacramento Specific Comments on California Water Fix Documents
Attachment B – City of Sacramento Comment Letter on the Draft BDCP and BDCP DEIR/EIS