From: Shanda Beltran <sbeltran@biasc.org>
Sent: Thursday, July 17, 2014 2:43 PM
To: BDCP.Comments@noaa.gov
Subject: Comments from BILD Foundation
Attachments: BILD Comment Letter on BDCP EIR EIS 7_17_14.pdf

Attached is a comment letter from the Building Industry Legal Defense Foundation. Please let me know if there are any technical difficulties accessing the document.

Kind regards,

Shanda Beltran

Shanda M. Beltran, Esq.
Executive Vice President & General Counsel
Building Industry Legal Defense Foundation
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BDCP 1506

Building Industry Legal Defense Foundation

July 17, 2014

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

Via Electronic Mail: BDCP.Comments@noaa.gov

Re: Support Draft Bay Delta Conservation Plan (BDCP) and Associated Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Alternative #4

Dear Mr. Wulff:

Thank you for the opportunity to comment on the Draft Bay Delta Conservation Plan (BDCP) and Associated Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (collectively "BDCP"). Building Industry Legal Defense Foundation ("BILD") respectfully submits these comments concerning the BDCP. BILD represents the homebuilding and community development industries within a six-county Southern California region that includes specifically Los Angeles County, Ventura County, Orange County, San Bernardino County, Riverside County, and Imperial County. BILD is a separate non-profit mutual benefit corporation and affiliate of Building Industry Association of Southern California, Inc. ("BIASC"). BILD's constituents are BIASC (which is BILD's sole corporate member) and BIASC's over 1,000 member companies involved in construction and community development. BILD's purposes are to monitor legal and regulatory conditions for the construction industry in Southern California and intervene as appropriate. BILD focuses on litigation and regulatory matters with a regional or statewide significance to its mission.

Support for Alternative #4: Our overarching comment on the BDCP is to support proposed Alternative #4 (the Preferred Alternative) which would provide three new intakes on the Sacramento River in the northern Delta and a 9,000 cfs tunnel system to convey water to the existing aqueduct system, coupled with a comprehensive habitat conservation plan for the Delta.

Alternative #4 Best Achieves the Coequal Goals: We believe this alternative best achieves the coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem." Cal. Pub. Res. Code §29702(a) (Delta Reform Act). The BDCP balances the coequal goals by proposing to improve 145,000 acres of Delta habitat and permitting new conveyance facilities, as outlined in Alternative #4 that will improve the water supply reliability in the Delta as well as other parts of California. Implementation of the new conveyance facilities proposed in Alternative #4 will protect California's water supply from tidal influences, improve water quality and allow for more predictable pumping operations.

Furthermore, the proposed operating rules allow for a "big gulp, little sip" approach that increases water exports when excess water is available and lowers exports when the environment is strained under below-average flow conditions. Maintaining the adaptive management framework discussed as part of Alternative #4 ensures ecosystem protection as conveyance facilities are improved. Several aspects of Alternative #4 will lead to reduced conflicts between fish and pumping, such as reducing reverse flows at the South Delta pumps and isolating conveyance facilities through the tunnel system both of which will reduce fish entrainment.

We would also point out that the approval of Alternative #4 will not, as some critics would believe, allow for greater exports of water from the Delta. To the contrary, the BDCP estimates that average water supplies available for export will be 4.7 million acre-fee to 5.6 million acre-fee per year—the same average currently permitted for export through the Delta.

The improvement of water supply reliability through the new conveyance facilities will protect supplies from earthquake, levy-failure, and seawater intrusion risk. To illustrate, a large earthquake occurring in the region with resulting levee failure and seawater intrusion (which has a 63 percent chance of occurring by 2036 according to the U.S. Geological Survey) would lead to an interruption of deliveries of water for 3.5 to 4.5 years (EIR/EIS, Ch. 5, at 5-62) a completely unacceptable result for the millions of people who depend on the Delta for their water supply. Through implementation of Alternative 4 and the construction of the three intakes in the north would allow for deliveries to be secured even if the levees within the Delta fail due to a major earthquake. Furthermore, location of the intake structures in the north as opposed to their current location will allow water to be taken outside the tidal influence zone; thereby reducing the risk to conveyance facilities from salt water intrusion in the event of sea level rise.

Thus, while some alternatives discussed in the EIR/EIS would allow for either greater exports of water or greater environmental benefits, implementation of Alternative #4 best achieves the coequal goals of securing water supplies and improving environmental conditions.

The No Action Alternative Should Not Be Pursued: The No Action Alternative discussed in the EIR/EIS should not be pursued, as implementation of such an alternative would lead to increased environmental damage and reduce water supply reliability, contrary to the balance struck by the implementation of proposed Alternative #4. Under the No Action Alternative, existing conveyance facilities would continue to degrade due to sea level rise and climate change impacts requiring greater Delta outflows to curb salinity increases. EIR/EIS, Ch. 5, at 5-57.

BDCP 15006

Furthermore, implementation of the Fall X2 RPA action as would be required by the No Action Alternative would increase Delta outflows by five percent compared to existing conditions. EIR/EIS, Ch. 5, at 5-57 –5-60. Levee failure under the No Action Alternative would also increase. EIR/EIS, Ch.5, at 5-62. Impacts due to sea level rise, climate change, and increased salinity would also negatively impact Delta species, resulting in additional take of species, under the No Action Alternative. EIR/EIS, Ch. 5, at 5-64. Delta exports under the No Action Alternative would also fall by fourteen percent. EIR/EIS Ch. 5, at 5-64. Thus, given all these considerations, the No Action Alternative should be rejected in favor of Alternative #4.

****

The economy of California depends upon a secure and reliable water supply. Just the construction of the facilities integral in Alternative #4 would lead to the creation of 177,000 jobs, $11 billion in employee compensation, and $29 billion in increased revenues for California businesses. BDCP Economic Impacts Fact Sheet, available at http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Statewide_Economic_Impacts_Report_-_Fact_Sheet.sflb.ashx. Alternative #4 will keep the engine of the California economy running while, at the same time, better securing the environment in the Delta compared with current conditions. BILD urges the state and federal agencies to finalize as quickly as possible the BDCP and the EIR/EIS, so that uncertainty in both the Delta's ecosystem and California's water supply reliability can end through the implementation of Preferred Alternative #4.

Kind regards,

Shanda M Beltran

Shanda M. Beltran, Esq.
General Counsel

BDCP1507.

From: David Okita <dokita@scwa2.com>
Sent: Friday, July 18, 2014 9:05 AM
To: BDCP.comments@noaa.gov
Subject: comments from SCWA
Attachments: SCWA_COMMENTS_BDCP.pdf; SCWA_COMMENTS_BDCP_EIR EIS.pdf

Hard copies also submitted by mail.

David B. Okita, General Manager
Solano County Water Agency
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BDCP 1507

SOLANO COUNTY WATER AGENCY

July 18, 2014

Ryan Wulff, NMFS
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Dear Mr. Wulff:

These are comments from the Solano County Water Agency (SCWA) on the Public Draft Bay Delta Conservation Plan (BDCP).

The SCWA is a State Water Project contractor receiving water through the North Bay Aqueduct (NBA) of the State Water Project. Our agency boundaries include all of Solano County including parts of the legal Delta. SCWA is also the lead on the Solano Multispecies Habitat Conservation Plan (Solano HCP) that is under development. We have interests in how BDCP impacts our NBA water supply, the Solano HCP, Delta agricultural diverters and local point and non-point dischargers.

We appreciate the changes made to the Public Draft from our comments on the Administrative Draft and for meetings with BDCP staff regarding NBA water quality and habitat conservation plans.

We find that the Draft BDCP is deficient and needs revisions regarding addressing adverse water quality impacts to the NBA, CM 21 (Nonproject Diversions) and CM 19 (Urban Stormwater Treatment).

A general comment pertains to how the North Bay Aqueduct Alternate Intake Project (AI) is referenced in the Draft BDCP. The AI project is independent of BDCP, but must be referenced in the BDCP documents because, if implemented, it will become part of the State Water Project and is in the same geographical area of BDCP. The AI project has its own EIR and separate permitting process. Where there is overlap with BDCP is in the operations of the AI project. Since the intake locations of the AI project and BDCP are in the same part of the Delta, the AI project will be operated in coordination with BDCP tunnels. In other words, whatever the limitations on pumping for the BDCP tunnels are, the AI project will be included in that limitation. Additionally, the BDCP documents should not take any credit for any environmental benefits of the AI project since the AI project is not a conservation measure in BDCP and we have not yet determined if we are going to fund the AI project, so its implementation is uncertain.

Another general comment pertains to how the Solano HCP relates to BDCP. We see no major conflicts between the two Plans (assuming Alternative 4). However, close

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BDCP 1507

coordination during implementation of both Plans will be necessary to ensure there are no future conflicts and to maximize environmental benefits of both Plans. We also suggest that BDCP use the most up to date environmental data that is included in the Solano HCP for the Delta area, especially our detailed vernal pool data.

A major concern is CM 21 – Non-project Diversions. This CM needs to be revised such that any non-project diverter, such as Solano County Delta irrigators, is granted incidental take authority upon request by the irrigator. Any costs for infrastructure, such as fish screens or consolidation of intakes, including operations, maintenance and replacement, must be an expense of BDCP, not the irrigators. The BDCP financial plan must include adequate funding for the revised CM.

Another major concern is CM 19 – Urban Stormwater Treatment. This CM needs to be revised and broadened to include Agricultural runoff and discharges. The CM should specify that if point or non-point water quality standards are increased for the protection of BDCP covered species in the Delta or Suisun Marsh, entities contributing to urban and agricultural runoff to the Delta and Suisun Marsh need to be held harmless for the regulation and costs associated with the increment of the standard caused by BDCP programs that enhance the populations of such species. The BDCP financial plan must include adequate funding for the revised CM.

Regarding Governance, we feel it is critical that local governments are adequately represented on decision making bodies of BDCP. The current proposed structure limits Delta local government to a relatively distant advisory role.

Attached are some additional detailed comments.

We have coordinated our review of BDCP documents with Solano County, Reclamation District No.2068 and the Suisun Resource Conservation District. Their comments raise other local concerns that we share and those comments are important to address.

If you have any questions, please contact me at 707 455-1103 or dokita@scwa2.com

Sincerely,

David Okita, General Manager

N-122 BDCP comments

BDCP1507

Solano County Water Agency Detailed Comments on 2013 Public Draft BDCP

Chapter 1 Introduction
Pg 1-31 Table 1-4 – take "County" out of title
Fig 1-2 take "County" out to correct Solano HCP name.
Appendix 1A – Take "County" out of name of Solano HCP in various places

Chapter 2 – Existing Ecological Conditions
Pg 2-11 Explain why Solano HCP vernal pool data base not used
2-26 line 11 – change "Water District' to "of the State Water Project".
Fig 2-11 Yolo Bypass (incomplete figure)
Fig 2-12 NBA Alternate Intake – incorrectly implies it is an existing facility.
Appendix 2B – use SCWA Vernal Pool data

Chapter 3 - Conservation Strategy
3-vi– Take word "County" out for Solano HCP
Pg. 3.2-13 Table 3.2.1 RPM 2 says NBA Alternate Intake Project will minimize impacts to covered fish – should not take credit for a project that is not part of a conservation measure and is uncertain.
Pg. 3.2-21 Line 11 - Take word "County" out for Solano HCP.
3.3.7.1 &2 Include current existing ESA and CESA restrictions on NBA: longfin smelt 2081 restriction and ESA BiOp Delta Smelt restriction
Pg 3.3-129 Need to characterize Solano HCP as "in progress" – all notations
Pg 3.3-147 remove word "County" in reference to Solano HCP
Pg 3.3-297 Solano HCP remove "County"
Pg 3.3-369 Solano HCP reference old – there is a later version available on SCWA web page.
Pg 3.4-6 NBA issues (i.e. existing ESA and CESA restrictions on NBA pumping) not in Problem Statement

CM1
Pg 3.4-11 - 3.4.1.4; line 42 NBA AI listed a Proposed Water Facility, but not included on next page . line 42, typo: "…intakes, ~~an alternative North Bay Aqueduct intake~~, and…"

CM2
Page 3.4-42, line 44, typo: "…and the **proposed Barker Slough Pumping Plant facilities…**" *Nothing is proposed at BSPP.*

Pg 3.4-52 – Lower Putah Creek Improvements. Should be updated to include work being done under a DFW grant to Yolo Basin Foundation.

CM3
Pg 3.4-72 overlap with local HCP's. South Sac and San Joaquin mentioned, no Solano

CM18

3.4-324 – says conservation hatchery expected in Rio Vista – chapter 8/9 says at UCD - clarify

Chapter 4 – covered actions
Pg 4-24 4.2.1.2.4 Barker Slough Pumping Plant – seeks Section 10 and NCCPA Section 2835 permits when DHCCP becomes operational. Permits are needed for current operations so they should be issued at approval of take permits.
Pg 4-29 4.2.1.4 "Alternate" not "Alternative"
Fig 4-1- Putah South Canal of the Solano Project is not part of CVP

Chapter 5 Effects Analysis
Pg. 5.2-10 USFWS RPM2 NBA Comment says SCWA is constructing NBA AI – should be DWR
Pg 5.5.1- 29 BSPP wrong about screens protecting Delta Smelt. Clarify status of NBA AI.
Pg 5.5.1 – 35 Net effects NBA AI wrongly assumed.
Page 5.5.1-26, line 9, clarify: change '~~implementation~~' to '**operation**'
Page 5.5.1-29, line 41, clarify: change '~~implementation~~' to '**operation**'
Page 5.5.1-29, line 41, clarify: "…instead of Barker Slough intake **during periods of concern**, under BDCP…"
Page 5.5.1-35, line 17, clarify: change '~~implementation~~' to '**operation**'
Page 5.5.2-21, line 19, clarify: change '~~implementation~~' to '**operation**'
Page 5.5.2-24, line 21, clarify: "…reduced by **operation of an** ~~the~~ alternate intake…"
Page 5.5.7-9, line 34, clarify: "…and the ~~construction/~~operation of an alternate…"

5B-xiii – Dual conveyance of NBA with AI reduces entrainment – do not assume benefits of AI project
The assumed flow regimes shown in Table 5.B.4-1 are unrepresentative of existing BSPP operations.
5.B-9 NBA and AI –incorrectly implies AI will get implemented.
Page 5.B-xiii, line 1, clarify: change '~~implementation~~' to '**operation**'
Page 5.B-xiii, line 3, clarify: change '~~implementation~~' to '**operation**'
Page 5.B-xiii, line 10, clarify: change '~~implementation~~' to '**operation**'
Page 5.B-324, line 33-34, clarify: "…Barker Slough, which would allow entrainment of delta smelt larvae to be limited by ~~removing most of the~~ **reducing** export pumping from the Barker Slough facility to the new Sacramento River facility at times when entrainment risk is greatest. Therefore the difference between EBC and ESO scenarios probably would be greater than modeled here."
Page 5.B-331, line 34, clarify: "… by ~~removing most of the~~ **reducing** export…"
Page 5.B-388, line 1, clarify: change '~~implementation~~' to '**operation**'
Page 5.B-388, line 3, clarify: change '~~implementation~~' to '**operation**'
Page 5.B-388, line 10, clarify: change '~~implementation~~' to '**operation**'

BDCP1508.

From: kalchik@comcast.net
Sent: Saturday, July 19, 2014 11:26 AM
To: BDCP.comments@noaa.gov
Subject: Water Crisis
Attachments: Water Crisis.docx

Dear BDCP,

I received a request from you about making comments concerning the Bay Delta Conservation Plan. I have attacked my letter to Governor Brown about my ideas of the BDCP and the water crisis California is facing.
Thank you for taking the time to contact me and to reading my response.

Sincerely,
Mrs. Laura P. Kalchik

July 19, 2014

BDCP1508

Governor Jerry Brown
C/O State Capitol, Suite 1173
Sacramento, California 95814

Dear Governor Brown,

I would imagine I am similar to a great majority of Californians in my concern about the crisis our state is facing due to the lack of water. I am doing my part to conserve my usage, but I realize that not is enough. With that in mind, I have some suggestions I believe you and the legislature should definitely consider.

- I believe this lack of water might occur for many years so I suggest a state-wide committee be formed that includes people from all walks of life: people who live in cities, people who live in small towns, farmers from large farms, farmers from small farms, industry, state government, etc.
- Any regional committee concerning water issues, such as the Bay Delta Conservation Plan, should be disbanded, since the issue of water is a state-wide problem affecting everyone in the state.
- This state-wide committee should be projecting and planning water use for decades into the future, and not just short-term plans to alleviate the probable lack of water in the next few years.
- Any city that is now currently dumping sewage which is not totally treated into any body of water should be given a very limited amount of time to correct the problem or be heavily fined and their sewage disposal into that water stopped immediately.
- In order for water usage to be equitable for everyone in the state, all current water contracts should be closely examined and probably terminated.
- Current dams should be inspected to see if they can be made bigger so their reservoirs can be expanded.
- Areas should be examined to find other locations for dams that would not severely impact the environment.
- The proposed tunnels in the delta should be eliminated immediately because it is only a partial "fix" for the water problems. Improperly treated sewage or continued lack of water in the northern part of the state will not be corrected by expensive tunnels.
- The high-speed train down the central valley should be postponed allowing new funding to be passed to help with the water crisis. When the state has taken all necessary measures to alleviate the water crisis, then the high-speed train could be reconsidered. There is no reason to bankrupt the state trying to do everything, and the water crisis must take precedence over a new train.
- Although I am not in favor of trampling on the earth for the benefit of people, I believe it is time to place people's needs above the needs of the Delta Smelt.
- Any city along the coast should immediately plan, sell bonds, and construct water desalination plants so all their water can come from the ocean. Israel is successfully desalting their water so that country could be a source of information and help.
- The State should help finance the desalination plants because the lack of water is a state-wide, not regional, problem.
- Once the cities by the ocean have their desalting plant in operation, most or all of the water from the California Aqueduct should be diverted to farmers and towns in the Sacramento and Central Valleys.
- Immediately, the entire California Aqueduct and all other aqueducts need to be covered to stop evaporation.
- All unnecessary use of outdoor water such as misters in outdoor seating at restaurants, outdoor fountains, washing down driveways and sidewalks, and such, should be made illegal state-wide.

BDCP1508

I realize some of my suggestions would be very expensive and some people might feel they are being burdened with more than their "fair share" of California water problem. But I feel if the solution is examined on a state-wide level, with concerns of all citizens being considered, and political agendas are not allowed into the discussion, our state can come to far-reaching solutions that are equitable to all citizens and businesses.

Sincerely,

Mrs. Laura P. Kalchik
5648 N. Millbrook
Fresno, California 93710

BDCP1509.

From: Williams, Diane <dwilliams@brentwoodca.gov>
Sent: Friday, July 18, 2014 5:53 PM
To: bdcp.comments@noaa.gov
Subject: City of Brentwood BDCP Comments
Attachments: PE - Wulff-NMFS re BDCP Comments 07.18.14.pdf

Mr. Wulff:

Please find attached a letter from City Manager, Paul Eldredge, regarding City of Brentwood comments to the BDCP Draft EIR/EIS. A hard copy will follow in the mail.

Thank you

Diane R. Williams, Executive Assistant
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dwilliams@brentwoodca.gov

BDCP 1509

THE CITY OF BRENTWOOD

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OFFICE OF THE CITY MANAGER

July 18, 2014

Ryan Wulff, NMFS
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

VIA U.S. MAIL AND EMAIL

Email: BDCP.Comments@noaa.gov

RE: City of Brentwood Comments to the Bay Delta Conservation Plan Draft EIR/EIS

Dear Mr. Wulff,

The City of Brentwood ("City") appreciates this opportunity to review the Bay Delta Conservation Plan ("BDCP") Draft EIR/EIS. As one of the oldest and largest Delta communities, the City relies on the Delta for its high quality of life, recreation and economy. In addition, the City has a diverse water portfolio that utilizes both treated and untreated water from the Delta, groundwater and tertiary-treated recycled water. The City has reviewed the BDCP and associated EIR/EIS and has found significant legal and scientific flaws in the documents that cannot be corrected by responses to comments. The BDCP Draft EIR/EIS needs to be withdrawn, reworked and recirculated to address these fundamental deficiencies.

The City has the following serious concerns about the BDCP Draft EIR/EIS:

- *The BDCP Draft EIR/EIS does not meet the fundamental requirements of CEQA or NEPA for defining a project, thoroughly analyzing the project impacts, and providing adequate mitigation for those impacts.*
- *The technical analysis, specifically, the modeling used in the documents is fundamentally flawed and underestimates the impacts of the project.*
- *The BDCP Draft EIR/EIS identifies significant impacts to the City's drinking water supply, quality and cost of service that negatively impacts our economy, recreational opportunities, and quality of life for our residents and businesses, yet fails to provide adequate mitigation for these impacts.*
- *The BDCP Draft EIR/EIS needs to be withdrawn, rewritten and recirculated to address the identified deficiencies.*

BDCP1509

- *The BDCP Draft EIR/EIS does not provide mitigation for significant impacts identified at Brentwood.*
- *The City purchases and uses Delta water from both Contra Costa Water District ("CCWD") and East Contra Costa Irrigation District ("ECCID"). ECCID is party to a contract with the State of California (acting by and through the Department of Water Resources) dated January 7, 1981 (the "Contract"). Section 6 (a) (ii) of that existing Contract provides:*

  The State recognizes a pre-1914 appropriative right of the District to divert from the Delta at Indian Slough for use within the District. The State shall furnish such water as may be required within the District, up to 50,000 acre-feet per year at a rate of 200 cubic feet per second, to the extent not otherwise available under the water rights of the District.

  The existing Contract, as amended April 11, 1991 and February 7, 2000, between the State and ECCID defines the minimum water quality that the State must provide at ECCID's Point of Diversion. The BDCP Draft EIR/EIS fails to provide a detailed analysis of the impacts and associated mitigations to water quality and quantity as they relate to impacts to ECCID, CCWD and the City at all intake diversion locations. In addition, the BDCP Draft EIR/EIS should provide an explanation and plan on how DWR will guarantee the minimum water quality and quantity at all intake diversion locations, especially during periods of low flow with diminished Delta water quality.

- *The City utilizes multiple diversion locations for both potable and non-potable water. The operations that govern which diversion or combination of diversion points of water the City uses is highly dependent on a variety of factors, including Delta water supply, Delta water quality, and associated water treatment costs. The BDCP Draft EIR/EIS does not adequately analyze nor provide adequate mitigation for these operational and associated economic impacts to the City's Water Treatment Plant as well as the City's use of untreated Delta water based on anticipated periods of detrimental changes to the Delta water supply and quality.*
- *The City's Wastewater Treatment Plant ("WWTP") discharges tertiary treated wastewater into Marsh Creek under the California Regional Water Quality Control Board ("CRWQCB"), Central Valley Region NPDES Permit CA0082660 ("NPDES Permit"), Order R5-2013-0106 (see the following link of the NPDES Permit included as part of our comments:*

  http://www.swrcb.ca.gov/rwqcb5/board_decisions/adopted_orders/contra_costa/r5-2013-0106.pdf). The NPDES Permit imposes stringent effluent limitations necessary to meet applicable water quality standards. Failure to meet the limitations and other provisions in the Order may subject the City to administrative or civil liabilities and/or other enforcement remedies to ensure compliance. The chloride effluent limitation in the NPDES Permit is 344 mg/L effective January 1, 2018, with an interim limit of 517 mg/L. One source of the wastewater chloride comes from our Delta drinking water supplies from CCWD's intake locations at Rock Slough and Old River. The BDCP Draft EIR/EIS modeling indicates increase in chloride during certain months of the year. The WWTP discharge currently exceeds the 344 mg/L limit, so ANY increase in chloride levels in any month in our drinking water sources imposes a significant and detrimental impact to the City and its ability to meet the state-mandated chloride effluent limitations. The City is currently exploring alternatives

BDCP1509

to achieve the chloride limits, but has yet to identify any feasible means of mitigating increases to the chloride levels due to the BDCP. In addition to effluent chloride limits, the NPDES Permit also imposes stringent limits on temperature, copper, dibromochloromethane, mercury, and other factors/constituents that detrimentally increase as the Delta water quality decreases. The BDCP Draft EIR/EIS fails to adequately analyze or identify any feasible mitigation for the potential impacts from increases in these constituent levels and the associated impacts on the City's WWTP state-mandated effluent limitations.

- *The City provides recycled water for use under the CRWQCB, Central Valley Region Master Reclamation Permit ("MRP"), Order R5-2004-0132 (see the following link of the MRP included as part of our comments:*

  http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/contra_costa/r5-2004-0132.pdf). Like the NPDES Permit, the MRP also imposes stringent requirements and limitations necessary to meet applicable required water quality standards, and also includes provisions for administrative or civil liabilities and/or other enforcement remedies for failure to comply with these requirements. These requirements include limits to total dissolved solids, boron, chloride and sodium. A significant source of these constituents comes from the City's surface drinking water supply from the Delta. The BDCP Draft EIR/EIS fails to adequately analyze or identify feasible mitigation for the potential impacts from increases in these constituent levels and the associated impacts on the City's use of recycled water, including potential impact to groundwater and irrigated landscaping.

- *The City is permitted for storm water discharges under the CRWQCB, Central Valley Region NPDES Permit CAS083313 ("Storm Permit"), Order R5-2010-0102 (see the following link of the Storm Permit included as part of our comments:*

  http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/contra_costa/r5-2010-0102_npdes.pdf). The Storm Permit imposes receiving water limitations for Delta waterways for dissolved oxygen, turbidity, pH, degradation of aquatic communities and population, and other applicable water quality standards. The BDCP Draft EIR/EIS fails to adequately analyze or identify feasible mitigation for the potential impacts on the City's ability to meet these water standards within the Delta waterways as they relate to the requirements in the Storm Permit.

- *In addition to treated surface water supplies from the Delta, the City also relies on groundwater for our potable water supply. The BDCP Draft EIR/EIS concludes that many of the alternatives will not alter regional patterns of groundwater flow or quality during construction or operation of BDCP conveyance facilities. The BDCP Draft EIR/EIS does not provide adequate justification for this conclusion nor does it provide any analysis of or identify any feasible mitigation for the detrimental localized effects, such as in our City, to groundwater flow or quality. In addition, the Draft EIR/EIS fails to adequately analyze or identify any feasible mitigation for the anticipated seasonal effects to groundwater flow or quality.*

- *The BDCP Draft EIR/EIS does not adequately consider alternatives or hybrid alternatives with significantly reduced environmental impacts such as increase in recycled water storage*

BDCP1509

and supply. Recycled water is a reasonable and more sustainable, environmentally sound, economical, drought-proof, usable water source whose use is consistent with State policy and does not rely on nor depend on uncertain hydrologic conditions or effects of long-term climate change.

- *The current drought conditions and actions by the State are reminders that current rules and regulations can be amended in an emergency condition. The BDCP Draft EIR/EIS fails to analyze or identify feasible mitigation for the potential impacts from future drought conditions, or discuss or analyze how future rule changes to undertaken to address drought conditions may impact the City's water supply and quality.*

The City is also carefully reviewing comments on the BDCP Draft EIR/EIS submitted by other agencies and interested members of the public, including but not limited to the CCWD, the ECCID, City of Antioch, Contra Costa County, and concurs with many of those comments. The City, therefore, reserves the right to rely on all other submitted comments on the BDCP Draft EIR/EIS.

The City looks forward to working with the various involved agencies on the BDCP to find meaningful resolutions to our concerns.

Sincerely,

Paul R. Eldredge

Paul R. Eldredge, P.E.
City Manager

cc: Congressman John Garamendi
Congressman George Miller
Congressman Jerry McNerney
California Resources Agency/Secretary John Laird
Dept. of Water Resources, Director Mark Cowin
Senator Mark DeSaulnier
Senator Lois Wolk
Assemblyman Jim Frazier
Contra Costa County Board of Supervisors
Brentwood City Council
Brentwood Department Directors
ECCID, General Manager Pat Corey
Contra Costa Water District, General Manager Jerry Brown
Diablo Water District, General Manager Mike Yeraka
Oakley City Manager Bryan Montgomery
SWRCB, Board Chair Felicia Marcus

From: Steve Bayley <steve.bayley@ci.tracy.ca.us>
Sent: Monday, July 21, 2014 8:33 AM
To: 'BDCP.comments@noaa.gov'
Cc: Daniel Sodergren; Andrew Malik; William Dean; Kuldeep Sharma; 'John Luebberke'; Stephanie Reyna-Hiestand; Jherrlaw@aol.com
Subject: City of Tracy Comment Letter
Attachments: 201407210822.pdf

Dear Mr. Wulff – Attached are the City of Tracy comments concerning the BDCP Draft EIR/EIS. Thanks for your consideration. Steve

BDCP1510

City of Tracy
520 Tracy Boulevard
Tracy, CA 95376

PUBLIC WORKS DEPARTMENT

MAIN 209.831.4420
FAX 209.831.4472
www.ci.tracy.ca.us

July 21, 2014

Submitted via email: BDCP.comments@noaa.gov

National Marine Fisheries Service
Attention: Ryan Wulff
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Dear Mr. Wulff:

Re: Bay Delta Conservation Plan Draft EIR/EIS

The City of Tracy (Tracy) appreciates the opportunity to comment on the subject document. Tracy is a city with a population of 83,000 and is located within the boundaries of the Delta. Tracy is concerned about the impacts of the Bay Delta Conservation Plan (BDCP) on the city's ability to discharge treated wastewater effluent into Old River and the mitigation of any impacts.

Tracy's wastewater is regulated through the National Pollutant Discharge Elimination System (NPDES) permit. Tracy provides tertiary level of treatment to its wastewater effluent and the treated wastewater meets the numeric standards for drinking water when it is discharged into the Delta. The proposed project, with its physical changes in pumping location within the Delta, will change river flow patterns within the Delta.

The Draft EIR/EIS does not contain detailed analysis to determine the impacts on Tracy regarding:

- Changes in flow in Old River
- Changes in water temperature in Old River
- Changes in salinity in Old River

Changes in flow in Old River - The flow in Old River is extremely important to Tracy as many regulated constituents in the NPDES permit allow for dilution. Changes in the flow equate to changes in the concentration of regulated constituents. Based upon the information provided in the Draft EIR/EIS, it is not possible for Tracy to determine the change in flow in Old River and the effects on Tracy's regulated NPDES constituents in its wastewater discharge.

Changes in water temperature in Old River - The changes in flow patterns within the Delta will affect the water temperature in Old River. With decreased flows in the southern Delta water temperatures would likely tend to increase. Tracy is regulated in its NPDES permit regarding temperature. The Draft EIR/EIS does not contain information for Tracy to determine the change in water temperatures in Old River and the effects on Tracy's wastewater discharge.

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Changes in salinity in Old River - The change in the diversion point for the California Department of Resources and the US Bureau of Reclamation pumping plants from the southern Delta to more northerly locations as proposed by the BDCP has unknown effects on salinity in the southern Delta. Tracy is regulated in its NPDES permit regarding salinity. The Draft EIR/EIS does not contain information for Tracy to determine the changes in salinity in Old River and the effects on Tracy's wastewater discharge.

Stormwater Management - The City's stormwater discharges are also regulated under the NPDES Phase II Municipal Separate Storm Sewer System (MS4) permit. The proposed project targets urban runoff through Conservation Measure 19 (urban stormwater treatment) which would have significant impacts on our municipal stormwater program. We believe that CM19 has inaccuracies regarding urban runoff contaminants and water quality regulations, all without any demonstrated benefit to the covered species. This section intends to decrease urban runoff contaminant discharges to help other beneficial uses however there is no technical analysis to demonstrate that potential benefit. While we agree that continued efforts to reduce urban runoff contamination are important, we believe it is not realistic to assume that reduction of just one source could make measurable differences in downstream water quality.

The NPDES Phase II MS4 permit recommends using a regional approach to implement cost effective strategies to reduce contaminants in the Delta. This project does not address other stakeholder discharges nor does it align with said permit requirements. As described in the BDCP, CM19 would be costly to an already over-burdened municipal budget and would require monitoring and assessments for effectiveness of only one source to impacts on water quality. Further, the BDCPs evaluation of water quality impacts in its Effects Analysis is insufficient and lacks clear methods and summaries of effects. Justification for CM19 through evaluation has not been sufficiently provided in the BDCP.

The impacts on Tracy from the BDCP need to be evaluated and mitigated. The BDCP should wholly mitigate impacts to affected local agencies caused by the BDCP, including providing funding for the mitigations. The project should not be allowed to proceed with unmitigated impacts on Delta communities. Further, Tracy requests that CM19 be removed because it has not been sufficiently justified and contains inaccuracies which without extensive analysis and inclusion of other contributors cannot fully impact the water quality in the Delta as laid out in the BDCP.

Very truly yours,

Steven G. Bayley
Project Specialist

From: Andrew Ramos <AJR@bkslawfirm.com>
Sent: Monday, July 21, 2014 4:48 PM
To: BDCP.comments@noaa.gov
Subject: BDCP Comments by American River Water Agencies
Attachments: ARWA BDCP Comment Letter - Final with attachments.pdf

Please find enclosed comments on the Bay Delta Conservation Plan and related EIR/EIS submitted by the American River Water Agencies on July 21, 2014.

Please acknowledge receipt, and please contact me if you have any difficulty opening the attachment.

Thank you,

Andrew J. Ramos
Bartkiewicz, Kronick & Shanahan
1011 22nd St., Sacramento, CA 95816
(916) 446-4254
ajr@bkslawfirm.com

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July 21, 2014

HAND DELIVERED

Ryan Wulff
National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

VIA U.S. MAIL

The Honorable Sally Jewell
Secretary
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

The Honorable John Laird
Secretary
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, California 95814

Re: Comments on Bay Delta Conservation Plan and Draft EIR/EIS

Dear Mr. Wulff:

Our agencies — collectively the American River Water Agencies ("ARWA") — supply water to over 1,000,000 people in the American River region. We recognize that significant efforts are necessary to provide reliable water supplies to all of California. Unfortunately, the draft Bay Delta Conservation Plan ("BDCP") presents significant risks to the water supply reliability of our region and contains numerous flaws that undermine its analysis and potential effectiveness.

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While the BDCP documents' analysis of climate change is seriously flawed for the reasons set forth below, they highlight the potential for climate change to cause significant disruptions to water supply reliability. In lieu of the piecemeal approach taken by this BDCP proposal, the State should comply with the Delta Reform Act mandate by addressing the effects of climate change on the reliability of water supplies on a statewide basis. This requires a fundamentally broader analysis than provided in the current BDCP documents, including redesigning the operating plans for California's existing water supply infrastructure and reassessing the State's approach to water quality regulations in the face of rapidly rising sea levels and changes in precipitation and runoff.

We believe that the BDCP and its associated documents require significant reconsideration and revision to address the below-described critical shortcomings before any decisions regarding implementation can be made.

As discussed further below, the BDCP and draft EIR/EIS ("DEIR/EIS") contain significant flaws that include:

- The BDCP's hydrologic analysis contains fundamental flaws and unrealistic assumptions, including that under future climate conditions, Reclamation would drain Folsom Reservoir to its dead pool in <u>one out of ten years</u>. These actions would make it impossible for Reclamation to satisfy the settlement contracts and water-right permit terms that protect our agencies' water supplies, and they would severely jeopardize the American River fisheries that rely on stored cold-water releases from the reservoir. The proposed economic and environmental impacts that would result from these plan actions are unacceptable to our agencies and the communities we serve.

- Numerous technical flaws in the BDCP and DEIR/EIS violate the National Environmental Policy Act ("NEPA") and the California Environmental Quality Act ("CEQA") and undermine the documents' usefulness to the public. The documents are so disorganized and confusing that they do not serve the fundamental function of informing the public about the proposed plan and its likely impacts on the environment. Furthermore, the plan suffers from numerous flaws in the level of environmental analysis, the analytical baseline, and the lack of analysis for short- and medium-term impacts. The fundamental problems in the BDCP's climate change analysis ripple through the document and prevent accurate analysis of the plan's long-term impacts.

- Many elements of the BDCP are poorly conceived and would violate the Endangered Species Act (16 U.S.C.A. §§ 1531-1544) ("ESA") and the Natural Community Conservation Planning Act (Fish & Game Code §§ 2800-2835) ("NCCPA"). The BDCP fails to satisfy the most basic funding requirements of the ESA and the NCCPA because nearly all of the funding sources it identifies are too speculative, and there are no guarantees that anticipated funding will be adequate to implement the proposed conservation measures. Other elements of the plan, including the proposed regulatory

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assurances under the "No Surprises" rule and the draft implementing agreement released in May 2014, are vaguely defined and do not satisfy requirements under federal and state law.

Because of the numerous fundamental flaws in the BDCP and DEIR/EIS, the project must be significantly reconsidered and revised before any decisions can be made regarding permitting or implementing the plan. Regarding the long-term impacts to Folsom Reservoir operations from the plan and climate change, we renew our prior requests that Reclamation develop, and the revised BDCP integrate and analyze, a long-term plan for Folsom Reservoir operations that protects our region.

COMMENTS ON THE DRAFT BDCP AND DEIR/EIS

Preliminarily, all of our agencies are members of the North State Water Alliance ("NSWA"). We agree with and incorporate the comments of the NSWA on the BDCP and DEIR/EIS.

A. The BDCP's analyses of surface water, groundwater, and socioeconomic impacts to the American River region are inadequate.

The BDCP's analysis of impacts to our region is flawed because it assumes that Folsom Reservoir could be operated in a manner that would violate several settlement contracts, as well as water-right permit terms, that apply to the water diverted to storage in the reservoir. The DEIR/EIS's modeling assumes that it would be legally possible for Reclamation to allow Folsom Reservoir to be drained below its water-supply intake — to "dead pool" as assumed in the BDCP modeling — in one out of ten years, which would make it impossible for Reclamation to satisfy the settlement contracts and water-right permit terms that protect local communities' water supplies from the reservoir. Because that assumption is invalid, the modeling, and the DEIR/EIS's environmental analysis, is not defensible and does not comply with CEQA and NEPA. The BDCP compounds these errors by also failing to analyze the proposed project's impacts on groundwater and socioeconomics in our region.

1. The BDCP improperly assumes that Folsom Reservoir could be operated to preclude water-supply diversions from the reservoir.

BDCP's hydrologic modeling is flawed in relation to the American River region for several reasons. It improperly assumes that Reclamation would, and would be allowed, to violate numerous contracts and water-right permit terms that protect water supplies in the American River region. That modeling probably underestimates the risks to water supplies from Folsom Reservoir that would occur with BDCP's implementation because it apparently does not account for probable adjustments to CVP operations under the Coordinated Operations Agreement (COA). Finally, contrary to experience in this severely dry year, that modeling assumes that Reclamation, the State Water Resources Control Board (SWRCB) and other agencies would not adjust operations to protect water supplies for municipal purposes. For these

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reasons, BDCP's hydrologic modeling of Folsom Reservoir operations — and therefore many of the DEIR/EIS's environmental analyses that are based on that modeling — is inadequate and inconsistent with CEQA and NEPA.

Several of our agencies rely on diversions directly from Folsom Reservoir as their primary water supply. In particular, approximately 500,000 people in the Cities of Folsom and Roseville and San Juan Water District rely on diversions directly from the reservoir through a shared municipal intake. That intake is dry when the elevation of the reservoir drops below approximately 330 feet above mean sea level (msl). That level generally exists when the reservoir has less than 90,000 acre-feet (AF) of water in storage. That intake's capacity is impaired when reservoir levels are well above 330 feet msl. Impairment of the intake's capacity begins when the reservoir's level drops below about 392 feet msl, which is when there is about 328,000 AF of water in storage.

Water supplies under many different water rights and contracts depend on the capability of this Folsom Reservoir municipal intake to deliver water. The City of Folsom holds water rights in the American River that date from 1851 and are reflected in CVP settlement contracts with the United States. (Contracts Nos. DA-04-167-eng-330, 14-06-200-4816A, 14-06-200-5515A.) Under these contracts, the City of Folsom holds rights to 27,000 AF per year (AFY) of water supplies that are not subject to dry-year reductions. San Juan Water District holds water rights in the North Fork of the American River that date from 1852 and are reflected in a CVP settlement contract with the United States. (Contract No. DA-04-167-eng-610.) Under that contract, San Juan holds rights to 33,000 AFY of water supplies that are not subject to dry-year reductions. At the time that Reclamation was applying for its water-right permits for Folsom Reservoir, many local agencies were applying for similar permits that would have had priority over Reclamation's applications under the area-of-origin laws. (Water Code § 11460; State Water Rights Board Decision 893, pp. 5-6 ("D-893").) Those local agencies included the City of Roseville and San Juan's predecessor Fair Oaks Irrigation District. (D-893, p. 5.) Rather than grant those applications and create administrative difficulties with Reclamation, the State Water Rights Board granted Reclamation's applications, but inserted a term in Reclamation's permits requiring that Reclamation satisfy needs in Placer, Sacramento and San Joaquin Counties before exporting American River water appropriated at Folsom Reservoir. (D-893, pp. 51-54.) Specifically, D-893 stated, at page 54:

> Permits are being issued to the United States to appropriate enough American River water to adequately supply the applicants naturally dependent on that source and availability of water to such applicants is reasonably assured by the terms to be contained in the permits to be issued to the United States restricting exportation of water under those permits insofar as exportation interferes with fulfillment of needs within Placer, Sacramento and San Joaquin Counties. Other applicants in more remote areas must if necessary seek water from other sources.

In its 2006 Delta decision, the Court of Appeal interpreted the relevant water-right permit term – D-893's Term 14 – and D-893's discussion of it as follows:

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> [T]he Water Rights Board was explaining that the availability of water to applicants within Placer, Sacramento, and San Joaquin Counties that were naturally dependent on the American River was "reasonably assured" by the permit condition that restricted the export of water appropriated under the American River permits until the needs of those counties were fully met.

(*State Water Resources Control Board Cases* (2006) 136 Cal.App.4th 674, 814.)

As adopted in D-893, Term 14 initially set a 1968 deadline for the execution of CVP water-service contracts in the American River region that would receive protection under that term. Reclamation later agreed to extend that deadline to 1975. (See SWRCB Decision 1356, p. 8; Decision Amending And Affirming As Amended, Decision 1356, p. 1.) Five agencies now hold CVP water-service contracts that are intended to provide the water supply reliability mandated by Term 14: (1) the City of Roseville; (2) San Juan Water District; (3) Placer County Water Agency; (4) Sacramento Municipal Utility District ("SMUD"); and (5) Sacramento County Water Agency (via an assignment by SMUD). (See Contract Nos. 14-06-200-3474A (Roseville); 06-07-20-W1373-LTR1 (San Juan); 14-06-200-5082A (PCWA); 14-06-200-5198A (SMUD); 14-06-200-5198B (SCWA).) The City of Roseville and San Juan Water District divert these supplies directly through Folsom Reservoir's municipal intake. Roseville's 32,000-AFY CVP water-service contract is the city's primary water supply.

This history, the pre-1860 water rights that the City of Folsom and San Juan Water District hold, their CVP settlement contracts that do not allow dry-year reductions and explicit protection for the American River Division CVP water-service contractors that D-893 embedded in Folsom Reservoir's water-right permits require Reclamation to operate the reservoir to protect the American River region's ability to divert water through the reservoir's municipal intake. However, BDCP's hydrologic modeling — and therefore the DEIR/EIS's environmental analysis — is premised on an assumption that Reclamation would be allowed to operate the reservoir so that it would effectively drop below elevation 330' in at least 10% of years and, even more often, would decline to low levels that would impair diversions through the reservoir's municipal intake. The modeling results contained in section C of the DEIR/EIS's Appendix 5A indicate that, in at least a 90% exceedance scenario, the reservoir's storage would be between 90,000 and 92,000 from August through October in the late long term-no action scenario. (DEIR/EIS, Appendix 5A, p. 5A-C94 (Table C-4-1).) This level would be the minimum level for diversion through the municipal intake. The modeling results for the Alternative 4/proposed action scenarios also indicate that Folsom Reservoir's storage would be reduced to extremely low levels at which the municipal intake would be dry or nearly dry for several months during a 90% exceedance scenario. (DEIR/EIS, Appendix 5A, pp. 5A-C110 to 5A-C113.) These results do not indicate how low the reservoir would drop in years drier than a 90% exceedance scenario, as this year has been.

These operational scenarios indicate that BDCP assumes that Reclamation would operate, and would be allowed to operate, Folsom Reservoir to eliminate deliveries through the

reservoir's municipal intake for at least three months in 10% of years. These scenarios further indicate that BDCP implicitly assumes that Reclamation would operate, and would be allowed to operate, the reservoir so that the approximately 500,000 people that currently rely on the reservoir as their primary water supply would be denied that water supply for those three months in 10% of years.

Moreover, because BDCP does not contain any explanation for how Delta flow obligations between the CVP and the State Water Project ("SWP") would be adjusted under the COA, it also is probable that actual Folsom Reservoir storage levels would be measurably different than as projected in the modeling results. COA currently imposes a greater burden for Delta conditions on the CVP, and NMFS has indicated that Reclamation should prefer releases from Folsom Reservoir to releases from Shasta Reservoir in dry conditions. The 2009 NMFS biological opinion on CVP and SWP operations provides that, in years when Shasta Reservoir end of September storage is less than 1.9 million AF (MAF) and operational changes become necessary to meet Delta environmental requirements, the CVP must first increase releases from Folsom Reservoir. (See 2009 NMFS Biological Opinion, pp. 595-596.) Similarly, in years when Shasta Reservoir storage cannot meet both water quality and carryover targets, then spring releases by Reclamation to meet Delta environmental requirements must first come from Folsom Reservoir. (*Id.* at p. 598.) Therefore, it is distinctly possible that the Alternative 4 proposed project modeling underestimates future demands on Folsom Reservoir to address Delta conditions. That modeling probably underestimates the risk to storage in that reservoir and the risk to communities that rely on the reservoir's municipal intake to provide their primary water supply.

Practical experience during this severe drought year indicates that the assumptions embedded in BDCP about how Reclamation would drain Folsom Reservoir to the point that deliveries from its municipal intake would be impossible are incorrect. Beginning in December 2013, Reclamation has sought to manage releases from Folsom Reservoir to at least keep the reservoir's municipal intake wet. In its temporary urgency orders concerning CVP/SWP operations this year, the SWRCB has relaxed Delta outflow standards for, among other reasons, the explicit purpose of allowing Reclamation to maintain more water in upstream reservoirs. (See, e.g., SWRCB, April 18, 2014 Order Modifying An Order That Approved A Temporary Urgency Change In License And Permit Terms And Conditions Requiring Compliance With Delta Water Quality Objectives In Response To Drought Conditions, *In the Matter of Specified License and Permits of the Department of Water Resources and U.S. Bureau of Reclamation for the State Water Project and Central Valley Project*, p. 9, ¶ 4.) It is likely that the SWRCB and Reclamation would take similar actions in future dry years at 90% and higher exceedances in order to maintain the availability of municipal water supplies as long as possible. BDCP's modeling assumes that such adjustments would not occur with climate change and in dry years. BDCP's project description and environmental analysis are fundamentally flawed for these reasons.

2. The BDCP improperly assumes that Reclamation would not comply with the City of Sacramento's settlement contract.

The City of Sacramento relies on Folsom Reservoir for storage and release of American River water that provides a vital water supply for approximately 500,000 residents and other municipal uses in and around the City of Sacramento. Reclamation provides this use of Folsom Reservoir pursuant to an *Operating Contract Relating to Folsom and Nimbus Dams and their Related Works and to Diversion of Water by the City of Sacramento*, entered into by the City and Reclamation on June 28, 1957, Contract Number 14-06-200-6497 ("Sacramento Settlement Contract"). The Sacramento Settlement Contract is one of the predicates that enabled Reclamation to acquire the water rights necessary to operation of Folsom Reservoir.

The Sacramento Settlement Contract was negotiated and approved during the State Water Rights Board's proceeding that resulted in D-893. Along with Reclamation and others, as described above, the City of Sacramento was one of the applicants for American River water in that proceeding. The City filed applications in 1947 and 1954 for rights to divert American River water. Reclamation had its own applications for water for the CVP facilities at Folsom Reservoir. The Sacramento Settlement Contract resolved what the Reclamation Commissioner at the time described as a major operational problem created by the City's and Reclamation's competing claims on the American River. As stated by the Reclamation Commissioner in a June 21, 1957 memorandum recommending approval of the Sacramento Settlement Contract to the Secretary of the Interior:

> Of primary concern to the United States is the accomplishment of maximum benefits from the operation of Folsom Reservoir. The basic interest of the City is the assurance of a reliable and permanent water supply from the American River to take care of its future requirements. These concepts are embodied in the proposed contract.

Also in 1957 (on the same date as the Sacramento Settlement Contract), SMUD assigned to the City of Sacramento SMUD's 1948 applications for consumptive water rights associated with SMUD's planned Upper American River power generation project ("UARP"). In 1958, in D-893, the State Water Rights Board issued four American River water-rights permits to the City of Sacramento, including two permits for the applications filed by SMUD in 1948 and assigned to the City. The State Water Rights Board recognized the importance of the Sacramento Settlement Contract to provide operational certainty that the water under these permits would be available for downstream rediversion by the City of Sacramento after its passage through Reclamation's Folsom and Nimbus facilities. (See D-893, at p. 50.)

Under the Sacramento Settlement Contract, the City of Sacramento agreed to certain rate and volumetric constraints on its diversions of water to which the City is entitled under its water rights, and in exchange, Reclamation agreed to operate both Shasta and Folsom Reservoirs, and their related works, so as to make this water available for diversion by the City. Specifically, Article 9 of the Sacramento Settlement Contract requires Reclamation to (1) make available

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water from the American River for diversion by the City (up to the quantities specified in Schedule B of the Sacramento Settlement Contract), and (2) operate Shasta Dam and its related works so as not to interfere with the City's diversions on the Sacramento River. With regard to Folsom Reservoir operations, Article 9 goes on to state:

> The United States will impound and store water in the reservoirs back of Folsom and Nimbus Dams or elsewhere and does hereby agree to discharge and release into the river channel below Nimbus Dam for the use of the City an amount of water which will ... aggregate a quantity of water as shown in Schedule B and will so operate Folsom and Nimbus Dams and their related works that water will be discharged and released into the river channel below Nimbus Dam for later downstream diversion by the City at its said American River diversion and filtration facilities at the times and in the quantities shown in Schedule B.

The City Settlement Contract is permanent (Article 23), and within the limits of available water supply, the City of Sacramento is not required to accept any pro-rata reduction in Reclamation's deliveries of American River water (Article 27).

The Sacramento Settlement Contract requires Reclamation to operate its Folsom Reservoir facilities as necessary to maintain the availability of water for diversion at the City of Sacramento's downstream facilities up to the maximum amounts specified in the contract. However, the BDCP modeling, and the attendant DEIR/EIS analysis, improperly assume that Reclamation will <u>not</u> operate in accordance with the Sacramento Settlement Contract, because this modeling shows Folsom Reservoir declining to "dead pool" levels (90 TAF storage) approximately one out of every ten years. Such operation of Folsom Reservoir would violate Reclamation's obligations under the Sacramento Settlement Contract. Therefore, the BDCP project description and modeling are flawed and the BDCP environmental analysis that relies on that description and modeling is inadequate.

3. <u>The BDCP's hydrologic modeling is technically flawed and is inadequate to support the DEIR/EIS's NEPA and CEQA conclusions.</u>

MBK Engineers has reviewed the BDCP's hydrologic analysis. As discussed in MBK's enclosed technical memorandum (Attachment A), the hydrologic modeling for Folsom Reservoir and the American River Basin contains pervasive errors that render the BDCP's analysis of the proposed project's environmental impacts inadequate. CEQA and NEPA require the DEIR/EIS to support its significance findings with evidence in the record. (See 5 U.S.C.A. § 706(2)(A); Public Resources Code § 21082.2.) Because the BDCP modeling does not adequately or accurately reflect the proposed project's environmental impacts, the DEIR/EIS's NEPA and CEQA conclusions regarding water supply are not supported by the BDCP documents.

As MBK's technical memorandum discusses, BDCP's modeling contains the following significant flaws:

- *Unreasonable projection of American River conditions under climate change.* BDCP assumes that climate change will significantly change inflow into Folsom Reservoir, but that Reclamation and other entities will not change how they operate Folsom Reservoir to adapt. The DEIR/EIS's modeling projects that, in the late-long term, in 10% of years, storage in Folsom Reservoir will be drained to "dead pool" conditions in which most water suppliers who divert water directly from Folsom Reservoir could not divert water through the existing municipal water-supply intake, the lower American River's fisheries would be severely impacted and the City of Sacramento would have serious difficulties diverting water from the Lower American River. These projections are highly improbable, and do not reflect the reasonably likely operation of Folsom Reservoir. As demonstrated by the response to the ongoing drought conditions in 2014, Reclamation, the SWRCB, and the fish and wildlife agencies are unlikely to ever permit Folsom Reservoir to be operated in such a manner. Frequent "dead pool" conditions would lead to catastrophic results for both hundreds of thousands of people who rely on Folsom Reservoir and for the aquatic species that rely on summer and fall cold water releases from the reservoir. The BDCP modeling compounds this flaw by ignoring that reservoirs upstream from Folsom are also likely to change their operations in response to climate change, modifying the rate and timing of inflow into Folsom Reservoir. Because BDCP's modeling fails to account for reasonable adaptations in the operation of Folsom Reservoir and other upstream reservoirs in future baseline conditions, the BDCP modeling does not represent the reasonably likely future operation of the CVP and SWP. The significant problems in that modeling ripple through numerous DEIR/EIS chapters that deal with many resource categories because the analysis in those chapters depends on hydrologic modeling.

- *Modeling of the BDCP proposed project scenario that is most likely to be permitted does not account for impacts on the CVP through the COA.* The BDCP documents identify the Alternative 4-H4 "high outflow scenario" as the project alternative most likely to be permitted. The BDCP modeling assumes the SWP would be responsible for the additional Delta outflows required by the high-outflow scenario, but does not then adjust CVP and SWP responsibilities for Delta outflow requirements as required by the COA for the CVP and SWP. The BDCP modeling fails to reflect increases in CVP reservoir releases that probably would be required by COA if demands on SWP supplies were increased as contemplated by the BDCP documents' description of the "high outflow scenario." This error means that the draft DEIR/EIS does not adequately account for the proposed project's impacts on Folsom Reservoir and the many resources in our region that rely on water from that reservoir.

- *BDCP obscures project impacts by only analyzing the project with climate change.* The Delta Reform Act of 2009 requires BDCP to consider the projected future impacts of climate change and sea level rise. (Water Code § 85320, subd. (b)(2)(C).) However, the

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BDCP fails to analyze the proposed project's impacts without future climate change as a baseline to allow interested parties and the public to understand how the proposed project's impacts may vary under different climate change scenarios. Future climate change probably will not occur exactly as projected in the BDCP documents, even if these documents' projections represented the best available science, or even a median of it. The result of the BDCP documents' lack of a hydrologic analysis of the proposed project's impacts under existing and near term conditions is to obscure project impacts in the near term, as well as those that could occur in the reasonably likely scenario that climate change does not occur exactly as described in the single climate change scenario assumed in those documents.

- *The BDCP modeling contains errors that render modeling for the north Delta diversions inaccurate.* The version of CalSim II on which the BDCP modeling relies contains errors that artificially limit, in the modeling, the CVP's and SWP's use of the proposed north Delta diversion. According to MBK, DWR and Reclamation have fixed these errors in more recent versions of CalSim II, but the corrections are not reflected in the DEIR/EIS's modeling. The DEIR/EIS therefore significantly underestimates the water diverted at the proposed north Delta diversion and overestimates the water diverted from the south Delta diversion facilities. This error results in the DEIR/EIS's description of project impacts on various resource categories – including Delta flows – being inaccurate and inadequate.

- *Flawed assumptions about American River basin demands.* BDCP's modeling contains significant errors concerning late-long term (2060) water demands in the American River Basin. The modeling assumes demands for water from Placer County Water Agency's (PCWA) Middle Fork Project of 64,000 to 81,000 acre-feet per year where PCWA projects future demands by existing contractors at 120,000 acre-feet. The error is significant in relation to the City of Roseville, which projects needing 30,000 acre-feet per year of PCWA water by 2025, but is assumed in the BDCP modeling to only need 5,000 acre-feet per year of that water even by 2060. The modeling also makes the unlikely assumption that water demand in the Basin will increase rapidly between 2010 and 2025, but will then remain unchanged for the next 35 years. Finally, the modeling does not accurately account for how changing release patterns from Folsom Reservoir under the proposed project may affect the City of Sacramento's ability to divert water from the lower American River under the "Hodge Flow" limits contained in its water-right permits. The resulting impacts to the City and its retail and wholesale water users are not described or analyzed.

4. <u>The BDCP improperly assumes that Reclamation could operate the CVP in a manner that would severely impact American River fisheries.</u>

Cardno ENTRIX ("Cardno") has reviewed the BDCP's effects analysis for Central Valley steelhead and fall-run Chinook salmon. As discussed in Cardno's enclosed technical memorandum (Attachment B), the DEIR/EIS's effects analysis is flawed and fails to disclose

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significant adverse impacts on covered species and their habitat in the lower American River. By failing to disclose the BDCP's significant impacts, the DEIR/EIS does not comply with NEPA and CEQA.

As discussed in Cardno's enclosed technical memorandum, water temperatures in the lower American River already exceed threshold tolerances for anadromous fish during critical life stages. Because these steelhead and fall-run salmon are already in stressful temperature conditions, small increases in water temperatures will cause significant adverse impacts to these species. The DEIR/EIS projects in the late-long term, water temperatures will regularly exceed threshold temperature criteria for anadromous fish. The DEIR/EIS applies a significance criteria of a < 5% increase in mean monthly water temperature to compare late long-term conditions with and without the plan. Applying this criteria, the BDCP concludes the plan will not cause significant adverse temperature impacts to covered species. However, this conclusion is improper and obscures actual conditions for covered species because increased water temperatures will jeopardize the continued existence of these species. The BDCP fails to disclose and mitigate these significant impacts.

The conclusions in the DEIR/EIS are invalid because they are based on modeling that is not representative of future conditions. Cardno's technical memorandum explains that under the BDCP, in the late long-term, entire year classes of steelhead are likely to be lost and large fish kills of pre-spawning fall-run salmon are likely to occur. However, the BDCP acknowledges the federal fish agencies are unlikely to allow Reclamation and DWR to operate the CVP and SWP in this manner. Accordingly, the BDCP fails to present a reasonable and accurate representation of future conditions.

5. <u>The BDCP improperly fails to incorporate the Joint Federal Project at Folsom Reservoir in baseline conditions.</u>

NEPA and CEQA require an environmental document to describe prevailing environmental conditions to define a baseline against which predicted effects will be described and quantified. (40 C.F.R. § 1502.15; Cal. Code Regs., tit. 14, § 15125, subd. (a); see *Neighbors for Smart Rail v. Metro Line Construction Authority* (2013) 57 Cal.4th 439, 447.) The document must employ a realistic baseline that gives the public and decision makers the most accurate picture practically possible, and it may incorporate reasonably expected changes that will take effect before the project would go into operation. (*Neighbors for Smart Rail*, *supra*, 57 Cal.4th at pp. 449, 452-453.)

Appendix 3D of the DEIR/EIS describes the BDCP's existing, no action alternative, and cumulative impact conditions. One condition affecting the water supply analysis under the no action alternative and cumulative impact conditions is the Folsom Dam Safety and Flood Damage Reduction Project (the "Joint Federal Project"), an ongoing project that Reclamation, U.S. Army Corps of Engineers, Sacramento Area Flood Control Agency, and Central Valley Flood Protection Board are jointly undertaking. Appendix 3D describes the Joint Federal Project:

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> The project includes the Joint Federal Project Auxiliary Spillway, seismic improvements to the Main Concrete Dam and Mormon Island Auxiliary Dam (MIAD), static improvements to earthen structures, security upgrades, replacement of the Main Concrete Dam spillway gates, and a 3.5-foot (ft.) raise to all Folsom Facility structures.
>
> Construction on the auxiliary spillway began in 2008 and is expected to be completed in 2015. The modifications to the dam would allow for the release of water sooner than is now possible, with the potential for higher releases should the downstream levees be improved to accommodate the increased flows. These larger, earlier releases from Folsom Reservoir would create and conserve flood storage space based on projected reservoir inflows resulting from a major storm impacting the upper American River watershed.
>
> However, the modifications would be operated using existing criteria until the completion of a revised Folsom Water Control manual and supporting supplemental environmental compliance documentation. The manual would be completed one year prior to completion of proposed structural modifications at Folsom Dam and Reservoir, at which time the full potential benefits of the proposed modifications would be realized.
>
> (See DEIR\EIS, App. 3D, p. 99.)

The DEIR\EIS's discussion of the Joint Federal Project is vague, but it appears that, because the revised Folsom Water Control manual was not complete when the BDCP Notice of Preparation was filed in 2010, BDCP did not consider the Joint Federal Project's reasonably foreseeable changes to Folsom Reservoir operations.

Since 1999, however, federal law has required that, upon completion of the Joint Federal Project, the variable space allocated to flood control within Folsom Reservoir will be reduced by 70,000 acre-feet. (See Water Resources Development Act of 1999, Pub. L. No. 106-53 (Aug. 17, 1999) 113 Stat. 273, 274, § 101, subd. (a)(6)(B).) Given that the total water storage capacity in Folsom Reservoir is approximately 966,000 acre-feet, the 70,000 acre-feet that could be made available by the control manual update could affect the operation of the reservoir significantly. For example, that 70,000 acre-feet of additional carryover storage could be very significant in dry years such as this year, during which reservoir storage declined to approximately 162,000 acre-feet, which was only approximately 70,000 acre-feet above the minimum level at which the municipal water-supply intake in the reservoir would be operational. Given that BDCP's hydrologic modeling indicates that Folsom Reservoir may be drained to "dead pool" levels from which municipal and industrial direct deliveries through the municipal intake would not be possible in 10% of years in the future, the additional storage that the Joint Federal Project will make available will be extremely important. Because since 1999 federal law has required a reservoir operations manual update to account for the Joint Federal Project, that update is reasonably foreseeable. Given this, and that the BDCP documents use projected conditions in

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2060 as the basis for their environmental analysis, omitting the Joint Federal Project and associated reservoir control manual update from the BDCP modeling and its cumulative effects analysis renders the BDCP documents inadequate to satisfy NEPA and CEQA.

6. The DEIR/EIS inappropriately fails to analyze groundwater impacts in this region.

The DEIR/EIS treats the entire Sacramento Valley as a single groundwater basin and conducts, at most, a perfunctory analysis of the impacts of the BDCP on that basin. This analysis, however, fails to consider several facts about groundwater conditions within the Sacramento metropolitan region that make this region unique within the Sacramento Valley and therefore subject to potential impacts from BDCP implementation that would be different from the rest of the Valley. The DEIR/EIS's failure to consider the American River region's specific circumstances and the specific impacts that BDCP could cause here makes the DEIR/EIS inadequate.

The DEIR/EIS states that there could be "minor decreases" in water supply availability to CVP water users in the Sacramento Valley service area as a result of BDCP's implementation. (See DEIR/EIS, p. 7-32.) This minor change is estimated at approximately 50,000 acre-feet per year, which constitutes approximately 2% of the current annual average groundwater production quantity in the Sacramento Valley. (*Ibid.*) The DEIR/EIS concludes that, because a "2% increase in groundwater use in the Sacramento Valley to make up for any shortfalls in surface water supply is not anticipated to substantially impact the groundwater resources as long as the additional pumping is not concentrated in a particular area of the valley," it did not include a groundwater analysis of the Sacramento Valley Groundwater Basin. (*Id.*, p. 7-32.) The DEIR/EIS's omission of any analysis of BDCP's impacts on the Sacramento metropolitan region's unique groundwater resources is improper, and the scant information that is provided contains several inaccuracies that result in a misleading and incomplete analysis of BDCP's impacts to groundwater resources. (DEIR/EIS, pp. 7-2, 7-12 to 7-15, 7-31 to 7-32.) Several grounds support this conclusion.

First, the DEIR/EIS does not recognize how this region is different from much of the rest of the Sacramento Valley. While much of the Sacramento Valley has long relied almost entirely on surface water sources, this region historically has relied extensively on groundwater, resulting in some drawdown of aquifers and increasing this region's sensitivity to reduced surface-water deliveries now. Groundwater in this region — specifically, the North and South American Sub-basins as defined in DWR's Bulletin 118 — historically has been overdrawn to serve intensive municipal and industrial uses that do not exist in other parts of the Sacramento Valley. Since at least the 1950s, groundwater extraction was concentrated in the central part of the North Area basin, which constitutes the southern one-third of the North American Sub-basin ("North Area Basin"). (Sacramento Groundwater Authority (SGA) Basin Management Report, at p. 4 (2013), *available at* http://www.sgah2o. org/sga/files/pub-bmreport-2013.pdf.) This has resulted in a cone of depression. (*Ibid.*) No such impacts to the groundwater basin have been observed, however, in the western part of the North Area Basin, which historically has relied almost exclusively on surface water for supply. (SGA Water Accounting Framework – Phase III Effort,

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at p. 5 (2010), *available at* http://www.sgah2o.org/sga/files/WAF-PhaseIII-Final-9-28-10.pdf.) A similar condition exists in the South American Sub-basin ("Central Area Basin") where a cone of depression has developed and is centered proximate to the City of Elk Grove. (Sacramento Central Groundwater Authority (SCGA) Basin Management Report, at pp. 14-16 (2010), *available at* http://www.scgah2o.org/documents/2009-2010%20Basin%20Management%20Report%20v2.pdf) In addition, there are significant contaminant plumes in this region's groundwater aquifers that could be mobilized by any significant increase in groundwater pumping. These plumes, which are present from source areas at the former McClellan Air Force Base, the former Mather Air Force Base, Aerojet, the Union Pacific Railroad site in the City of Sacramento, and a number of military and industrial sites located in north and central Sacramento County, are not present in other parts of the Valley. (See SGA Basin Management Report, p. 25 and SCGA Basin Management Report, p. 29.) The DEIR/EIS appears to assume that any impacts from a 2% increase in groundwater pumping will be felt uniformly throughout the Valley and can be avoided simply by ensuring that pumping "is not concentrated in a particular area." (DEIR/EIS, p. 7-32.) This is simply not the case given that this region is unique within the Sacramento Valley.

Second, the DEIR/EIS misstates the existing conditions in this region. The draft EIR/EIS states several times that northern Sacramento County shows "early signs of persistent drawdown." (DEIR/EIS, pp. 7-13, 7-31.) While this region's groundwater was drawn down historically, the DEIR/EIS's statement about current conditions is not accurate and has not been true for more than a decade. The SGA, a joint powers authority formed in 1998 to manage the Sacramento region's groundwater basin north of the American River, has observed that since the mid-1990s, groundwater levels have stabilized and, in some cases, have slightly increased. (SGA Basin Management Report, p. 18.) SGA's 2013 management report states that groundwater pumping from the North American Sub-Basin was lower than any year since 1983. (SGA Basin Management Report, at p. 11.) While some of the reduced demand can be attributed to wetter than normal hydrologic conditions, much of the improved conditions can be explained by increased intentional groundwater management, including expanded conjunctive use facilities and operations in the basin. (SGA Water Accounting Framework White Paper, p. 3 (2006), *available at* http://www.sgah2o.org/sga/files/WAF_White_Paper_final_6-31-06_ reduced.pdf.) Local agency actions aimed at managing contaminant plumes that migrated north of the American River also have contributed to the long-term sustainability of the groundwater basin. (See SGA White Paper, p. 4.)

While the draft EIR/EIS does not comment on groundwater conditions in central Sacramento County it should be noted that the Sacramento Central Groundwater Authority (SCGA), a joint powers authority formed in 2006 to manage the Sacramento region's groundwater basin between the American and Cosumnes rivers, has made similar observations of improved conditions related to hydrologic year type and expanded conjunctive use facilities and operations within their basin. Both local and regulatory agency actions aimed at managing contaminant plumes within the basin have also resulted in long-term sustainability of the groundwater basin. A number of municipal signatories to this letter rely on groundwater from the Cental Basin. The DEIR/EIS does not, but needs to, address impacts on the Central Basin.

Third, the DEIR/EIS does not account for the importance of surface-water deliveries from Folsom Reservoir to this region and the consequent impacts on this region's groundwater if that reservoir were to be drained as frequently and as low as projected in the DEIR/EIS. The DEIR/EIS projects that Folsom Reservoir would be drained to a level too low to support municipal and industrial deliveries from the reservoir's water-supply intake. As discussed elsewhere in these comments, operating the reservoir in this manner would be illegal and inappropriate. Operating the reservoir in this way also would cause indirect impacts on this region's groundwater that the DEIR/EIS does not discuss. As discussed in SGA's 2013 management report, increased conjunctive use of surface water from the reservoir and from water released from the reservoir to the lower American River has enabled water agencies to reduce groundwater pumping and helped to stabilize the basin's groundwater. For example, Sacramento Suburban Water District has been able to reduce its prior 100% reliance on pumped groundwater by purchasing and using surface water diverted directly from Folsom Reservoir (under Placer County Water Agency's water rights and a Warren Act contract) and from the lower American River (under a contract with the City of Sacramento). Dramatic reductions in the amount of water stored in Folsom Reservoir would increase demands for, and use of, groundwater in this region. The DEIR/EIS fails to account for this fact in describing the no action alternative conditions and the conditions that would result from the implementation of action alternative. The DEIR/EIS's failure to analyze these issues is a glaring omission in that document's analysis, given its dramatic projection of Folsom Reservoir's future condition.

Fourth, the DEIR/EIS fails to account for the effects that reduced Folsom Reservoir storage and BDCP's implementation would have on this region's contaminant plumes. The presence of these plumes is an ongoing concern for both SGA and SCGA and its member water agencies whose service areas encompass the North Area Basin (SGA Basin Management Report, p. 1) and the South Area Basin (SCGA Basin Management Report, p. 4). As discussed above, the reductions in Folsom Reservoir storage projected in the DEIR/EIS probably would result in increased groundwater pumping in this region. That increased pumping could cause migration of this region's contaminant plumes. The DEIR/EIS, however, does not discuss this issue at all. The DEIR/EIS therefore is inadequate.

7. <u>The DEIR/EIS inappropriately fails to analyze socioeconomic impacts in this region.</u>

NEPA requires that an EIS address a project's socioeconomic effects. (40 C.F.R. §§ 1502.16; 1508.8; U.S. Bureau of Reclamation, Reclamation's NEPA Handbook (Feb. 2012) pp. 8-15, 8-17.) Similarly, CEQA requires that an EIR address a project's socioeconomic effects that generate environmental consequences. (CEQA Guidelines §§ 15064(e), 15131; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1204-1213.) The DEIR/DEIS fails to properly analyze BDCP's socioeconomic impacts to this region.

As the NSWA letter points out, the DEIR/EIS is based on operations of Folsom Reservoir — specifically, it relies on hydrologic modeling that assumes Reclamation would, and would be authorized to, operate Folsom Reservoir so that it would be incapable of providing water

supplies to communities adjacent to the reservoir in approximately 10% of years. Yet the DEIR/EIS neither describes nor analyzes the socioeconomic effects of operating Folsom Reservoir in that manner. Any scenario in which the reservoir would be unable to provide the primary water supply for the 500,000 people who currently rely on reservoir water is likely to have significant socioeconomic impacts. The DEIR/EIS's socioeconomic analysis, however, is limited to the statutory Delta. (DEIR/EIS, pp. 16-1 to 16-29.) It contains no analysis of the socioeconomic effects within the Sacramento region of Folsom Reservoir operations that it assumes Reclamation would implement in implementing BDCP or of the indirect environmental impacts resulting from those socioeconomic effects. The DEIR/EIS therefore does not comply with NEPA or CEQA.

B. The BDCP and DEIR/EIS contain numerous technical flaws that violate NEPA and CEQA and undermine the draft documents' usefulness.

The BDCP and DEIR/EIS suffer from numerous technical flaws. The most significant of these flaws is that the documents are so disorganized and confusing that they fail their fundamental purpose — to inform the public and decision-makers about the proposed plan and its potential effects. These problems are compounded by an inadequate project description, impermissibly mixed levels of specificity, and flaws in the BDCP's environmental baseline and climate change analysis. Taken together, these technical flaws violate NEPA and CEQA and undermine the documents' usefulness.

1. The BDCP and DEIR/EIS are inadequate because they are so disorganized and confusing that they do not serve the fundamental function of informing the public and decision-makers.

NEPA requires that an EIS "provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts" to the environment. (40 C.F.R. § 1502.1.) Thus, an EIS must be "concise, clear, and to the point." (40 C.F.R. § 1502.1.) Further, it "must be organized and written so as to be readily understandable by governmental decision-makers and by interested non-professional laypersons likely to be affected by actions taken under the EIS." (*Oregon Envt'l Council v. Kunzman* (9th Cir. 1987) 817 F.2d 484, 494.) Similarly, under CEQA, an EIR's function is "to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been taken into account." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449.) For the EIR to serve these goals, it must "be written in plain language . . . so that decision-makers and the public can rapidly understand the documents." (Cal. Code Regs., tit. 14, § 15140.) Accordingly, the DEIR/EIS must convey the required information clearly and present it "in such a matter that the foreseeable impacts of pursuing a project can be understood and weighed." (*Vineyard Area Citizens for Responsible Growth, Inc.*, *supra*, 40 Cal.4th at p. 449.)

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The DEIR/EIS is legally inadequate as an informational document because it is poorly organized and very difficult to read, making it virtually incomprehensible to decision-makers and the public alike. It is at turns so general, and at others so technical, as to provide no meaningful information about many of the project's environmental impacts. The confusing nature of the document itself — its extreme length, numerous cross-references, and contradictory statements — prevents the meaningful evaluation of BDCP's environmental consequences. The same is true for the BDCP itself. It suffers from these same deficiencies and, as such, is rendered unsuitable for the public review and comment process required by ESA and the NCCPA. (See 16 U.S.C. § 1539(a)(2)(B); Fish & Game Code § 2815.)

A few examples illustrate this point. The documents' discussion of the crucial "decision tree" process is perhaps the best example. The proposed project is Alternative 4. Alternative 4 is analyzed as potentially operating under four different "Scenario H" Delta-outflow scenarios, one of which would be chosen — after the proposed diversion facilities are built — through a "decision tree" process. However, the DEIR/EIS states that, "Scenario H could be implemented with any other project alternative in order to create a hybrid alternative within the bookends created by the entire range of alternatives addressed in the EIR/EIS." (DEIR/EIS, p. 3-202.) Accordingly, there apparently are at least 36 different possible project alternatives "within the bookends," even though the environmental impacts of only Alternative 4 are actually analyzed in combination with the four different Scenario H possibilities. Stating that the ultimate project could be within the "entire range of alternatives" is an admission that the DEIR/EIS and BDCP documents do not adequately identify, or analyze the environmental impacts of, what may actually be permitted and built. This is a fatal deficiency of the project description.

Similarly, it is nearly impossible to understand the DEIR/EIS's analysis of the proposed-project Alternative 4's impact on fish — including listed salmonids that are among the species to be benefitted by BDCP — because that discussion is so filled with, and dependent on, cross-references to the DEIR/EIS's fisheries analysis for Alternative 1A. Alternative 1A reflects a much larger north Delta diversion than Alternative 4. (DEIR/EIS, § 11.3.4.9.) The documents fail to distinguish between the impacts of markedly different sizes of the project.

In addition, there are numerous conflicting statements in BDCP and the DEIR/EIS. The DEIR/EIS's purpose statement provides, "[i]t is not intended to imply that increased quantities of water will be delivered under the BDCP." (DEIS/EIR, p. 2-5.) However, the BDCP itself states that "[t]he BDCP is intended to minimize entrainment levels, while also increasing water supply . . . ." (BDCP, p. 5.B-2.) The BDCP documents also contain numerous contradictory statements concerning the operation of the proposed fish screen intakes, criteria for the new north Delta intakes, and purported impacts to salmonids. This is highlighted in the technical memorandum by fisheries expert Dave Vogel, which is attached to the NSWA comment letter.

The BDCP documents are sufficiently confusing that, whatever the technical information contained in them, they do not meet the fundamental requirement of informing the public of what is being proposed and what impacts the proposal may cause.

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2. The BDCP's and the DEIR/EIS's project descriptions are vague and uncertain.

As discussed in the NSWA comment letter, the BDCP's and the DEIR/EIS's project description are vague and uncertain, and therefore do not satisfy the ESA, the NCCPA, NEPA and CEQA. These statutes necessarily require that a project contain well-defined and specific actions, the analysis of which will inform the public of what is proposed and the projected environmental effects of implementing the project. The BDCP's and the DEIR/EIS's project descriptions fail to satisfy these requirements because they contain numerous uncertainties, vague descriptions, and analytical gaps. Therefore, the BDCP and DEIR/EIS must be revised and recirculated for public review before any decisions may be made concerning permitting and implementation of BDCP.

3. The DEIR/EIS illegally mixes project-level and program-level analyses.

The DEIR/EIS takes a programmatic approach toward evaluating all of BDCP's proposed conservation measures except for Conservation Measure 1 — the proposed tunnels — for which it takes a project-level approach. (DEIR/EIS, p. ES-3.) The DEIR/EIS notes that, because specific design information for the restoration and preservation actions within the conservation zones has not been identified, and because design information for the restoration and conservation strategies for aquatic and terrestrial habitat and other stressor reduction measures in Conservation Measures 2 through 22 are still at a "conceptual level," the analyses for the implementation of those conservation measures are presented at a program level. (DEIR/EIS, p. 4-2.) In contrast, because more specific design information on the water conveyance facilities is available, the elements of Conservation Measure 1 are analyzed at a project level. (DEIR/EIS, p. 4-2.) The DEIR/EIS states that its goal is to "meet the requirements of CEQA and NEPA, provide sufficient analysis to support BDCP decision making, and to inform permit decisions for the issuance of the ITPs/NCCP permit." (DEIR/EIS, p. ES-3.) For those conservation measures presented and analyzed at a program level, the DEIR/EIS recognizes that "more detailed, site-specific analysis and site-specific environmental documents will be prepared later, prior to implementation of specific projects, as the BDCP is implemented over time, as appropriate." (DEIR/EIS, p. 3-2.)

This approach is inadequate for two reasons. First, the lack of information and insufficient analysis provided for Conservation Measures 2 through 22, even at the program level, prevents the meaningful evaluation of their environmental impacts and improperly defers the required analysis of such impacts to the future. Second, as a result of combining programmatic and project-level alternative definitions and analyses, neither is sufficiently complete or accurate to comply with the requirements of CEQA and NEPA and to support the requested take coverage pursuant to the ESA and NCCPA. Permitting and implementation of Conservation Measure 1 is dependent on the other conservation measures under the ESA and the NCCPA, so it is inappropriate to leave the analysis of those other measures at a much vaguer level while essentially assuming that Conservation Measure 1 will proceed as designed.

Under CEQA, a programmatic EIR is helpful if it deals with the effects of the program "as specifically and comprehensively as possible." (Cal. Code Regs., tit. 14, § 15168, subd. (c)(5).) A "good and detailed analysis of the program" must be provided. (*Id.*) Similarly, NEPA requires that an EIS for a programmatic plan provide "sufficient detail to foster informed decision-making." (*Pacific Rivers Council v. U.S. Forest Service* (9th Cir. 2012) 668 F.3d 609, 622-623.) That is, regardless of whether a programmatic or site-specific plan is at issue, NEPA requires that an EIS analyze the environmental consequences of a proposed plan as soon as it is "reasonably possible" to do so. (*Kern v. U.S. Bureau of Land Management* (9th Cir. 2002) 284 F.3d 1062, 1071-1073.) Agencies "may not avoid the obligation to analyze in an EIS environmental consequences that foreseeably arise . . . merely by saying that the consequences are unclear or will be analyzed later when an environmental assessment is prepared for a site-specific program . . . ." (*Kern, supra,* 284 F.3d at p. 1072.)

As discussed in the NSWA comment letter, there is significant uncertainty associated with many of the BDCP's proposed conservation measures. Numerous conservation measures are either ill-defined (and are qualified by statements noting that further environmental analysis will be refined in subsequent environmental documents) or contain too many uncertainties. (See, e.g., BDCP, pp. 3.4-48 (Conservation Measure 2); 3.4-147 (Conservation Measure 5); 3.4-196 (Conservation Measure 6); 3.4-294 (Conservation Measure 15); 3.4-315 (Conservation Measure 16).) An environmental document, however, cannot defer the analysis of one of its elements to a pending environmental document that will be completed in the future. (*Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 440-441.) While program-level analysis is possible under NEPA and CEQA, as the above authority makes clear, a NEPA/CEQA document must present a detailed analysis of a project <u>as a whole</u>. The BDCP documents fail this test because their combination of project-level analysis for Conservation Measure 1 and program-level analysis of everything else prevents interested parties from understanding how <u>the project as a whole</u> would function and impact relevant resources. For example, it is not possible to understand how salmonids migrating from the Sacramento Valley would be impacted by the project as a whole where the new north Delta intakes are well-defined, but the Yolo Bypass-based Conservation Measure 2 that could affect these fish is defined at the program level at most. It is not possible to integrate the analysis of even those two Conservation Measures, much less the other 20 Conservation Measures as well. The unequal treatment of Conservation Measure 1 and the other conservation measures is inappropriate because it prevents decision makers and the public from fully evaluating the project as a whole.

Conservation Measure 1 is essentially the infrastructure project desired by the project proponents. Its characterization as a "conservation measure" is questionable. Regardless, it is analyzed at a project level and <u>all</u> of the mitigation (or conservation) measures are analyzed at a program level. This uneven treatment makes the infrastructure project (CM 1) far more well defined and certain; and the mitigation necessary for it to satisfy legal requirements ill-defined and uncertain. This approach is insufficient under NEPA and CEQA.

Our agencies agree with prior comments by federal agencies regarding a related shortcoming due to the variation in level of environmental analysis. As the federal agencies

(Reclamation, USFWS and NMFS) pointed out in their comments on the BDCP Second Administrative Draft EIR/EIS dated July 18, 2013 ("Federal Agency Letter"), BDCP's approach to analyzing one alternative at a project level and the rest of the alternatives at a programmatic level makes it more difficult to assess whether either type of analysis "was provided completely or correctly." (See Federal Agency Letter, p. 47, *available at* http://baydeltaconservationplan .com/Library/Correspondence.aspx.)

4. <u>The DEIR/EIS's handling of existing conditions and use of late long-term conditions as an analytical baseline violates CEQA.</u>

The DEIR/EIS relies entirely on 2060 "late long term" conditions to identify the impacts of the proposed project for, among other resource categories, aquatic species and water supplies. The DEIR/EIS does not discuss the simulated operations of the twin tunnels and north Delta diversions in 2010 (the year the notice of preparation was issued) and does not analyze the impact of these simulated operations on existing conditions. (See DEIR/EIS, p. 5-47.) Instead, the DEIR/EIS uses an existing conditions baseline only in comparison to the no action alternative and project alternatives, all of which occur in the late-long term (around 2060) and include the simulated effects of sea level rise and climate change. Comparing a 2010 existing conditions baseline without project with the simulated 2060 scenarios with and without the project is an "apples to oranges" comparison that fails to properly inform the public about the proposed project's impacts. The effects of 50 years' worth of sea level rise and climate change make it impossible for the reader to determine which significant effects are related to the proposed project. The BDCP acknowledges this flaw and states that comparing existing conditions with the late-long term scenarios is unhelpful and obscures project-related impacts. (See DEIR/EIS, p. 5-47.)

The limitation of project environmental analysis to one climate change scenario and one future timeframe increases the likelihood that the impacts of an indisputably major project are masked in a manner prohibited by *Neighbors for Smart Rail, supra,* 57 Cal.4th, at p. 456. Rather than analyze the proposed project's impacts under existing conditions, the DEIR/EIS chooses one possible climate change scenario and uses that scenario for its environmental analysis. In *Neighbors for Smart Rail*, however, the majority of the California Supreme Court expressly disapproved of such an approach to omitting all analysis of project impacts on existing conditions. The majority rejected the dissent's proposal for allowing future-condition baselines in broader circumstances:

> Justice Baxter's concurring and dissenting opinion proposes a significantly more lax rule . . . under which a future conditions baseline may be employed, in lieu of one based on existing environmental conditions, so long as it is "a realistic measure of the physical conditions without the proposed project" projected at the agency's chosen future date . . . [This approach] would sanction the unwarranted omission of information on years or decades of a project's environmental impacts and open the door to gamesmanship in the choice of baselines.

> Under the rule proposed in Justice Baxter's opinion, agencies evaluating projects intended to exist and operate for many decades could seemingly choose a baseline of conditions from *any* period of the project's expected operations, 15, 30 or 60 years in the future, so long as the agency's projections were supported by reasonably reliable data and predictive modeling.
>
> (*Neighbors for Smart Rail*, *supra*, 57 Cal.4th at p. 456 (emphasis in original).)

Similarly, the DEIR/EIS violates *Neighbors for Smart Rail* by failing to properly analyze the project's impacts on existing conditions in favor of relying solely on one future, with-climate change scenario. The DEIR/EIS selects 2060 as an allegedly appropriate date to evaluate the BDCP's impacts and bases its analysis on "predictive modeling" of what conditions will exist at that time.

Under *Neighbors for Smart Rail*, there can be no adequate basis for the DEIR/EIS's use of such an approach because an environmental analysis of the proposed project's impacts in the existing conditions would be very helpful for the understanding of decision makers and the public. Two examples prove this point.

First, using an existing conditions baseline would help all parties understand better what water-supply impacts would occur as CVP and SWP operations are modified to enable diversions through the proposed tunnels. As discussed in the enclosed technical memorandum by MBK Engineers, BDCP's hydrologic modeling appears to assume that Reclamation's patterns of releases from Folsom Reservoir would change by increasing in the summer, and decreasing in the fall, in order to move water through the proposed tunnels.[1] As described by MBK, this altered pattern in turn would alter seasonal patterns of storage in the reservoir. Under the with-climate change baseline, however, the effects of these altered patterns are muted or masked by the overarching effect of climate change, which the DEIR/EIS projects will severely reduce Folsom Reservoir storage in drier years. This does not provide the information and analysis needed for our agencies and others to understand what effect the revised Folsom Reservoir release patterns necessary to implement BDCP would have under existing conditions.

Second, using an existing-condition baseline would assist our agencies and others in understanding what impacts operations under BDCP would have on fish in the lower American River. As discussed in the enclosed technical memorandum by Cardno (Attachment B), the with-climate change baseline conditions projected by BDCP would have severe impacts on salmonids in the river, including steelhead listed under the federal ESA and fall-run Chinook salmon. As described by Cardno, it is unlikely that Reclamation would be allowed to operate the CVP in such a manner. Consistent with the concern of the California Supreme Court in

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[1] As elsewhere noted, this operational change to allow the project's main feature to function is not accompanied by any recognition of other operational changes that would necessarily follow given the addition of this project, and also climate change, to the picture. The absence of a realistic reasonably foreseeable operating plan or scenario for the SWP, CVP and related facilities is a significant omission from the DEIR/EIS.

Neighbors for Smart Rail that using a future baseline might cause "changes in background conditions" to "mask or swamp" project impacts (57 Cal.4th at p. 456), it is impossible to tell from the DEIR/EIS's fisheries analysis whether the proposed project — and the changes in Folsom Reservoir operations that it apparently incorporates — would cause any impacts to sensitive American River fish in addition to those projected as a result of climate change. An analysis based on existing and near-term conditions is necessary to allow our agencies and others to understand the proposed project's possible impacts on those fish.

Because the DEIR/EIS does not properly analyze the proposed project's impacts on existing conditions, and existing evidence demonstrates that such an analysis is necessary for all parties to understand the proposed project's impacts, the DEIR/EIS is inadequate and violates CEQA.

5. The DEIR/EIS violates CEQA by failing to properly analyze the proposed project's short- and medium-term impacts.

While the proposed tunnels would begin operating in 10 years, the DEIR/EIS only analyzes project water-supply impacts in the late-long term with projected 2060 hydrology, leaving 35 years of project water-supply impacts unanalyzed. CEQA requires that the BDCP give due consideration to short- and medium-term impacts, and the DEIR/EIS provides no justification for failing to analyze project water-supply impacts prior to 2060. As a result, the DEIR/EIS is inadequate under CEQA.

The BDCP preparers conducted CalSim II model runs for project impacts on hydrology in the near-term and early-long term (see DEIR/EIS, App. 5A, p. 4), but the DEIR/EIS's environmental analysis has no analysis of project impacts in the near-term or early-long term. Most tellingly, the BDCP modeling technical appendix — the core hydrologic analysis that is the basis for environmental analysis of project impacts on many resource categories, including water supply and aquatic life — does not include the results of CalSim II model runs for the near-term and early-long term. (See DEIR/EIS, App. 5C.) The DEIR/EIS provides no justification for these omissions.

Analysis of project impacts in the early-long term is necessary to inform the public about the project's immediate impacts on water supply and aquatic life when the proposed tunnels are complete. As the draft EIR acknowledges, analysis of impacts in the late-long term with sea level rise and climate change is subject to error and the DEIR/EIS's analysis does not segregate project-related impacts. The draft EIR acknowledges that the document's hydrologic analysis may ultimately be inaccurate because predictions for climate change in 2060 are "inherently limited and reflect large degrees of speculation." (See DEIR/EIS, p. 5-49.) This is also a flaw of the one climate change scenario approach. The DEIR/EIS also acknowledges that project-related effects cannot be isolated from climate-change related effects in 2060 for CEQA analysis against existing conditions. (DEIR/EIS, p. 5-49.)

The DEIR/EIS's failure to analyze interim impacts causes that document to be inadequate under CEQA. In *Neighbors for Smart Rail*, the California Supreme Court held that CEQA

requires an environmental document to give due consideration to short- and medium-term impacts in addition to long-term impacts:

> Even when a project is intended and expected to improve conditions in the long term – 20 or 30 years after an EIR is prepared – decision makers and members of the public are entitled under CEQA to know the short- and medium-term environmental costs of achieving that desirable improvement. These costs include not only the impacts involved in constructing the project but also those the project will create during its initial years of operation. Though we might rationally choose to endure short- or medium-term hardship for a long-term, permanent benefit, deciding to make that tradeoff requires some knowledge about the severity and duration of the near-term hardship. An EIR stating that in 20 or 30 years the project will improve the environment, but neglecting, without justification, to provide any evaluation of the project's impacts in the meantime, does not "giv[e] due consideration to both the short-term and long-term effects" of the project (Cal. Code Regs., tit. 14, § 15126.2, subd. (a)) and does not serve CEQA's informational purpose well.
>
> (*Neighbors for Smart Rail*, 57 Cal.4th at p. 455 (emphasis added).)

Because the BDCP only analyzes impacts of the tunnels' operation in the 2060 timeframe and fails to analyze the previous 35 years of project impacts, DEIR/EIS fails to give due consideration to short- and medium-term impacts and therefore violates CEQA, as interpreted by *Neighbors for Smart Rail*.

6. The BDCP's climate change analysis does not adequately inform the public of the project's potential impacts.

The BDCP's climate change analysis uses an ensemble projection scenario that represents the median prediction of over one hundred aggregated climate change studies. This single scenario approach to predicting climate change is inadequate for several reasons.

As discussed above, this approach is identical to the approach proposed by the dissent in *Neighbors for Smart Rail* and rejected by the majority of the California Supreme Court. (*Neighbors for Smart Rail*, *supra*, 57 Cal.4th at p. 456.) The DEIR/EIS's use of this approach therefore violates CEQA.

In addition, the DEIR/EIS's use of a single, median climate change scenario does not adequately inform the public. As the document acknowledges, climate change predictions are highly uncertain, and the long-term effects of climate change on sea level rise, water availability, and water temperatures are unknown. It will not be possible to know for decades whether BDCP has significantly underestimated or overestimated the potential effects of climate change. (DEIR/EIS, p. 5-49.) Yet the BDCP presents the significant effects of climate change in the late-long term as reasonably certain and predictable by presenting the single, median climate change scenario. Facing similar uncertainty, other environmental studies, including the 2008 USBR

OCAP analysis and the 2009 DWR California Water Plan Update, have adopted a bracketed analysis that analyzes two or more scenarios representing the range of likely climate change scenarios. This analysis provides "bookends" for the uncertain effects of climate change, and it is more effective for informing the public about the potential impacts of BDCP. Bracketed predictions also better captures potential extreme effects, which can be more biologically significant for covered species, than median scenarios. As explained in the technical memorandum by Cardno (Attachment B), increasing water temperatures have already stressed steelhead and fall-run Chinook salmon in the lower American River. If the BDCP's water temperature analysis for late-long term conditions has underestimated warming by a few degrees, there will be devastating consequences for these covered species. Without analyzing a wider range of potential climate change outcomes and accounting for potential extreme temperature changes, the BDCP is inadequate.

The BDCP's median climate change scenario also is an inappropriate basis for the BDCP permittees to receive regulatory and economic assurances under the ESA and the NCCPA. The BDCP permittees will seek assurances under the "No Surprises" rule, which would prevent the fish and wildlife agencies from seeking additional regulatory and economic measures from the permittees if changed or unforeseen circumstances occur. The BDCP states that if climate change occurs other than as predicted by BDCP, then this will constitute a changed circumstance. (BDCP, p. 6-43 to 6-44.) However, even if the BDCP's climate change predictions are completely wrong, the BDCP states that BDCP permittees would still receive the benefits of the regulatory and economic assurances:

> Long-term changes in sea level, watershed, hydrology, precipitation, or temperature (air or water) that are of the magnitude or effect assumed for the effects analysis and that adversely affect conservation strategy implementation or covered species are considered a changed circumstances. [. . .] Because the BDCP already anticipates the effects of climate change, <u>no additional actions will be required to remediate climate change effects on covered species and natural communities in the reserve system</u>.

(BDCP, p. 6-43 (underlining added).)

The BDCP also states that any climate change scenario requiring conservation measures in response to climate change beyond those described in BDCP are unforeseen circumstances and would require no remedial actions. (BDCP, p. 6-44 – 6-45.) The effect of these provisions would shift the inherently uncertain risks of planning for climate change away from the BDCP permittees and onto the federal government, other public agencies, and private landowners. Even the DEIR/EIS, however, acknowledges that its predictions for climate change in 2060 are "inherently limited and reflect large degrees of speculation." (See DEIR/EIS, p. 5-49.) The DEIR/EIS needs to sufficiently identify the project impacts, including if that should be done within a range given the uncertainties, so that appropriate mitigation can be crafted in accordance with CEQA and NEPA. Leaving all other parties subject to potentially increased regulatory and economic burdens if climate change ultimately results in different conditions than those assumed

by BDCP's admittedly speculative single projection would violate NEPA and CEQA, be highly inequitable and would violate, among other laws, the area-of-origin laws that so that the protected areas "shall not be deprived . . . directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein." (Water Code § 11460; see also Water Code § 11128 (§ 11460 applies to the CVP).)

7. <u>The BDCP's use of only one climate-change scenario, and the DEIR/EIS imprecise comparison of that scenario to existing conditions, is inappropriate and illegal.</u>

Under CEQA, existing conditions will normally constitute the baseline physical conditions by which an EIR analyzes whether an impact is significant. (Cal. Code Regs., tit. 14, § 15125, subd. (a); *Neighbors for Smart Rail*, *supra*, 57 Cal.4th at 445.) To properly conduct this analysis, the standard practice is for the EIR to assume, counterfactually, that the project exists and is in full operation when the environmental analysis is conducted. (*Neighbors for Smart Rail*, 57 Cal.4th at p. 453; see Cal. Code Regs., tit. 14, § 15125, subd. (a).) The EIR will then analyze this "existing conditions with project" scenario against an existing conditions baseline to predict the project's impacts. (*Neighbors for Smart Rail*, *supra*, 57 Cal.4th, at p. 453.) In this case, since the notice of preparation was issued in 2010, the EIR's primary mode of analysis should assume that the project is existing and operational in 2010, and the EIR must analyze this hypothetical 2010 project against existing conditions. The resulting analysis is an "apples to apples" comparison that predicts project impacts by comparing the hypothetically operating project with existing conditions. For these reasons, the California Supreme Court held in *Neighbors for Smart Rail* that an analysis of the project's impact on an existing conditions baseline generally is required and cannot be omitted from an EIR except under unusual circumstances (57 Cal.4th at pp. 451-452, 456):

> Projected future conditions may be used as the sole baseline for impacts if their use in place of measured existing condition — a departure from the norm stated in Guidelines section 15125(a) — is justified by unusual aspects of the project or the surrounding conditions. That the future conditions analysis would be informative is insufficient, but an agency does have discretion to completely omit an analysis of impacts on existing conditions when inclusion of such an analysis would detract from an EIR's effectiveness as an informational document, either because an analysis based on existing conditions would be uninformative or because it would be misleading to decision makers and the public . . . [A]n agency must not create unwarranted barriers to public understanding of the EIR by unnecessarily substituting a baseline of projected future conditions for one based on actual existing conditions.

The DEIR/EIS's reliance on projected future, with-climate change 2060 scenarios in identifying the project's environmental impacts violates CEQA. The unusual circumstances under which an existing conditions baseline can be omitted from an EIR do not exist here because the analysis would be informative and would not mislead the public or decision makers.

The comparison of 2060 scenarios with the existing conditions baseline without project is not particularly informative, given what DEIR/EIS admits is the wide range of possible climate outcomes. Superimposing the proposed project on existing conditions would assist the public and decision makers in understanding the proposed plan's impacts, and enable them to distinguish project impacts from climate change.

C. Elements of the BDCP are poorly conceived and would violate the ESA and NCCPA.

Because of numerous technical and structural errors, the BDCP and DEIR/EIS are inadequate. The plan's funding, regulatory assurances, and draft implementation agreement do not meet the requirements imposed by state and federal law for conservation plans. Furthermore, significant issues render the plan's proposed governance structure inadequate. For the reasons discussed below, BDCP must be significantly revised before any decisions can be made regarding permitting and implementation of the plan.

1. The BDCP's proposed funding is inadequate under the ESA and NCCPA.

The ESA requires that proponents of a habitat conservation plan "ensure that adequate funding for the plan will be provided" and that adequate funding be available to implement the mitigation measures contained in the HCP. (16 U.S.C. §§ 1539(a)(2)(A), (a)(2)(B); see also *Southwest Center for Biological Diversity v. Bartel* (S.D. Cal. 2006) 457 F.Supp.2d 1070, 1105 (noting USFWS cannot issue an incidental take permit unless it finds that the applicant demonstrates sufficient funding will be available to implement the HCP).) Similarly, the NCCPA requires that a natural community conservation plan "contain provisions that ensure adequate funding to carry out the conservation actions identified in the plan." (Fish & Game Code § 2820, subd. (a)(10).) Large-scale, regional HCPs/NCCPs such as BDCP therefore must demonstrate sufficient funding for long-term needs and, where perpetual funding is required to implement any of the proposed mitigation measures, the HCP must establish programs or mechanisms to generate those funds. (See USFWS and NMFS Habitat Conservation Planning and Incidental Take Processing Handbook (1996), p. 3-34.) HCP/NCCP proponents cannot rely on the speculative future actions of others. (*Southwest Center for Biological Diversity*, *supra*, 457 F.Supp.2d at p. 1105 (citing *National Wildlife Federation v. Babbitt* (E.D. Cal. 2000) 128 F.Supp.2d 1274; 1294-1295 and *Sierra Club v. Babbitt* (S.D. Ala. 1998) 15 F.Supp.2d 1274, 1280-82).) The lack of adequate funding in an HCP can be fatal to the validity of the plan. (See, e.g., *National Wildlife Federation*, *supra*, 128 F.Supp.2d at pp. 1293-1295 (HCP invalidated in part due to inadequate funding guarantees from city); *Southwest Center for Biological Diversity*, *supra*, 457 F.Supp.2d at pp. 1105-1106 (reliance on undependable and speculative funding sources violates ESA's funding requirement).)

The BDCP fails to satisfy the funding requirements of the ESA and the NCCPA because nearly all of the funding sources it identifies are too speculative and, to the extent that a particular funding source is identified in the plan, there are no guarantees in the BDCP that such funding will be adequate to implement the proposed conservation measures. Our agencies agree

with the comprehensive comments submitted by the NSWA on this issue and incorporate those comments here.

The NSWA letter points out that BDCP appears to anticipate that it will "corner the market" with respect to existing bond funds — i.e., using all available state bond funding for the BDCP — but does not discuss what other projects throughout the State will not receive funding as a consequence. It is speculative to conclude that all remaining bond funds under the various programs cited in the BDCP (see BDCP, pp. 8-86 – 8-94) will be made available only to BDCP. For example, it notes that $378.7 million dollars of Proposition 1E funding for flood protection and habitat restoration in the Delta under the Disaster Preparedness and Flood Protection Bond Act of 2006 remains available as of November 2012. (BDCP, p. 8-87.) Of this amount, BDCP expects to receive up to $94.7 million dollars, which represents 25 percent of Proposition 1E funding still available for allocation. Yet BDCP does not explain its basis for claiming such a significant portion of these funds. To the contrary, all it does is state that Conservation Measures 2, 4, 5, 6, 7, 8, 9, 10 and 12 "may be eligible" for these funds. (BDCP, p. 8-87.) Eligibility for funding is in no way sufficient to guarantee that such funding will in fact materialize.

In addition, BDCP assumes that a significant portion of Proposition 84 funding presently targeted to support Integrated Regional Water Management (IRWM) plans will be repurposed to fund BDCP. (BDCP, p. 8-89.) Specifically, BDCP assumes that it will receive anywhere from $40 to $80 million dollars of the remaining funds allocated to the San Francisco Bay Area ($21 million dollars), the Sacramento River ($12 million dollars) and the San Joaquin River ($10 million) to implement proposed Conservation Measures 2 through 10 and Conservation Measure 12. (*Id.*, at p. 8-89.) The process for obtaining IRWM funds is highly competitive, with many government entities vying for the same limited funds. It is unreasonable for BDCP to assume that it will receive this funding at the expense of numerous other eligible projects in those regions. The fact that BDCP may qualify for some of these funds does not necessarily mean that it will receive these funds.

One of BDCP's biggest flaws is that it contains no assurances that there will be adequate funding to implement the conservation measures that are the cornerstone of the regulatory coverage under the ESA and NCCPA that BDCP's proponents seek to acquire very soon. The BDCP improperly defers its discussion of its funding plan to some undefined future date, stating that "financing plans will be prepared separately by various funding agencies and through future discussions between state and federal agencies." (BDCP, p. 8-2.) As the NSWA comment letter points out, without an understanding of who will pay and what funding is required, there is no way of evaluating whether adequate funding exists sufficient to provide regulatory assurances to BDCP proponents. To the contrary, what assured funding there is from participating state and federal contractors only makes up a small portion of BDCP's overall costs, as they have committed only to funding construction, operation and construction-related mitigation costs for the conveyance tunnels and not to funding the administration of BDCP or the implementation of conservation measures generally. (See BDCP, p. 8-73.) All other funding sources, as discussed above and in the NSWA comment letter, are either too uncertain or speculative to be relied upon.

2. The BDCP's proposed governance structure is confusing and causes the draft documents to inadequately describe possible impacts to other water users.

BDCP proposes a complicated governance structure that, among other things: (1) may subject other water users to BDCP's requirements and risks created by BDCP; (2) depends on undefined participation by Reclamation; and (3) leaves CVP contractors other than BDCP proponents open to undefined risks. ARWA agrees with the detailed comments submitted by the NSWA on this issue and incorporate those comments here.

As the NSWA letter points out, the proposed implementation structure described in BDCP's Chapter 7 is inadequate under the NCCPA, the ESA, NEPA and CEQA because it fails to clearly define how Reclamation — and, by extension, Reclamation's non-BDCP CVP contractors — would be affected by the decisions made within the BDCP. The uncertainties inherent in the proposed structure, which includes inconsistent statements concerning which particular entities would make decisions within the BDCP and prepare annual operations plans, and the lack of information contained in the BDCP concerning how project-specific actions relative to how operation of the proposed conveyance tunnels will be disentangled from the larger CVP and SWP operations that serve water users that are not BDCP proponents, render BDCP legally inadequate.

3. Regulatory and economic certainty under the "No Surprises" rule is incompatible with the BDCP's vague project description and uncertain conservation measures.

The BDCP and draft implementing agreement state the BDCP proponents, except for Reclamation, would receive regulatory and economic assurances under the ESA and NCCPA. These assurances would provide that if changed or unforeseen circumstances occur that adversely affect species covered by the BDCP, the fish and wildlife agencies could not impose additional regulatory restrictions or economic burdens on the BDCP proponents. Primary responsibility for undertaking additional conservation measures would rest with the federal government, other governmental agencies, or other nonfederal landowners. (See BDCP, p. 6-28.) The BDCP and draft implementing agreement do not meet the requirements for regulatory and economic assurances under ESA and NCCPA.

The regulatory and economic certainty provided by the "No Surprises" rule is incompatible with the BDCP's vague project description and uncertain conservation measures. BDCP states that the purpose of the "No Surprises" rule is similar under the ESA and NCCPA — to provide a degree of certainty regarding the conservation measures and economic commitment that the BDCP proponents will be required to undertake by limiting the proponents' exposure to additional regulatory and economic requirements. (BDCP, p. 6-28.) The "No Surprises" rule therefore presumes that the permittees receiving assurances have committed to certain, well-defined conservation measures. However, this is not the case in BDCP. As discussed above and in the NSWA comment letter, the BDCP's conservation measures and project description are vague, and their results are so uncertain that they remain subject to

substantial future revisions. Therefore, it is improper for the BDCP proponents to receive regulatory and economic assurances under the ESA and NCCPA when the BDCP is uncertain what conservation measures and biological objectives the BDCP permittees have committed to implement.

Similarly, one significant limitation on the assurances available under the ESA and NCCPA is that the permittee must have fully complied with and implemented the HCP/NCCP's environmental commitments. (See 63 F.R. 8859, 8872, Feb. 23, 1998; Fish & Game Code § 2820, subd. (f)(2).) Because the BDCP's conservation measures are not certain or well-defined, it would not be possible for the fish and wildlife agencies to evaluate full compliance and implementation of the measures.

For related reasons, CDFW may not provide assurances under the NCCPA for the proposed 50-year term of the incidental take permit. Under the NCCPA, CDFW must consider several factors when determining the level and term of assurances to be afforded a permittee. (See Fish & Game Code § 2820, subd. (f).) One factor CDFW must consider is the adequacy of analysis of the impact of take on covered species. (See Fish & Game Code § 2820, subd. (f)(1)(B).) As discussed in this letter and in the technical memorandum prepared by Cardno (Attachment B), the BDCP's analysis of the impact of take on aquatic species is deeply flawed. As a result, the BDCP is inadequate to support assurances under the NCCPA. Another factor CDFW must consider is the size and duration of the plan and the appropriateness of the size and duration of the plan regarding the quality and amount of data. (See Fish & Game Code § 2820, subd. (f)(1)(D), (H).) As the draft documents repeatedly acknowledge, the size and duration of the BDCP is unprecedented and it is subject to significant, cascading uncertainties regarding impacts on aquatic species. Therefore, the proposed assurances to the BDCP permittees cannot be justified under the NCCPA.

4. Assurances under the NCCPA would be inappropriate because it is impossible to determine how the BDCP could satisfy the NCCPA's rough proportionality requirement.

The NCCPA requires implementing mitigation and conservation measures to fully mitigate the impacts of authorized take. (See Fish & Game Code §§ 2081, subd. (b)(2).) The proposed mitigation must be roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan. (Fish & Game Code §§ 2081, subd. (b)(9).) Before CDFW can approve a NCCP, it must find that implementation of the required mitigation and conservation measures will provide mitigation roughly proportional to impacts on habitat or covered species. (Cal. Code Regs., tit. 14, § 783.4, subd. (a)(2); see also Fish & Game Code § 2820, subd. (b)(9).) These provisions ensure that a permittee will simultaneously mitigate any authorized take to a proportional extent. Failure to maintain this rough proportionality between impacts and mitigation is a basis for CDFW to suspend or revoke the incidental take permit. (Fish & Game Code § 2820, subd. (c).)

CDFW cannot make the mandatory finding of rough proportionality based on the BDCP or the draft implementing agreement. The BDCP fails to adequately describe and analyze the

impacts of the proposed tunnels. (See above, Section B.2.) Because the BDCP does not adequately disclose what impact the tunnels will have, CDFW cannot find the tunnels' impacts have been fully mitigated under the NCCPA or that proposed mitigation will be reasonably proportional to the extent of the tunnels' undisclosed and unanalyzed impacts. If the proposed project's impacts cannot be well-defined, it simply is not possible to determine that the necessary mitigation will occur in a manner roughly proportional, in time and extent, to those project impacts.

Furthermore, the BDCP fails to adequately disclose and analyze the projects' proposed mitigation and conservation measures. The BDCP intends that proposed Conservation Measures 2 through 22 will mitigate the impacts of operating the proposed tunnels. However, the BDCP analyzes the proposed Conservation Measures 2 through 22 using a program level of environmental review, with many of the essential details left to future environmental review and decisions. Rather than disclosing and analyzing the conservation measures that the BDCP permittees would undertake to maintain rough proportionality, the BDCP treats the Conservation Measures 2 through 22 as a vague list of studies and activities the BDCP permittees might or might not undertake, subject to further development and environmental review. (See above, Section B.3.) With Conservation Measures 2 through 22 being defined at best at the program level and being subject to further development and changes through future environmental analyses — even subject to changes of fundamental biological objectives — it is not possible for CDFW to make a roughly-proportional find that would support any assurances under the NCCPA.

5. The BDCP fails to explain how assurances would affect regulatory decisions of other agencies, such as the SWRCB.

The BDCP contains no explanation how the regulatory and economic assurances that fish and wildlife agencies would provide to the BDCP permittees would affect other agencies that must approve the BDCP. As part of BDCP, Reclamation and DWR would submit water-right change petitions for the CVP and SWP to the SWRCB. The BDCP does not state whether the BDCP's regulatory and economic assurances would prevent the SWRCB from requiring additional concessions to protect environmental resources beyond those set forth in BDCP, or whether the SWRCB must look to other legal users of waters to meet the board's requirements.

6. Assurances for unforeseen circumstances under the NCCPA cannot extend to impacts from permittees' activities.

For DFW to issue an incidental take permit, CESA requires the impacts of the authorized take to be fully mitigated. (Fish & Game Code § 2081, subd. (b)(2).) The California Supreme Court has interpreted this full mitigation requirement to prevent CDFW from providing regulatory and economic assurances for changed or unforeseen circumstances for which the BDCP permittees' activities were a contributing factor. (See *Environmental Protection Information Ctr. v. Cal. Dept. of Forestry* (2008) 44 Cal.4th 459, 512-513.) The BDCP's discussion of regulatory and economic assurances violates CESA's full mitigation requirement

because it fails to limit regulatory and economic assurance under BDCP to circumstances for which the BDCP permittees' activities were not a contributing factor.

7. The BDCP implementing agreement highlights the draft plan's lack of an adequate project description and does not meet the NCCPA's requirements for such agreements.

An implementing agreement is customary for a HCP and required for approval of an NCCP. (See Fish & Game Code § 2820, subd. (b).) Its purpose is to define the key structural and operational requirements for the HCP and NCCP. Under the NCCPA, the implementing agreement defines the scope of permitted take and any regulatory or economic assurances. (See Fish & Game Code § 2801, subd. (b).) The agreement also includes mechanisms to ensure adequate funding of the NCCP and provisions for suspension or revocation of the permit for violations of the incidental take permit. (Fish & Game Code § 2801, subd. (b)(3), (8).) The implementing agreement for BDCP is subject to NEPA and CEQA review (Fish & Game Code §§ 2815, subd. (a), 2826) and should have been released in December 2013 as part of the BDCP. However, the draft implementing agreement was not made available for a 60-day review period until May 30, 2014.

The draft implementing agreement highlights the BDCP's lack of an adequate project description. Like the BDCP, the draft implementing agreement does not describe how the proposed project would actually be implemented. Instead, the draft implementing agreement describes a series of decisions left to be made in the future about how the project might be designed and re-designed. These decisions could be made through adaptive management or the project's vague decision tree; in either case, the lack of a finite project description is spotlighted. The implementing agreement further provides that all of the key elements of the proposed project are subject to future development, changes and elimination, including the plan's biological objectives (pp. 24, 32-37), the decision tree for flows (p. 25), Delta outflow requirements (pp. 25-26), and all of the plan's Conservation Measures (p. 29). As the implementing agreement makes clear, the BDCP lacks a stable, adequate project description and leaves key elements of the plan to future design.

The implementing agreement also shows that the BDCP is inadequate for Reclamation to receive take authorization under Section 7 of the ESA. The agreement provides that the Reclamation will receive ESA coverage through an integrated biological opinion under Section 7 of the ESA and not through the permitting process. (Implementing Agreement (IA), pp. 3-4, 15, 17, 22.) This biological opinion will be incorporated in, and supported by, the BDCP. (IA, pp. 3-4.) Section 7 and its implementing regulations will require the biological opinion to broadly identify and analyze all direct and indirect impacts of the BDCP on covered species and critical habitat, together with the effects of other activities that are interrelated or independent with the BDCP. (See 50 C.F.R. §§ 402.02 (defining "effects of the action"), 402.14.) Interrelated effects and interdependent effects are those effects that would not occur "but for" the proposed project's larger actions. (*Ctr. for Biological Diversity v. United States BLM* (9th Cir. 2012) 698 F.3d 1101, 1113; USFWS and NMFS Endangered Species Consultation Handbook (March 1998) p. 4-

26.) Such effects include related actions that would occur to support the main proposed action. (*NRDC v. Rodgers* (E.D. Cal. 2005) 381 F. Supp. 2d 1212, 1236.)

Significant changes in the operation of reservoirs upstream of the Delta, including Folsom Reservoir, would be interrelated and interdependent effects of the BDCP. As discussed in many of the comments above, Folsom Reservoir operations apparently would have to change in the long-term to accommodate the BDCP and future climate change. This would be particularly true under the existing COA if Oroville Reservoir Storage would be used to meet increased Delta outflow requirements contained in BDCP permits. However, the BDCP improperly constrains its analysis to exclude impacts upstream from the Delta, including impacts to Folsom Reservoir, by saying these impacts are outside the project area. Because no proper analysis of interrelated and interdependent effects exists in the BDCP, Reclamation cannot receive ESA coverage based on the current BDCP. To meet Section 7's requirements, Reclamation would essentially have to redo the DEIR/EIS's analysis of impacts to covered species in its integrated biological opinion. The BDCP must be revised to include an analysis of interrelated impacts on upstream reservoirs.

Finally, as discussed above, the BDCP permittees' financial commitments are inadequate for the size and scope of the proposed conservation measures and 50-year adaptive management program. The draft implementation agreement's ostensible purpose is to detail and substantiate the BDCP permittees' commitments to fund the BDCP conservation measures. However, the draft implementing agreement merely incorporates by reference the vague financial commitments discussed in Chapter 8 of the BDCP. (See IA, p. 46.) The implementing agreement also provides no financial commitments whatsoever from the federal entities involved in the plan. (See IA, p. 46.) As a result, the draft implementing agreement fails to satisfy the NCCPA's requirement that the agreement identify adequate funding for the plan.

CONCLUSION

The BDCP and DEIR/EIS present significant risks for our region and contains numerous flaws that undermine its analysis, potential effectiveness, and ability to withstand legal challenge. Because of these risks and flaws, the plan must be significantly reconsidered and revised before any decisions can be made regarding permitting or implementing the plan. Because one significant flaw in the plan is unrealistic long-term modeling of Folsom Reservoir operations, our agencies renew our prior requests that Reclamation develop, and the revised BDCP integrate and analyze, a long-term plan for Folsom Reservoir operations that protects our region.

ARWA appreciates your attention to these comments and looks forward to your response.

CITY OF FOLSOM

By: _____
Evert W. Palmer
City Manager

CITY OF ROSEVILLE

By: _____
Ray Kerridge
City Manager

CITY OF SACRAMENTO

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Enclosures
8618/BDCP Drafts/L071814ajr BDCP Amer River - Final v2.docx

BDCP1511

Attachment A

MBK ENGINEERS

Water Resources • Flood Control • Water Rights

DATE: July 11, 2014

TO: Dan Kelly, Ryan Bezerra, and Martha Lennihan

FROM: Lee G. Bergfeld, Dan Easton, and Walter Bourez

SUBJECT: Technical Comments on Bay-Delta Conservation Plan Modeling

This technical memorandum is a summary of MBK Engineers' ("Reviewers") findings and opinions on the hydrologic modeling performed in support of the draft environmental document for the Bay-Delta Conservation Plan (BDCP) for Folsom Reservoir and the American River Basin. The results of that modeling are summarized in Appendix 5A to the draft BDCP EIR/EIS.

The Reviewers' analysis of the BDCP modeling is summarized in categories: (1) assessment of general assumptions and operations; (2) assessment of American River demands; (3) assessment of climate change assumptions, implementation, and effects; (4) assessment of the assumptions and operational criteria for inclusion of the new BDCP facilities. The issues discussed in (1), (2) and (3) are relevant for all modeling scenarios, both baseline scenarios that do not include BDCP and with project scenarios that evaluate BDCP or the Alternatives. The issues discussed in (4) are specific to the inclusion of the BDCP as defined in the draft BDCP plan and identified as Alternative 4 in the Draft EIR/EIS.

This review focuses on water operations modeling using CalSim II. CalSim II is a computer program jointly developed by DWR and Reclamation. CalSim II presents a comprehensive simulation of State Water Project (SWP) and Central Valley Project (CVP) operations, and is used by DWR as a planning tool to predict future availability of water for the SWP. CalSim II is widely recognized as the most prominent water management model in California, and it is generally accepted as a useful and appropriate tool for assessing the water delivery capability of the SWP and the CVP.

Broadly speaking, CalSim II estimates, for various times of the year, how much water will be diverted, how much will serve as instream flows (e.g., flow in the rivers at various locations, such as Delta outflow), and how much will remain in the reservoirs. Within the context of the BDCP, CalSim II is used to estimate the amount of water that will be diverted from BDCP's proposed North Delta Diversion (NDD) facilities. Thus, for BDCP, the CalSim II model estimates how much water will be diverted at the NDD facilities, how much flow will remain in the Sacramento River below Hood (the approximate location of the NDD facilities), how much water will be diverted through the existing South Delta Diversion (SDD) facilities at Tracy, how much flow will leave the Delta by flowing out to the Bay, and how much water will remain in storage in upstream reservoirs (including Folsom Reservoir). The location and timing of the diversion and the amount of water remaining instream and in reservoirs are significant because they can cause impacts on species, water quality degradation, and the like.

The coding and assumptions included in the CalSim II model drive the results it yields. Data and assumptions, such as the amount of precipitation runoff at a certain measuring station or the demand for water by specific water users are input into the model. Criteria used to operate the CVP and the SWP (including current regulatory requirements) are included in the model as assumptions; because of the volume of water associated with the CVP and SWP, these operational criteria significantly influence the model's results. Additionally, operational logic is coded into the CalSim II model to simulate how DWR and Reclamation would operate the system under circumstances for which there are no regulatory or otherwise definitive rules (e.g., when to move water from upstream storage to south of Delta storage). This attempt to specify (i.e., code) the logic sequence and the relative weighting that humans will use as part of their "expert judgment" is a critical element to the CalSim II model.

The model's ability to reliably predict effects of a proposed action depends on the accuracy of its coding and its representation of operations criteria. In other words, the model's results will be only as good as its data, coding, assumptions, and judgment and the knowledge of the modelers. For this reason, a detailed operating plan of existing facilities and the proposed facility is essential to create an accurate model of how a proposed action will affect existing water operations. In reviewing the BDCP modeling, it became apparent that coding errors and operating assumptions are inconsistent with the actual purposes and objectives of the CVP and SWP, thus limiting the utility and accuracy of the results.

The CalSim II model is the foundational model for analysis of the BDCP, including the effects analysis in the Draft BDCP and the impacts evaluation in the Draft EIR/EIS. Results from CalSim II are used to examine how water supply and reservoir operations are modified by the BDCP, and the results are also used by subsequent models to determine physical and biological effects, such as water quality, water levels, temperature, Delta flows, and fish response. Any errors and inconsistencies identified in the underlying CalSim II model are therefore present in subsequent models that estimate impacts on water quality, hydrodynamics in the Delta, economics, hydropower, and other parameters and adversely affect the results of analyses based on those subsequent models.

No Action Alternative

Water operations modeling assumptions used in CalSim II for the BDCP No Action Alternatives (NAA) are defined in the December 2013 Draft BDCP[1] and associated draft EIR/S. Those assumptions include assumed changes to hydrology cause by climate change, so the NAA includes that assumed climate change. Assumptions affecting modeling results for Folsom Reservoir and the American River are the focus of this review. Because Folsom Reservoir is operated as an integral part of the CVP, system-wide assumptions affect conditions on the American River and these assumptions are included in this review. Demands for American River supplies also influence American River storage and flow conditions, therefore demand assumptions are included in this review. Because climate change assumptions not only affect system-wide operations, but have a significant influence on American River operations, these assumptions are reviewed to understand the basis for the NAA model results. In addition to input assumptions, the NAA operation depicted by CalSim II is reviewed for reasonableness.

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

Each of the NAA assumes the same regulatory requirements, generally representing the existing regulatory environment at the time of study formulation (February 2009), including Stanislaus ROP NMFS BO (June 2009) Actions III.1.2 and III.1.3, Trinity Preferred EIS Alternative, NMFS 2004 Winter-run BO, NMFS BO (June 2009) Action I.2.1, SWRCB WR90-5, CVPIA (b)(2) flows, NMFS BO (June 2009) Action I.2.2, American River Flow Management NMFS BO (June 2009) Action II.1, no SJRRP flow modeled, Vernalis SWRCB D1641 Vernalis flow and WQ and NMFS BO (June 2009) Action IV.2.1, Delta D1641 and NMFS Delta Actions including Fall X2 FWS BO (December 2008) Action 4, Export restrictions including NMFS BO (June 2009) Action IV.11.2v Phase II, OMR FWS BO (December 2008) Actions 1-3 and NMFS BO (June 2009) Action IV.2.3v. The modeling protocols for the recent USFWS BO (2008) and NMFS BO (2009) have been cooperatively developed by Reclamation, NMFS, U.S. Fish and Wildlife Service (USF&WS), California Department of Fish and Wildlife (CDF&W), and DWR.

American River Basin Demands

BDCP model inputs were reviewed to understand demand assumptions for water purveyors in the American River Basin. Table 1 is a summary of average annual demands used in CalSim II by the BDCP modeling at both the existing (Existing Conditions) and future (NAA) levels of development. The Existing Conditions model run was not used in the analysis of project effects, but is provided for reference. A single level of demand was used to represent the two future conditions simulated, early long term (ELT) and late long term (LLT) that represent planning horizons of approximately 2025 and 2060, respectively.

There are several problems with the demands summarized in Table 1. Existing Conditions are approximately representative of current demands. Future demands for Placer County Water Agency (PCWA) are not representative of current projections. PCWA diverts water at the American River Pump Station and delivers water into Folsom Reservoir for diversion by San Juan Water District (SJWD), Sacramento Suburban Water District (SSWD), and the City of Roseville (Roseville). The total projected annual demand for these four entities is approximately 120,000 acre-feet. Demands represented in the BDCP modeling total between 64,000 and 81,000 acre-feet annually, depending on the annual demand of SSWD. One error that contributes to underestimating PCWA's future demand is the assumption that Roseville will take only 5,000 acre-feet of their 30,000 acre-feet of contract supply from PCWA. Most future level of development CalSim II studies, such as those produced for the 2013 State Water Project Delivery Reliability Report, assume Roseville's demand for water from PCWA is 30,000 acre-feet. Roseville's 2010 urban water management plan projects that Roseville will have a demand for its 30,000 acre-feet per year of PCWA water by 2025.[2]

A second concern is that the BDCP modeling assumes that demands will increase significantly over the next 11 years, from Existing Conditions to ELT at approximately 2025, but then remain unchanged over the next 35 years to LLT conditions in 2060. Issues with this assumption are in part illustrated by reference to the City of Sacramento's most recent (2010) Urban Water Management Plan which identifies water demands continuing to increase as a result of development through at least 2035. For example, that UWMP projects total year 2030 demands within the retail service area and wholesale demands to be 250,000 acre-feet and year 2035 demands to be 261,000 acre-feet.

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[2]Roseville's 2010 urban water management plan is available at https://www.roseville.ca.us/eu/water_utility/water_efficiency/plan.asp.

Another demand-related issue with the NAA and the with-Project scenarios is that BDCP modeling does not simulate diversion limitations at the Fairbairn water treatment plant when releases from Nimbus Reservoir are below the "Hodge Flows" limits that apply to the City of Sacramento's diversions at Fairbairn. These limitations are included as terms in the City of Sacramento water right permits, and therefore are known and should be accurately reflected in the BDCP modeling.[3] This omission affects modeling of flows in the lower American River downstream of Fairbairn and simulated diversions at Fairbairn and the Sacramento River Intake.

Table 1. American River Basin Demand Assumptions

Water Purveyor	Existing Conditions (1,000 acre-feet)	NAA (1,000 acre-feet)
Placer County Water Agency (PCWA)	35.5	35.5
PCWA – CVP contract	0.0	35.0
City of Folsom	27.0	27.0
City of Folsom – CVP contract	7.0	7.0
Folsom Prison	2.0	5.0
San Juan Water District (SJWD)	33.0	33.0
SJWD - from PCWA	17.0	24.0
SJWD – CVP contract	11.2	24.2
City of Roseville - from PCWA	5.0	5.0
City of Roseville – CVP contract	32.0	32.0
Sac. Suburban Water District (SSWD) - from PCWA	0.0 - 17.0	0.0 - 17.0
El Dorado Irrigation District (EID)	0.0	17.0
EID – CVP contract	7.55	7.55
El Dorado County – CVP contract	4.0	15.0
So. Cal. Water Company /Arden Cordova Water Service	5.0	5.0
California Parks and Recreation	1.0	5.0
Sacramento Municipal Utilities District (SMUD)	15.0	15.0
SMUD – CVP contract	5.0	30.0
City of Sacramento (Fairbairn and Sacramento River)	120.3	245.0
City of Carmichael	12.0	12.0
Sacramento County Water Agency Total (SCWA)	15.0	109.7
SCWA – CVP contract	10.0	45.0
East Bay Municipal Utilities District – CVP contract	N/A	up to 112.0

Climate Change

[3] Water right permit numbers 11358, 11359, 11360, and 11361.

Analysis presented in the BDCP draft plan and draft EIR/EIS attempts to incorporate the effects of climate change at two future climate periods: ELT at approximately the year 2025; and 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[4], 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 over an 82-year period of variable hydrology; these time-series were then input to the CalSim II model.

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. 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, except in the limited manner described below.[5] This review is limited to evaluating how modified flows were incorporated into CalSim II and whether the operation of the CVP and SWP in response to modified flows and modified flow-salinity relationship is reasonable for ELT and LLT conditions. This review focuses on assumed underlying hydrology and simulated operation of the CVP and SWP, assumed regulatory requirements, and the resultant water deliveries.

To assess climate change, the three without Project ("baseline" or "no action") modeling scenarios were reviewed: No Action Alternative (NAA)[6], 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[7]. The only difference between these scenarios is the climate-related changes made for the ELT and LLT conditions (Table 2).

Table 2. 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

Differences between the NAA and NAA-ELT reveal effects of climate change assumptions under ELT conditions; similarly, differences between the NAA and NAA-LLT reveal effects of climate change assumptions under LLT conditions.

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[4] BDCP EIR/EIS Appendix 5A, Section A and BDCP HCP/NCCP plan Appendix 5.A.2
[5] 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.
[6] NAA is also called the Existing Biological Conditions number 2 (EBC-2) in the Draft Plan.
[7] BDCP EIR/EIS Appendix 5A, Section B, Table B-8.

There is considerable uncertainty regarding the effects of climate change on future temperature and precipitation. Analysis of only one potential future condition at different planning horizons does not cover the range of potential effects. While other analyses attempt to bracket the range of climate change effects (e.g. 2008 OCAP analysis[8]) on proposed projects, BDCP's entire effects analysis is based on a single climate change scenario. Standard practice for modeling CVP and SWP operations is to impose future demand projections on historical hydrology to develop No Action Alternatives. BDCP did not follow the standard practice of evaluating effects of BDCP using historical hydrology, but relied solely on one climate change scenario to form the basis of their analysis.

The significance of changed hydrology between the three without project baselines (NAA, NAA-ELT, and NAA-LLT) is illustrated below in Figure 1. The figure illustrates the projected combined inflow of Trinity, Shasta, Oroville, and Folsom Reservoirs under the NAA and the change relative to the NAA for the NAA-ELT and NAA-LLT baselines. BDCP baselines show Trinity, Shasta, and Oroville inflow are projected to increase overall, but with a significant shift from spring runoff to winter runoff and increases in wetter years with decreases in drier years.

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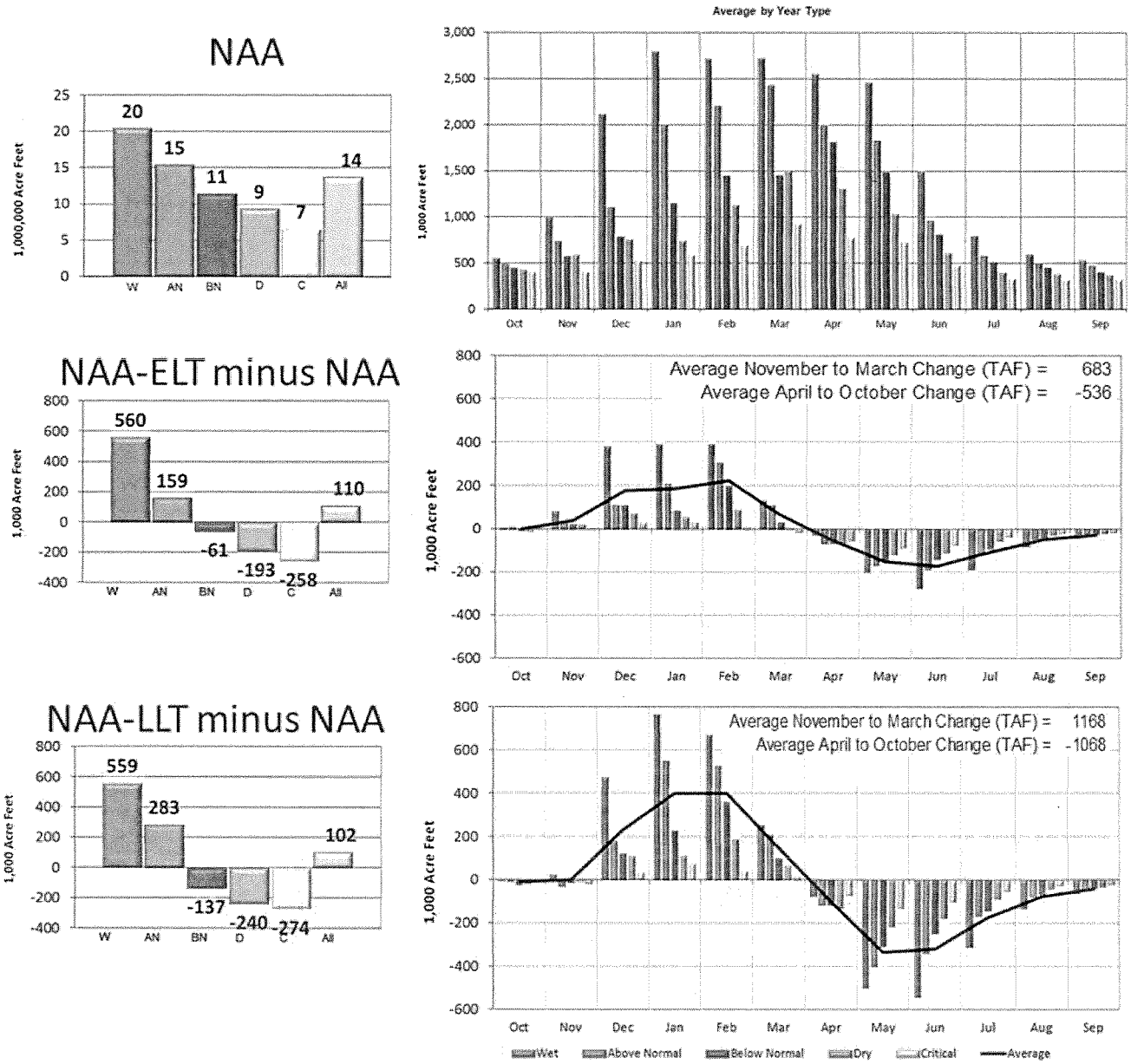
[8] USBR, 2008. Biological Assessment on the Continued Long-term Operations of the Central Valley Project and the State Water Project, Appendix R Sensitivity of Future Central Valley Project and State Water Project Operations to Potential Climate Change and Associated Sea Level Rise, U.S. Bureau of Reclamation, July 2008.

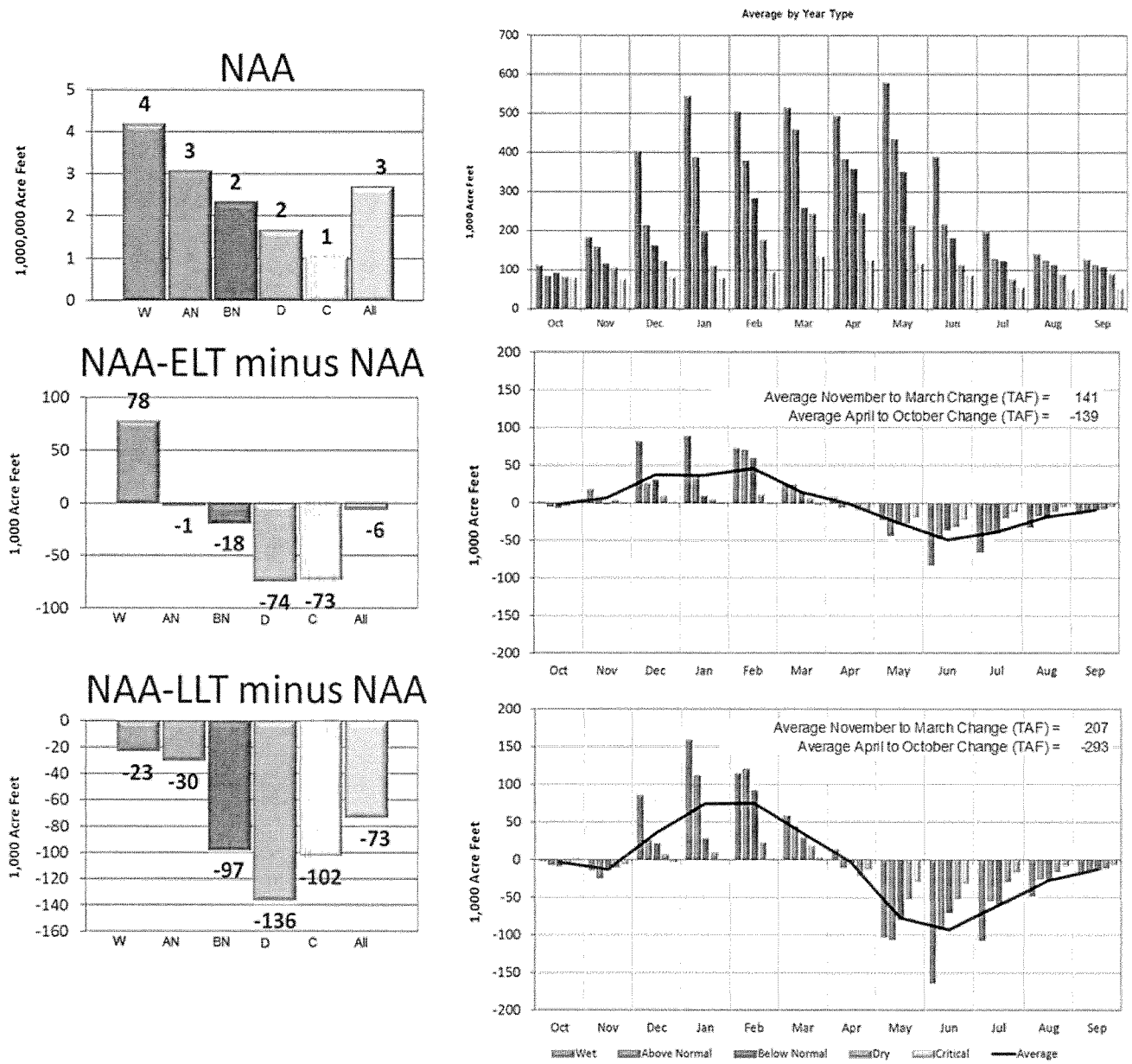
Figure 1. Inflow to Trinity, Shasta, Oroville, and Folsom Reservoirs – NAA, NAA-ELT and NAA-LLT



The effect of assumed climate change on average annual Folsom Reservoir inflow in the NAA-ELT scenario is minor, but causes decreases in inflow of about 70 TAF in the NAA-LLT scenario. The spring to winter shift in runoff is also projected for Folsom Reservoir inflow. Figure 2 is an illustration of Folsom inflow under the NAA and the change relative to NAA for the NAA-ELT and NAA-LLT baselines. To properly incorporate climate change into modeling of Folsom Reservoir and the American River, climate change effects must be applied to flows and reservoirs upstream from Folsom, which was not done. There is significant storage capacity in the upper American River watershed in PCWA's Middle Fork Project and the Sacramento Municipal Utility District's (SMUD) Upper American River Project. The

operation of Folsom is significantly affected by changes in upstream conditions and operations.[9] Because climate change in BDCP modeling is imposed on the American River by adjusting only the inflow to Folsom only, however, the effect on the American River is likely misrepresented in the BDCP NAA-ELT and NAA-LLT scenarios.

Figure 2. Projected Inflow to Folsom Reservoir – NAA, NAA-ELT and NAA-LLT



Comparison of inflow changes illustrated in Figure 1 and Figure 2 show the effects of climate change are large in the American River Basin relative to changes in other river basins. Total changes illustrated in

[9] SMUD's Upper American River Project alone is estimated to have water storage capacity of about 430,000 acre-feet. "The History of SMUD's UARP", Sacramento Municipal Utility District (2001).

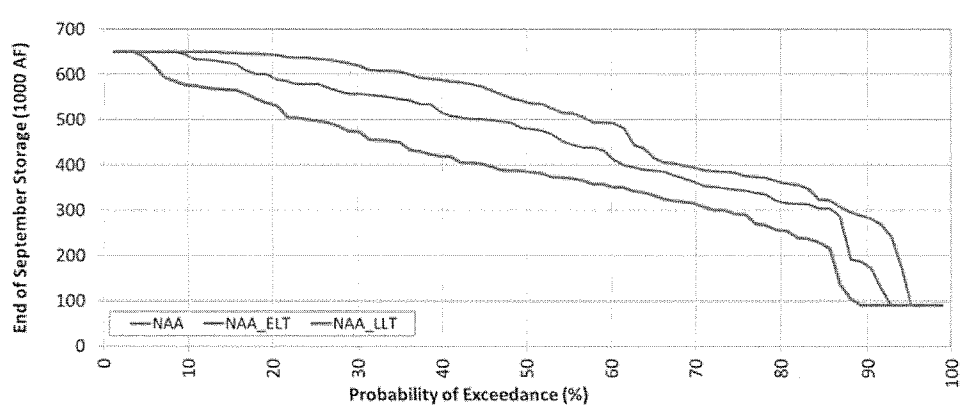
Figure 1 show wetter conditions in wet years and drier conditions in dry years when considering the four basins together. However, climate change in the American River Basin for the LLT shows drier conditions in all year-types. Additionally, a large percentage of the dry and critical year inflow reduction, 57 and 37 percent respectively, for the combined four basins occur in the American River Basin. By comparison, runoff from the American River at Folsom is approximately 20 percent of the sum of runoff of the Trinity, Sacramento, Feather, and American rivers.

Changes in Folsom inflow can affect American River operations in a variety of ways, such as changes in lower American River flows based on the June 2009 NMFS BO Action II.1 (American River Flow Management), availability of water to M&I purveyors in the American Region Basin, and flood control operations in Folsom Reservoir. Climate change is imposed on the American River Basin by adjusting Folsom inflow without adjustments to operations upstream from Folsom. Lower American River flow requirements are calculated and adjusted using several different indices that include forecasted inflow to Folsom, end-of-September storage in Folsom and upstream reservoirs, forecasted Folsom storage, and the Sacramento River Index. Water deliveries from Folsom are partially based on water supply in upstream reservoirs. Required flood reservation space in Folsom Reservoir is affected by storage in upstream reservoirs. Because Folsom Reservoir operation is affected by storage conditions upstream from Folsom, climate change must be applied to the entire American River basin to properly analyze conditions with climate change.

For Folsom and other upstream CVP and SWP reservoirs, the shift of in timing of inflows along with a continuing need to satisfy downstream environmental requirements and demands significantly affects carryover storage. Because of climate change's assumed effect on hydrology and the lack of CVP/SWP operational adaptations in the BDCP modeling, the CVP and SWP simply cannot satisfy water demands and regulatory criteria imposed on them in the NAA-ELT and NAA-LLT modeling scenarios. Figure 3 illustrates change in carryover storage in Folsom Reservoir. The relatively high frequency (approximately 10% of time) of minimum storage occurring at Folsom Reservoir leads us to question whether the NAAs reflect credible or defensible operations. The projected occurrences of low and dead storage conditions projected by the BDCP modeling result in severe reduction of flow available to sustain habitat in the Lower American River and severe reductions in water supply reliability.

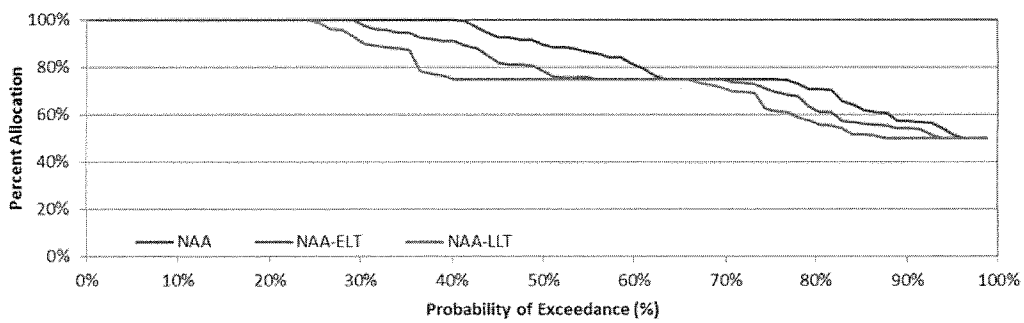
Figure 3. Folsom Reservoir Carryover Storage

	Year Type	NAA_ELT minus NAA	NAA_LLT minus NAA
Folsom	W	-42	-115
	AN	-54	-128
	BN	-58	-136
	D	-43	-112
	C	-43	-68
	All	-47	-113



Assumed effects of climate change and lack of adaptation reduces CVP water supply allocations to American River CVP Water Service Contractors. Figure 4 contains exceedance probability plots of CVP M&I allocations for the NAA, NAA-ELT, and NAA-LLT scenarios. Full allocations are made 40% of the time under the NAA, this is reduced to about 30% in the NAA-ELT, and full allocations are made about 25% of the time in the NAA-LLT. The occurrence of 50% allocation increases from about 4% in the NAA to about 7% in the NAA-ELT and to about 12% in the NAA-LLT. In addition to reduced water service contract allocations, water supply allocations under any right cannot be satisfied due to low storage levels in Folsom Reservoir and low flow in the Lower American River. It is not physically possible to divert water for M&I use from Folsom Reservoir when reservoir storage drops below about 100,000 acre-feet because, at that level, the M&I intake in the reservoir would be dry. In addition, flows in the lower American River below about 500 cfs make it impossible for the City of Sacramento to divert water at its Fairbairn diversion. The water-supply and other effects of these physical conditions occurring in the NAA scenarios are not identified or evaluated in the draft BDCP EIR/EIS.

Figure 4. CVP North of Delta M&I Water Service Contract Allocation



If climate change were to result in significant inflow changes, it is highly likely that certain underlying operating criteria such as instream flow requirements and flood control diagrams would also require changes. For example, the CVP and SWP are unlikely to draw reservoirs to dead pool as often as the NAAs depict. The NAA-ELT and NAA-LLT model scenarios show that, in 10% of years, Folsom Lake levels would drop to a "dead pool" condition where diversions to M&I use from the reservoir would not be physically possible. As a result, in this scenario, the modeling implies that American River M&I deliveries from the reservoir would be below what is needed for public health and safety in 10% of years. Additionally, low storage in Folsom would lead to water temperature conditions that would likely be detrimental for listed species and not achieve the temperature objectives in the June 2009 NMFS BO Action II.2 (Lower American River Temperature Management). In addition to affecting fishery habitat in the lower American River, increases in temperature cause problems with water treatment for urban water supplies. In short, the NAA-ELT and NAA-LLT do not provide reasonable underlying CVP and SWP operations on which to superimpose the BDCP and evaluate effects of Alternatives.

In the Reviewers' opinion, the CalSim II operations depicted in the NAA BDCP modeling that incorporate climate change do not represent a reasonably foreseeable future operation of the CVP and SWP. Although an argument is typically made that these NAAs will be used in a comparison analysis with Project Alternatives tiering from these NAAs, the Reviewers believe that the depicted NAA operations are so fundamentally flawed that there can be no confidence even in the comparative results. Therefore, results of the depicted operations are inappropriate as the foundation of technical analysis of a Project Alternative. As such, although the modeling approach may provide a relative comparison

between equal foundational operations, little confidence can be placed in the computed differences shown between the NAA and Project Alternative Scenarios.

Conclusions Regarding No Action Alternatives

BDCP No Action Alternatives include errors and omissions in American River demands and Fairbairn diversion limitations. However, the most significant issues with the NAAs are in operation of the CVP/SWP with climate change. The BDCP Model uses assumed future climate conditions that obscure the effects of implementing the BDCP. The future conditions assumed in the BDCP model include changes in precipitation, temperature, and sea level rise. The result of these assumptions is that BDCP's modeled changes in water project operations and subsequent environmental impacts are caused by undefined combinations and inter-relations of three different factors: (1) sea level rise; (2) climate change; and (3) implementation of the alternative that is being studied.

The inclusion of climate change, without adaptation measures, results in insufficient water needed to meet all regulatory objectives and user demands. For example, the BDCP Model results that include climate change indicate that during droughts, water in reservoirs is reduced to the minimum capacity possible. Reservoirs have not been operated like this in the past during extreme droughts and the current drought also provides evidence that adaptation measures are called for long in advanced to avoid draining the reservoirs. In this aspect, the BDCP Model simply does not reflect a real future condition. Foreseeable adaptations that the CVP and SWP could make in response to climate change include: (1) updating operational rules regarding water releases from reservoirs for flood protection; (2) during severe droughts, emergency drought declarations could call for mandatory conservation and changes in some regulatory criteria similar to what has been experienced in the current and previous droughts;[10] and (3) if droughts become more frequent, the CVP and SWP would likely revisit the rules by which they allocate water during shortages and operate more conservatively in wetter years. The modifications to CVP and SWP operations made during the winter and spring of 2014 in response to the drought supports the likelihood of future adaptations. The BDCP Model is, however, useful in that it reveals that difficult decisions must be made in response to climate change. But, in the absence of making those decisions, the BDCP Model results themselves are not informative, particularly during drought conditions. With future conditions projected to be so dire without the BDCP, the effects of the BDCP appear positive simply because it appears that conditions cannot get any worse (i.e., storage cannot be reduced below its minimum level). However, in reality, the future condition will not be as depicted in the BDCP Model. The Reviewers recommend that Reclamation and DWR develop more realistic operating rules for the hydrologic conditions expected over the next half-century and incorporate those operating rules into any CalSim II Model that includes climate change.

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

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[10] See www.waterboards.ca.gov/waterrights/water_issues/programs/drought/tucp.shtml for information concerning the SWRCB's urgency drought orders for CVP/SWP operations this year.

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 Tree discussed below); relocation of the Emmaton salinity standard; redefinition of the E/I ratio; 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.

For this analysis, the Reviewers analyzed the HOS (or H4) scenario because the BDCP[11] indicates the initial permit will include HOS operations that may be later modified at the conclusion of the targeted research studies. The HOS includes the existing fall X2 requirements but adds additional outflow

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[11] Draft BDCP, Chapter 3, Section 3.4.1.4.4

requirements in the spring. The model code was reviewed and discussed with DWR and Reclamation, who acknowledged that, although the SWP was bearing the majority of the responsibility for meeting the additional spring outflow in the modeling, the responsibility would need to be shared with the CVP under the CVP/SWP Coordinated Operations Agreement (COA)[12]. In subsequent discussions, DWR and Reclamation suggested the additional water for the HOS scenario may be purchased from other water users. However, the actual source of water for the additional outflow has not been defined. The actual source of the water will involve impacts that cannot be reflected in the modeling until the source is identified. While it is agreed that this is not how the projects would actually be operated, since the BDCP Model assumes that the SWP bears the majority of the responsibility for meeting the additional outflow, the Reviewers' analysis of the BDCP modeling results for HOS is limited to the evaluation of how the SWP reservoir releases on the Feather River translate into changes in Delta outflow and exports.

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

High Outflow Scenario (HOS or H4) Results

According to the Draft EIR/EIS[13], the HOS will reduce SWP south of Delta water deliveries for municipal and industrial (M&I) water users 7% below the level that they would receive without the BDCP (on average). During dry and critical years, SWP south of Delta water deliveries for M&I and agricultural water users will drop 17% below the level that they would receive without the BDCP. In other words, according to BDCP modeling, SWP contractors would get less water with BDCP than under the NAA.

The shared CVP and SWP obligation to provide flow to satisfy Delta outflow requirements is described in the COA. Because the CVP and SWP share responsibility for meeting required Delta outflow based on that specific sharing (rules under the COA), it is not reasonable to conclude that CVP water supplies would increase an average of 70 TAF while SWP water supplies decrease on average of 100 TAF under the HOS. These results, however, are what the BDCP modeling projects for the HOS-LLT scenario. The manner in which this alternative is modeled is inconsistent with existing agreements and operating criteria. If the increases in outflow were met based on COA, there would likely be reductions in Shasta and Folsom storage that would likely cause adverse environmental impacts, which have not been modeled or analyzed in the BDCP EIR/S.

Furthermore, there is no apparent source of water to satisfy the increased outflow requirements and pay back the COA debt that the CVP would incur if the SWP were used to meet HOS requirements. It appears, through recent public discussions regarding the High Outflow Scenario, that BDCP anticipates additional water to satisfy the increased Delta outflow requirement and to prevent the depletion of cold water pools will be acquired through water transfers from upstream water users. However, this approach is unrealistic. During most of the spring months, when BDCP proposes that Delta outflow be increased, agricultural water users are not irrigating. This means that there is not sufficient transfer

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[12] August 7, 2013 meeting with DWR, Reclamation, and CH2M HILL
[13] Draft EIR/EIS, Appendix 5A-C, Table C-13-20-2

water available to meet the increased Delta outflow requirements without releasing stored water from the reservoirs.

The overall effect of the HOS appears to be increases in Oroville releases to support both CVP and SWP exports in wetter years, with modest increases in Delta outflow. There is also a decrease in SWP reliability through large delivery reductions in drier years accompanied by Oroville storage increases. In addition to increases in dry and critical year storage in Oroville, total CVP dry and critical year carryover increases by 100 TAF and 380 TAF respectively with negligible reductions in wetter years types.

American River Changes with Proposed Project

The following section presents comparisons of model results and describes changes between the NAA-LLT and Alternative 4 H3 evaluated at LLT (referred to in this discussion as Alt 4-LLT) for key American River operations. These results focus on changes that directly impact American River water purveyors, flows, and temperatures in the American River downstream of Folsom Dam.

Based on a comparison of BDCP modeling of Alt4-LLT to NAA-LLT, there is a general trend for Folsom Reservoir to be drawn down more in Alt4-LLT during May and June and then remain lower until September. This change in storage is accompanied by increases in Lower American River flow in May and June and decreases from July through September. This shift in timing forms the basis of many concerns regarding impacts of BDCP on American River operations and environmental conditions.

BDCP modeling did not include a with-Project scenario without climate change. As a result of this omission it is impossible to clearly identify the effects of the Project separate from the effects of climate change.

Figure 5 is a comparison of simulated monthly Folsom Reservoir water surface elevations for the baseline and with-Project scenarios. A probability of exceedance chart for each month illustrates differences between the two model simulations and potential Project effects. Dashed horizontal lines indicate water surface elevations when groups of shutters on the intake device must be removed. For example, when the water surface elevation goes below approximately 430 feet, the first group of shutters must be removed. These lines are 30 feet above the top of shutter elevations for the three groups of shutters to account for water depth to prevent the formation of a vortex and cavitation at the intake which would prevent diversion.

Results presented in Figure 5 illustrate that Folsom Reservoir water surface elevation is lower under the with-Project scenario. The largest difference in Folsom elevation occurs from June through August and can affect temperature management by changing when shutters are removed. Shutters are removed from Folsom Dam's intakes in order to access colder water located lower in the reservoir. While removing shutters causes the temperature of water diverted and released from the reservoir to drop almost immediately, that effect does not cause release temperatures to remain cooler indefinitely. Accordingly shutters must be removed strategically.

The timing of shutter removal at Folsom Reservoir would change in the with-project condition. For example, in August the probability of all three shutters being in use is reduced from approximately 25 percent to 15 percent, and the probability of at least one shutter still in used is reduced from approximately 90 percent to 85 percent. Figure 6 is a comparison of simulated monthly Folsom

Reservoir storage for the baseline and with-Project scenarios. A probability of exceedance chart for each month illustrates differences between the two model simulations and potential Project effects. Dashed horizontal lines in Figure 6 represent storage levels below which M&I water purveyors cannot meet peak demands (322 TAF) with diversions from Folsom (illustrated for peak demand months only) or when M&I diversions are interrupted because water levels in Folsom are below the M&I intake (90 TAF). Results summarized in Figure 6 show that Folsom Reservoir storage is more likely to be lower under the BDCP Alt4-LLT than the NAA-LLT particularly in peak summer months. Lower storage impacts the ability of the water purveyors that divert directly from Folsom Reservoir, as well as downstream purveyors on the American River, to meet peak demands in the summer and increases the probability of M&I delivery interruptions.

Figure 5. NAA-LLT and Alt 4-LLT Simulated Folsom Reservoir Elevation

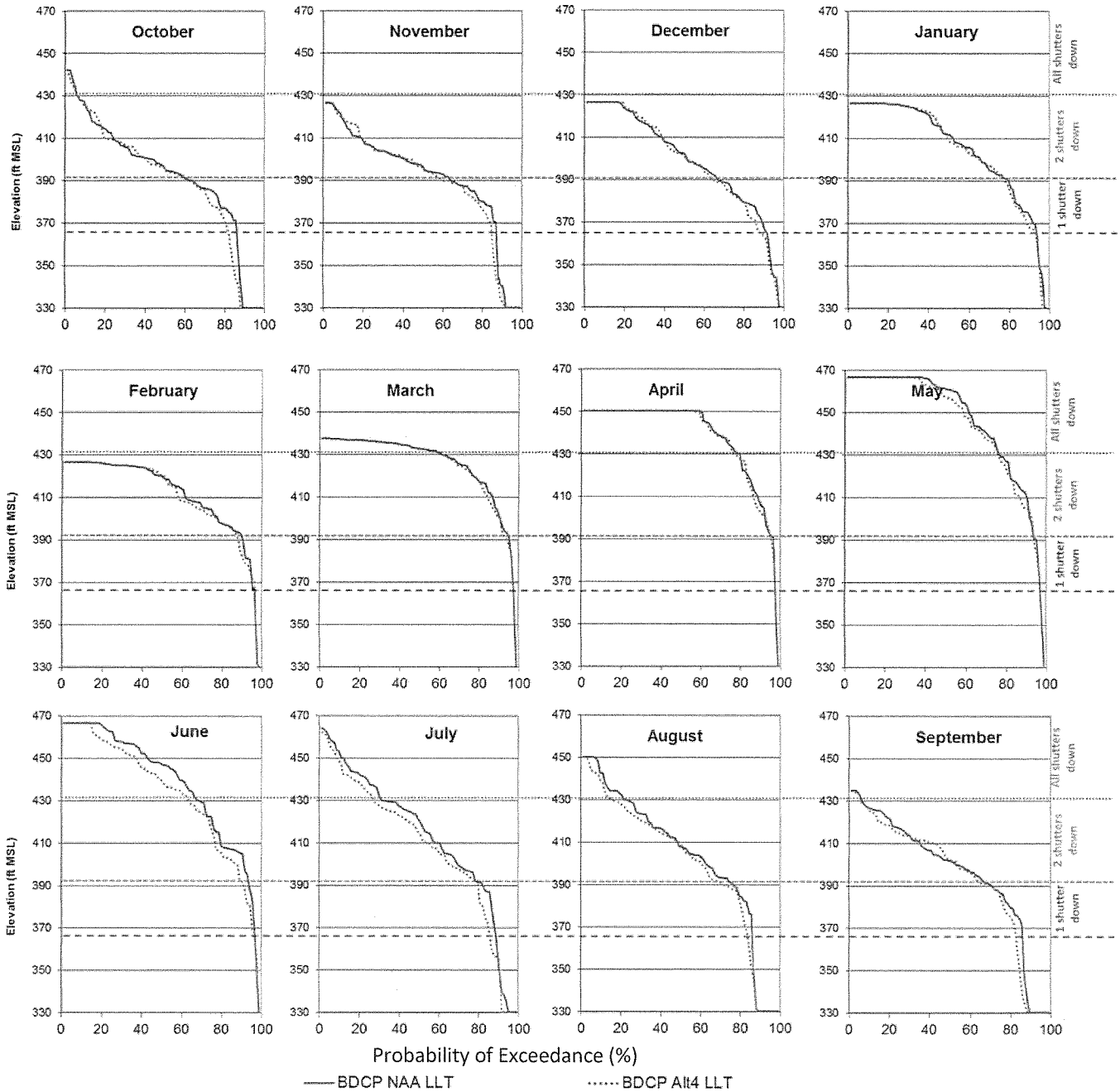

Figure 6. NAA-LLT and Alt 4-LLT Simulated Folsom Reservoir Storage

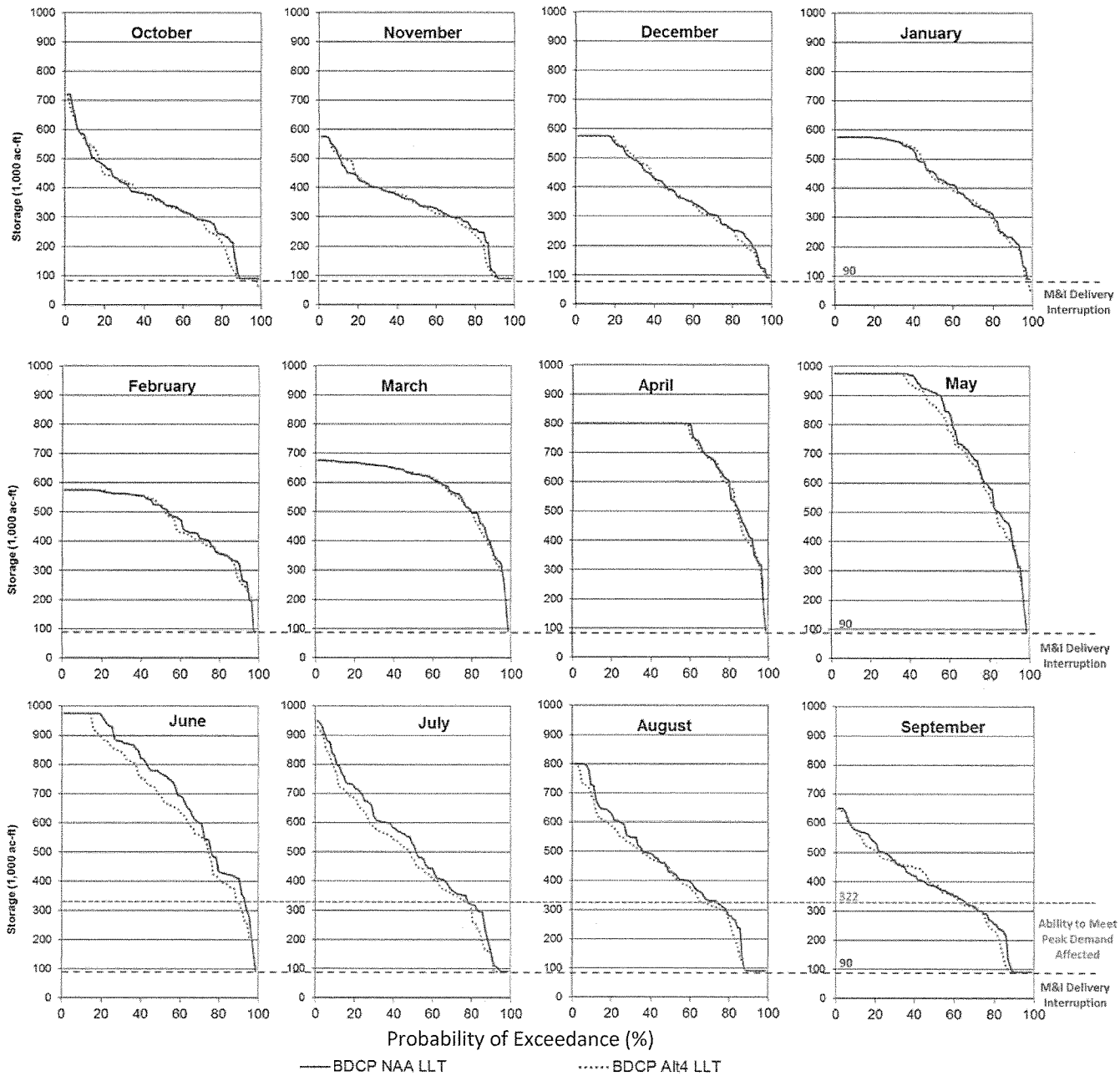

Figure 7 and Figure 8 contain comparisons of simulated monthly flow at Nimbus and H Street for the NAA-LLT and Alt4-LLT scenarios. Results show that under the Alt4-LLT American River flow is higher in the months of May and June, and lower in July, August, and September. Higher releases in May and June drive changes in Folsom storage and water surface elevation seen in previous figures. Likewise, lower releases from July through September bring simulated end-of-September storage between the baseline and with-Project scenarios closer. BDCP modeling shows a higher probability of Lower American River flows being above Hodge Flows in May and June and a higher probability of flows being below Hodge Flows in July, August, and September. When Nimbus releases are below Hodge Flows, diversion limitations under the City of Sacramento's American River water right permits for the Fairbarn Water Treatment Plant on the American River constrain the amount of water available to divert. The changes in American River flows will affect the location of the City of Sacramento's diversion, but this is not reflected in the BDCP modeling. There are also limitations on the City's Sacramento River diversion capability, which could interfere with any such shift in the location of diversions, and hence reduce the supply available to the City. This is not reflected in the BDCP modeling. In the Alt 4-LLT the City of Sacramento will be able to divert more water from the American River at Fairbairn during May and June and less during August and September.

Flow in the lower American River at H Street drops below 500 cfs in both the NAA-LLT and Alt4-LLT. This is critical for the City of Sacramento because their ability to divert water from the American River is affected when flow at H Street falls below 500 cfs due to the potential for pump cavitation. There are times when American River at H Street falls below 500 cfs more often in Alt 4-LLT than in the NAA-LLT. Water availability to the City of Sacramento, including under its settlement contract with Reclamation[14], would be curtailed or eliminated on the American River when water levels in Folsom Reservoir drop below to dead pool level of 90,000 AF.

Changes in Nimbus release under the Alt4-LLT would likely affect cold-water pool management and water temperatures downstream of Folsom Dam. Increased releases in May and June would reduce cold-water pool, lower reservoir water surface elevation, and require shutters to be removed earlier. Removing shutters earlier would drain Folsom Reservoir's limited cold-water pool more rapidly and potentially impact salmon and steelhead in the lower American River by resulting in warmer river temperatures. From July through September temperature management would be affected by the combination of a reduced cold-water pool and lower releases from Nimbus, i.e. lesser amounts of warmer water would be released and warm up quicker as it flows downstream.

The change in timing of release from Folsom Reservoir is caused in the Alt 4-LLT by BDCP using of different assumptions for balancing reservoirs upstream of the Delta with San Luis Reservoir in Alt 4-LLT relative to assumptions in the NAA. In other words, the BDCP operations triggered changes in the timing of Folsom Reservoir releases. These balancing rules attempt to move more water into San Luis Reservoir earlier in the year in the with-Project scenario. It is unclear why BDCP modeling changed these assumptions to simulate Project alternatives.

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[14] Operating Contract No.14-06-200-6497.

Figure 9 contains comparisons of simulated monthly flow in the Sacramento River at the confluence of the American River for the NAA-LLT and Alt4-LLT scenarios. When Sacramento River elevation falls below two feet above sea level (NGVD 1929) the City of Sacramento's intake structure capacity is reduced. Elevation 2.0 occurs when the flow rate is between approximately 5,000 cfs and 9,000 cfs and depends on tidal variation. Moreover, flow rates below 5,000 cfs may result in cavitation or vortexing, causing significant pump damage. Based on CalSim II modeling results, the frequency of the Sacramento River falling below 6,000 cfs is similar in the NAA-LLT and Alt4-LLT.

Figure 7. NAA-LLT and Alt 4-LLT Simulated Nimbus Release

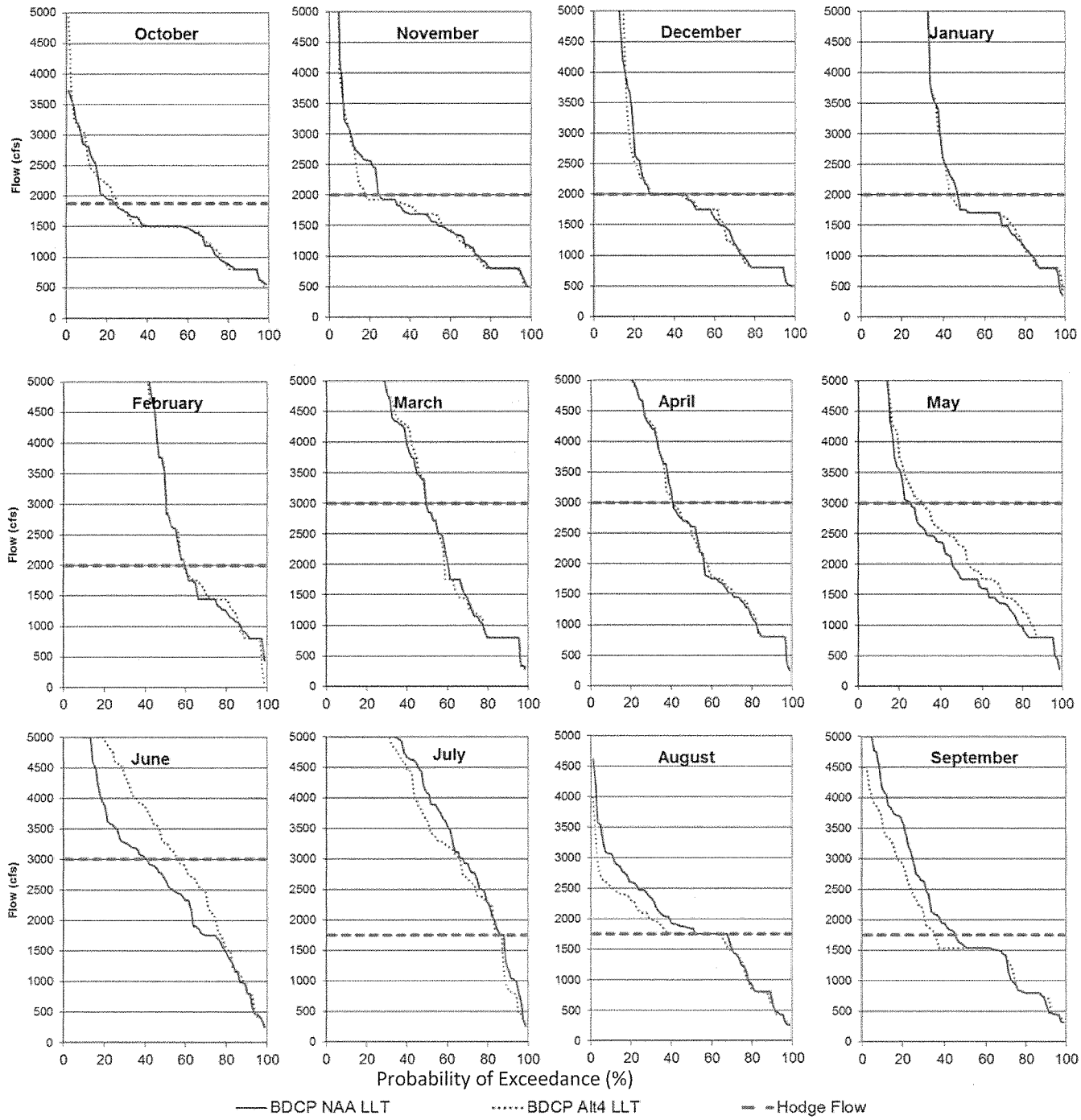


Figure 8. NAA-LLT and Alt 4-LLT Simulated H Street Flow

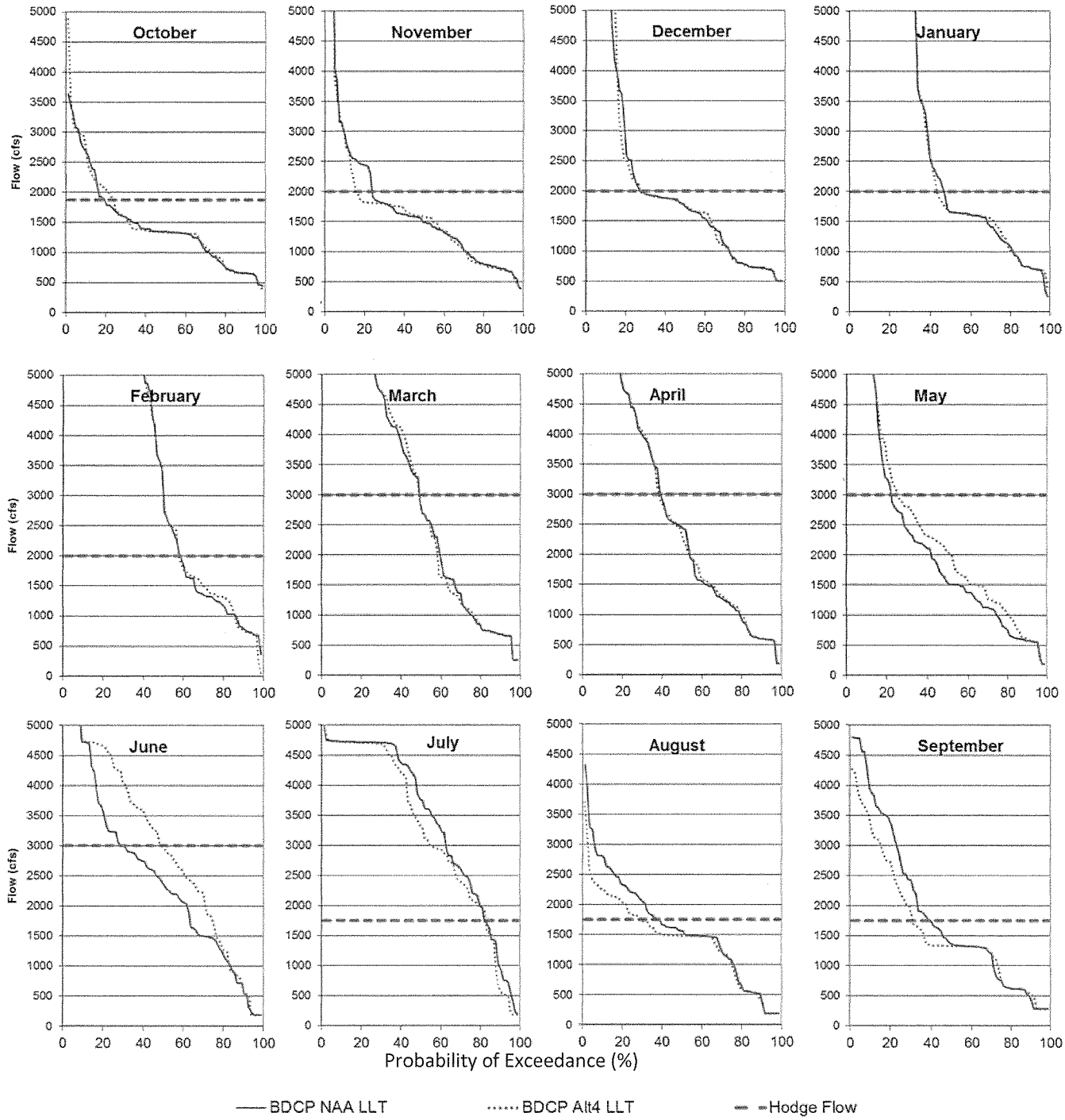


Figure 9. NAA-LLT and Alt 4-LLT Simulated Sacramento River Flow at the American River

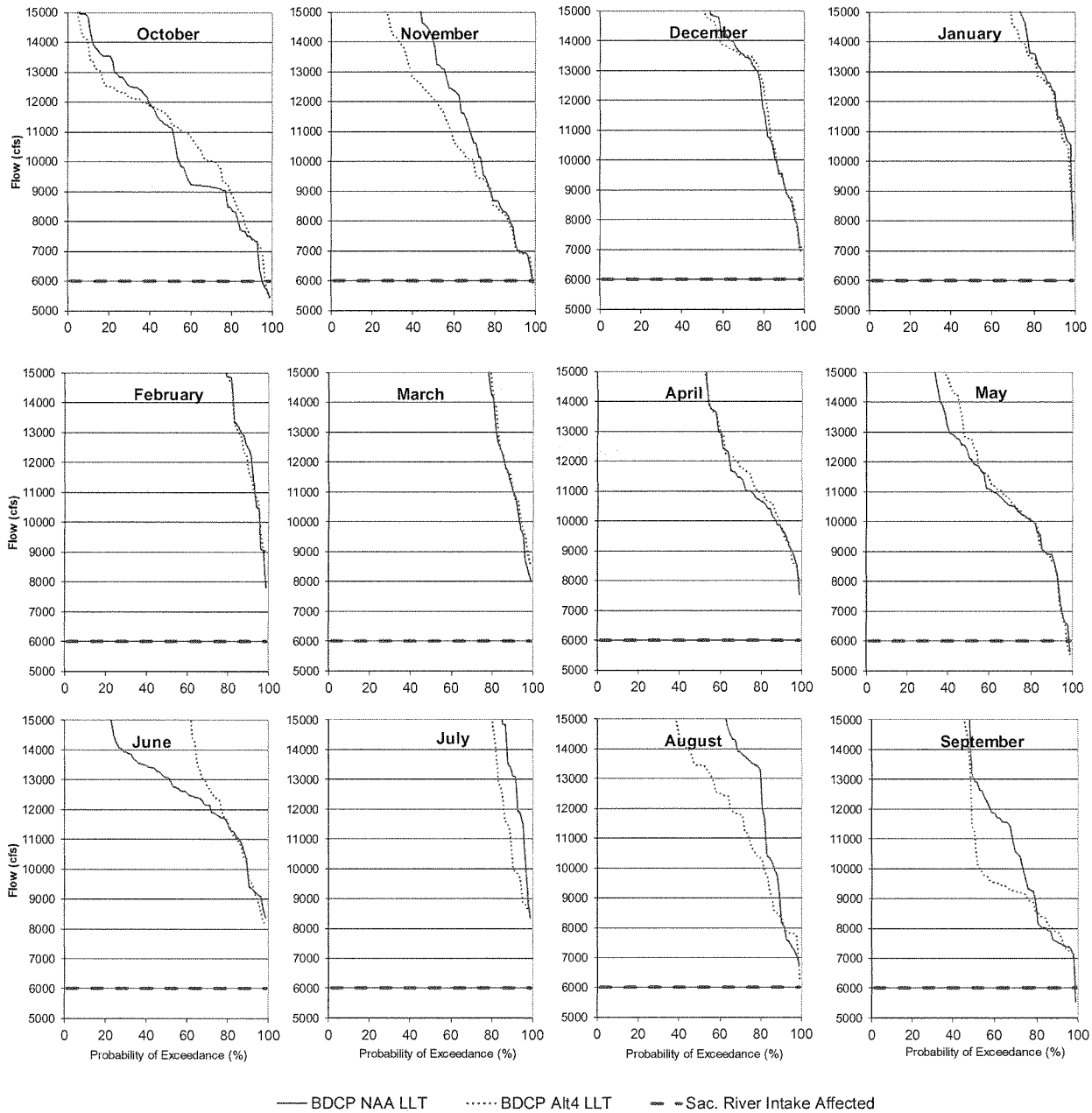
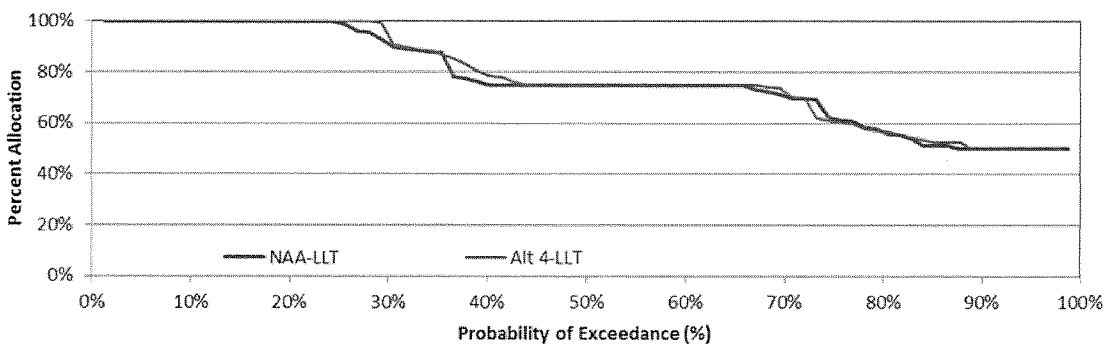


Figure 10 is an exceedance probability plot of CVP North of Delta M&I Water Service Contract Allocation for the NAA-LLT and Alt4-LLT. Changes in these allocations would affect the numerous CVP water-service contractors in the American River Basin, including the cities of Folsom and Roseville, Placer County Water Agency, SMUD and Sacramento County Water Agency. Average annual allocation to CVP M&I water service contractors is about 78% and increases by about one half of one percent in Alt 4-LLT compared to NAA-LLT. Although allocation never falls below 50%, deliveries are not always met due to low reservoir and river flows

Figure 10. CVP North of Delta M&I Water Service Contract Allocation



BDCP's "High Outflow Scenario" is not sufficiently defined for analysis.
The High Outflow Scenario (HOS) requires additional water (Delta outflow) during certain periods in the spring. The BDCP modeling places most of the responsibility for meeting this new additional outflow requirement on the SWP. However, the SWP may not actually be responsible for meeting this new additional outflow requirement. This is because COA would require a water allocation adjustment that would keep the SWP whole. Where one project (CVP or SWP) releases water to meet a regulatory requirement, the COA requires balancing to ensure the burden does not fall on only one of the projects. The BDCP modeling is misleading because it fails to adjust project operations, as required by the COA, to "pay back" the water "debt" to the SWP due to these additional Delta outflow requirements. Unless there is a significant revision to COA, the BDCP modeling overstates the impacts of increased Delta outflow on the SWP and understates the effects on the CVP, including Folsom Reservoir and the Lower American River.

Furthermore, based on the information made available from the BDCP environmental review process and after consulting with DWR and Reclamation project operators and managers, the Reviewers conclude that there is no apparent source of CVP or SWP water to satisfy both the increased Delta outflow requirements and pay back the COA "debt" to the SWP without substantially depleting upstream water storage. It appears, through recent public discussions regarding the High Outflow Scenario, that BDCP anticipates additional water to satisfy the increased Delta outflow requirement and to prevent the depletion of cold water pools will be acquired through water transfers from upstream water users. However, this approach may be unrealistic. During most of the spring, when BDCP proposes that Delta outflow be increased, agricultural water users, who are the only source of water in adequate volumes, are not irrigating. This means that they cannot transfer water during that time frame, and hence there is not sufficient transfer water available to meet the increased Delta outflow requirements without releasing stored water from the reservoirs. Releasing stored water to meet the increased Delta outflow requirements would deplete cold water pools and could potentially impact salmonids on the Sacramento and American River systems.

BDCP1511

Attachment B

Technical Memo

Effects of Implementation of the Bay Delta Conservation Plan

As Evaluated in the Draft Environmental Impact Report/Environmental Impact Statement

on

Central Valley Steelhead and Fall-run Chinook Salmon in the Lower American River

Prepared for Placer County Water Agency

Prepared by Cardno ENTRIX

July 2014

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1.0 INTRODUCTION

This technical memo provides an evaluation of the effects of implementation of the Bay Delta Conservation Plan (BDCP), as evaluated in the December 2013 Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS), on Central Valley (CV) steelhead (*Onchorhynchus mykiss*) (Federally Threatened, 71 Federal Register [FR] 834) and fall-run Chinook salmon (*O. tshawytscha*) (Federal Species of Concern, 69 FR 19975) in the Lower American River (LAR). The evaluation focuses on Folsom Reservoir operations and resulting physical habitat/temperature conditions for CV steelhead and Chinook salmon in the LAR.

The effects analysis in the Draft EIR/EIS is fundamentally flawed and fails to disclose significant adverse impacts on CV steelhead and fall-run Chinook salmon and their habitat in the LAR (critical CV steelhead and non-natal spring-run Chinook salmon critical habitat, 70 FR 52488, Sept. 2, 2005, and Essential Fish Habitat for Chinook salmon, 73 FR 60987, Oct. 15, 2008). If properly evaluated, the information provided in the Draft EIR/EIS would result in National Marine Fisheries Service (NMFS) issuing a jeopardy opinion under the Federal Endangered Species Act (ESA) for the BDCP effects on CV steelhead in the LAR based on the modeled Folsom Reservoir and LAR operations. Similarly, significant unmitigated impacts under California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) would exist for both CV steelhead and fall-run Chinook salmon in the LAR.

By failing to disclose impacts from implementation of the BDCP on anadromous fish in the LAR, the Draft EIR/EIS does not comply with CEQA (California Public Resources Code §21000 et seq.), or NEPA (42 U.S.C. 4321 et seq.). To comply with CEQA and NEPA, the underlying modeling assumptions, alternatives analysis, and impact analysis in the Draft EIR/EIS requires substantial modification such that re-circulation of the document is necessary.

The following discussion identifies adverse impacts to CV steelhead and fall-run Chinook salmon in the LAR under future operations of the Central Valley Project (CVP)/State Water Project (SWP).

2.0 ADVERSE IMPACTS TO CENTRAL VALLEY STEELHEAD AND FALL-RUN CHINOOK SALMON IN THE LOWER AMERICAN RIVER

The following identifies impacts to CV steelhead and fall-run Chinook salmon in the LAR under operations of the CVP/SWP, as modeled in the Draft EIR/EIS. The impacts are based on comparing modeled existing and future BDCP habitat and water temperature conditions. The discussion first describes the LAR setting, summarizes the current status of CV steelhead and fall-run Chinook salmon, describes key life history information and temperature requirements, reviews existing habitat conditions in the LAR (including key environmental stressors), and discusses the BDCP temperature significance criteria in the Draft EIR/EIS. The discussion then characterizes habitat conditions in the LAR under future BDCP operations of the CVP/SWP compared to existing conditions and identifies the resulting adverse impacts to CV steelhead and fall-run Chinook salmon.

2.1. Lower American River Setting

The American River is a major tributary to the Sacramento River. Historically, it provided over 125 miles of anadromous salmonid habitat (CV steelhead, Chinook salmon). The majority of the historical spawning and rearing habitat existed upstream of present-day Nimbus and Folsom dams (NMFS 2009; Yoshiyama et al. 2001). Since 1955, after construction of Folsom and Nimbus dams, use of the American River by anadromous fish has been limited to the lowest 22.5 miles of river downstream of Nimbus Dam (LAR). The Nimbus Fish Hatchery was built immediately downstream of Nimbus Dam in 1955 to mitigate for lost anadromous fish habitat due to construction of the Folsom-Nimbus Project (the adjacent American River Trout Hatchery was constructed in 1968 to rear resident salmonids).

Historically, summer and early fall habitat conditions in the LAR were relatively unsuitable for cold water salmonids due to naturally low flows and high water temperatures in the summer – fall (as high as 75-80°F) (Gerstung 1971). The Folsom-Nimbus Project modified the hydrology of the LAR. Currently, winter/spring flows in the LAR are much lower than historical flows and summer – fall flows are much higher (NMFS 2009). Folsom Reservoir provides a source of summer cold water for the LAR from the hypolimnion of the reservoir. However, the LAR is on the Central Valley floor at an elevation of approximately 100 feet (ft) above sea level. Summer and early fall air temperatures are very warm, with peak daily temperatures frequently above 100°F. Under existing conditions, water temperature in the LAR is colder in the summer – early fall, but warmer in the late-fall – winter than historical water temperatures (Reclamation 2008; NMFS 2009).

Extensive effort has been made to provide and maintain water temperatures in the LAR suitable for the remaining CV steelhead and fall-run Chinook salmon habitat and the two cold water fish hatcheries. Most of the cold water rearing and spawning habitat in the LAR occurs in the upper 13-mile portion (Nimbus Dam downstream to Watt Avenue [River Mile (RM) 9.4]), because the downstream portion of the river is generally too warm, in spite of, the cold hypolimnetic releases from Folsom Reservoir. Selective withdrawal shutters have been installed on the three powerhouse intakes and the municipal water intake at Folsom Dam to provide cold water management capability for the LAR. Detailed temperature modeling and reservoir operations scheduling are performed each year to obtain the best summer temperature conditions for CV steelhead, fall temperature conditions for fall-run Chinook salmon, and summer/fall temperature conditions for the hatcheries.

Water temperature management of the LAR is challenging and water temperatures are impaired for cold water fish under existing conditions, particularly in drier/low storage years due to high summer/fall temperatures (NMFS 2009; Reclamation 2008; Water Forum 2005; CDFW 2001). In addition to management for LAR water temperature (salmonid species and the fish hatcheries), Folsom Reservoir storage is also managed to meet Delta water quality objectives and deliveries to municipal and industrial (M&I) and agricultural water users. LAR water temperature is severely constrained by the limited amount of storage available in Folsom Reservoir. The amount of cold water pool available for release to the LAR is directly related to

the amount of storage in the reservoir at the beginning of the summer when reservoir stratification occurs. In drier years and/or when the storage in Folsom Reservoir is drawn down heavily to meet downstream demands (e.g., Delta water quality requirements, water exports, etc.), the cold water pool is not large enough to provide sufficient cold water releases for CV steelhead juvenile rearing (June – September), fall-run Chinook salmon spawning (October – December), and summer/fall hatchery operations. Water temperature management for both CV steelhead and fall-run Chinook salmon, particularly in low Folsom storage years, requires tradeoffs between releasing cool water in the summer for CV steelhead rearing or saving some cool water until the fall for fall-run Chinook spawning/incubation.

The Nimbus and American River fish hatcheries at the top of the LAR reach obtain their 20-60 cubic feet per second (cfs) water supply from the Nimbus Dam. Water temperatures are typically within the suitable range for Chinook salmon and CV steelhead, except in the summer – fall. When water temperatures exceed 60°F, fish are treated with chemicals to prevent disease. As temperatures continue to increase, treatment becomes difficult and water temperatures become increasingly dangerous to fish. Hatchery personnel and Reclamation routinely meet to determine a compromise for operations of Folsom Dam to release cooler water. If water temperatures exceed 70°F, the fish may have to be released or moved to another hatchery (Reclamation 2008). In an unprecedented operation this year, 2014, due to anticipated warm water temperatures, California Department of Fish and Wildlife (CDFW) determined in June that it was necessary to release all CV steelhead juveniles early from the Nimbus Fish Hatchery (released at a small size and much lower survival potential) and moved all trout from the American River Trout Hatchery rather than risk potential mortality to fish due to warm summer water temperatures.

Reclamation is required each year to prepare a draft Operations Forecast and Temperature Management Plan for Folsom Reservoir and the LAR and submit it to NMFS for review by May 1 and a final plan by May 15. The plan can be updated, but requires NMFS approval for deviations. The NMFS biological opinion temperature requirement is 65°F (daily average) in the LAR at Watt Avenue from May 15 through October 31 for CV juvenile steelhead rearing. If this temperature is exceeded for three consecutive days, or is exceeded by more than 3°F for a single day, Reclamation is required to notify NMFS in writing and convene the American River Group (ARG) to make recommendations regarding potential cold water management alternatives to improve water temperature, including potential power bypasses. If the May Operations Forecast and Temperature Management Plan identifies that Reclamation cannot meet the 65°F NMFS requirement because of insufficient cold water pool in the reservoir, after taking all actions within its authority, then the target daily average water temperature schedule[1] at Watt Avenue may be increased incrementally (i.e., no more than 1°F every 12 hours) to as high as 68°F. The priority for use of the temperature control shutters at Folsom Dam is to achieve the water temperature requirement for CV steelhead and, thereafter, may also be used to provide cold water for fall-run Chinook salmon spawning (RPA Action II.1, NMFS 2011).

[1] Automated temperature selection procedure schedules are identified in the LAR Flow Management Standard.

2.2. Status of Central Valley Steelhead

CV steelhead have been extirpated from most of their historical range and their numbers are a fraction of their historical abundance due to blockage of freshwater habitats (e.g., dams), habitat degradation/destruction, water allocation, and possibly genetic introgression with hatchery fish. It has been estimated that CV steelhead habitat has been reduced from 6,000 miles historically to 300 miles currently. In 1996, NMFS estimated that fewer than 10,000 CV steelhead existed throughout its present-day range (from a combination of dam counts, hatchery returns, and spawning surveys).

CV steelhead were listed as threatened in 1998 (reaffirmed in 2006), including naturally spawned CV steelhead in the American River. The Nimbus Fish Hatchery population in the American River was not listed because it was originally derived from out of basin fish, however, recent genetic information suggests that the status of the Nimbus Fish Hatchery population should be reconsidered (NMFS 2011). Critical CV steelhead habitat was designated in 2005, including all of the American River below Nimbus Dam.

One of the primary goals of the CV steelhead recovery plan (NMFS 2009) is to secure and improve all extant populations. In the American River, the extant CV steelhead population is confined to the LAR; however, 100% of the historical spawning habitat (located upstream of Nimbus Dam) is no longer accessible. Only a few hundred fish currently spawn naturally in the LAR (NMFS 2009). A relatively small percentage of CV steelhead redds are from natural spawned fish (i.e., non-hatchery fish without adipose clips) (Hannon and Deason 2008). In 2014, 112 CV steelhead redds were observed in the LAR (American River Group, Meeting Notes April 17, 2014). Currently, rearing and spawning habitat primarily exists in the upper 13 miles of the LAR. Ninety percent of spawning occurs above Watt Avenue (RM 9.4) (Hannon and Deason 2008). CV steelhead rearing habitat during the summer is particularly limited in the LAR due to warm summer water temperature (see below) and most juvenile rearing, similar to spawning habitat, occurs upstream of Watt Avenue.

Nimbus Fish Hatchery currently produces about 430,000 steelhead annually. The hatchery steelhead population is operated as a "segregated population" to mitigate for recreational fishery losses from the dam and is not used to enhance natural CV steelhead. The hatchery is operated to the extent possible to minimize effects on the limited natural population (California HSRG 2012).

2.3. Status of Fall-Run Chinook Salmon

Four seasonal runs of Chinook salmon occur in the Sacramento-San Joaquin River system. The runs are named after the upstream migration season – winter, spring, fall, and late-fall. Central Valley fall/late fall-run Chinook salmon were lumped together and jointly classified as a Federal Species of Concern in 2004. These two runs are separate runs, however, with the late-fall run occurring primarily only in the Sacramento River (Moyle et al. 2008), whereas, fall-run Chinook salmon occur throughout the Central Valley. Fall-run Chinook salmon are the only Chinook salmon run extant in the American River. Spring-run Chinook (listed as threatened 1996) were

extirpated from the American River historically and it is uncertain whether or not a late fall-run existed in the American River (Yoshiyama et al. 2001). Approximately 70% of the historical spawning habitat used by Chinook salmon in the American River was blocked by the Folsom-Nimbus Project.

CV fall-run Chinook salmon are currently and were historically the most abundant Chinook salmon run in the Central Valley (Moyle 2002; Williamson 2006). Since the 1950's escapement has been relatively robust with various cycles of years with low escapement of <100,000 fish (e.g., 1990 and 2007-2009) and years with high escapement >400,000 fish (e.g., 1999-2005 and 2013). The CV fall-run Chinook salmon in the LAR have similar abundance cycles to those of the larger population in the Central Valley. On average 17% of the total Central Valley escapement (48,000 fish) occurs in the LAR and, on average, 75% of the LAR escapement occurs in-river and 25% enters Nimbus Fish Hatchery (CDFW GrandTab data, 1952-2013).

Similar to CV steelhead, the majority of CV fall-run Chinook salmon spawning occurs in the upper portion of the LAR. Both spawning gravels and suitable fall water temperature (<58 to 60°F) are most prevalent above Watt Avenue. Warm water temperature in the fall delays spawning and affects adult mortality and in-vivo egg mortality. For example, in 2001 due to warm fall water temperature, a large portion of fall-run Chinook salmon died before spawning (Water Forum 2005).

Nimbus Fish Hatchery currently produces about 4 million Chinook salmon annually. The hatchery production helps fulfill mitigation requirements for construction of the Folsom-Nimbus Project. However, hatchery production and release of fish in the Carquinez Straits (in the estuary) has been implicated as part of the cause of lack of genetic structure and prevalence of straying in CV fall-run Chinook salmon (California HSRG 2012).

2.4. Key Life History Information and Temperature Requirements

Adult CV steelhead generally migrate from the ocean from August through April and spawn from December through April, with a peak in the LAR from February to early March (Hannon and Deason 2008; OCAP pg 104). Egg incubation occurs between December and May. Most juvenile fish emigrate as fry or rear for approximately a year (through one summer) before emigrating. Emigration typically occurs January through June (SWRI 2001; Sogard et al. 2012). In the LAR, water temperature in the summer is the primary CV steelhead stressor. Marginally acceptable CV steelhead rearing water temperature for short duration (e.g., weeks) is <70°F, with an upper long-term tolerance temperature of approximately 68°F. The upper range of optimal rearing temperature is 65°F (e.g., Cech and Myrick 1999; Bratovich et al. 2011).

Adult fall-run Chinook salmon generally migrate from the ocean in late summer, with migration peaking mid-October through November. Spawning in the LAR occurs between October and December (peak spawning in November). Fry emergence usually begins in mid- to late-January, with peak emergence usually mid- to late-February. Juvenile emigration occurs after emergence from January through June (e.g., SWRI 2001). In the LAR, water temperature in the fall is a primary factor affecting migrating/spawning fall-run Chinook salmon. Spawning does

not occur until temperatures are <58-60°F and delayed spawning and warm temperatures can result in adult and in-vivo egg mortality. Acceptable Chinook salmon spawning/incubation water temperature is <58°F (e.g., USFWS 1999; NMFS 2002; Reclamation 2008; Bratovich et al. 2011).

2.5. Existing Habitat Conditions

There are a number of potential environmental stressors for CV steelhead and fall-run Chinook salmon, however, the key environmental stressor in the LAR under existing conditions (and future conditions) is water temperature in drier years with low Folsom Reservoir storage. Water temperature in the summer (CV steelhead rearing) and fall (Chinook salmon spawning) currently exceeds threshold tolerances for critical life stages in drier years (Figure 1). Frequently, only the upper portion of the river provides suitable water temperatures for CV steelhead and Chinook salmon (Figures 2 and 3).

Over the 1922-2003 period of record analyzed in the effects analysis in the Draft EIR/EIS, water temperature at Watt Avenue in August under modeled existing conditions is 69-71°F; at the upper end of the acceptable range for CV steelhead rearing (Figures 4a and b). In drier years, daily measured water temperatures have reached 75°F at Watt Avenue in the summer (Reclamation 2008) (Figures 1 and 2). Water temperature at Watt Avenue in November under modeled existing conditions is 56-57°F (Figures 4a and b), at the upper end of the suitable range for Chinook salmon spawning temperatures.

The primary factor that is responsible for warm water temperature in the LAR is the limited storage/cold water pool in Folsom Reservoir in drier years. Any CVP/SWP operations (or BDCP operations) that reduce storage in drier years for whatever reason (sea level rise, climate change, Delta water quality standards, exports, etc.) directly and negatively impact water temperature conditions for CV steelhead and Chinook salmon in the LAR.

2.6. Habitat Conditions under BDCP Future Conditions

The Draft EIR/EIS attempts to use the NAA as the baseline for the analysis. Below we show that the NAA is a radical departure from existing habitat conditions and has large, significant, unmitigated impacts on anadromous fish in the LAR compared to existing conditions. The NAA would likely cause age class failures in drier years and eventual local extinction of the small natural rearing CV steelhead population in the LAR. The NAA would result in large scale fall-run Chinook salmon fish kills in the fall of the drier years.

The operation of the CVP/SWP as modeled in the NAA with the sea level rise, climate change, and future demand assumptions results in much lower Folsom Reservoir storage elevations compared to existing conditions (Figures 5a and b) and greatly increased LAR water temperature. The frequency of Folsom Reservoir being at low storage levels (e.g., <350 thousand acre-feet [TAF]) would increase substantially in July and August under the NAA compared to existing conditions (increases from about 10% of the time under existing conditions to about 30% of the time under the NAA) (Figure 5a). In critical years, mean monthly

Folsom Reservoir storage would be 119 TAF, 105 TAF, and 81 TAF lower in July, August, and September, respectively, than under existing conditions (down to 210 TAF, 165 TAF, and 159 TAF, respectively, under the NAA). Mean monthly storage in drier years would drop to less than 350 TAF in August and September under the NAA (>440 TAF under existing conditions) (Figure 5b). Further, the frequency of which Folsom Reservoir would be drained to dead pool storage would increase by about 10% (DWR et al. 2013; p. 5-61). This would result in greatly increased water temperatures in the LAR.

Higher American River summer temperature schedules occur when Folsom Reservoir storage drops, particularly as storage falls below 350 TAF in July. Figure 6 shows a relationship between the Folsom Reservoir storage in July and LAR water temperature schedules[2]. Figure 7 shows relatively large increases in fall water temperature below Nimbus Dam at low Folsom Reservoir water levels as reported in the BDCP EIR/EIS (and the associated Folsom Reservoir storage) under the NAA operations. These changes are most pronounced in drier years.

The marginally acceptable CV steelhead rearing water temperature is <70°F, with an upper long-term tolerance temperature of approximately 68°F (see above). Under the NAA, LAR water temperature increases during summer rearing would have a significant adverse impact on CV steelhead (Figures 4a and b). Mean monthly summer (August) water temperatures increase from the modeled existing condition of 69-71°F to 73-77°F (average and critical water years) under the NAA (Figures 4a and b). Over the 1922-2003 period of record, mean monthly water temperatures at Watt Avenue reach 70°F in 9% more of the July months, 13% more of the August months (90% of all August months), and 34% more of the September months (60% of all September months) under the NAA compared to existing conditions. The assumed CVP/SWP operations in the NAA would significantly impact CV steelhead and would result in take of CV steelhead in the LAR. More significantly, entire year classes of CV steelhead juveniles would be lost and, most likely, a complete loss of the LAR naturally spawning CV steelhead population would occur.

In the critically dry years, for example, average monthly August water temperatures under NAA (and the Proposed Action Alternative) for the entire LAR are ≥76°F (DWR et al. 2013; Appendix 11C). This would kill all over-summering juvenile CV steelhead. Critically dry years occur 15% of the time. Often critically dry years are sequenced back-to-back (e.g., 1976-1977) and sequenced with multiple dry years. Dry years (22% of the years) have entire LAR August water temperatures ≥72°F. Large scale mortality would occur in these years. It is easy to conceive of a sequence of years under NAA (and the Proposed Project) where the naturally occurring CV steelhead population sequential year mortality coupled with the current low abundance would result in the loss of the natural population. The historic sequence of years from 1987 to 1991 (dry, critically dry, dry, critically dry, critically dry, respectively) (DWR et al 2013; Section 5.5) would result in the loss of the LAR CV steelhead population.

Similarly, projected changes in water temperature under the NAA would have large adverse impacts on Chinook salmon spawning in the LAR. Mean monthly fall water temperature

[2] Automated temperature selection procedure schedules are identified in the LAR Flow Management Standard.

(November) in the LAR would increase from existing conditions (modeling) of 56-57°F to 60°F under the NAA. Acceptable Chinook salmon spawning/incubation water temperature is <58°F (see above). These assumed operations in the NAA would result in significant adverse impacts to Chinook salmon in the LAR (Figures 4a and b). Likely large fish kills of pre-spawning fall-run Chinook salmon would occur due to the extreme delays in spawning similar to pre-spawn mortality that happened in 2001 (Water Forum 2005). Monthly average November water temperatures in the NAA (and Proposed Action Alternative) are 3-4°F higher than the existing conditions that have caused mortality.

2.7. BDCP Temperature Significance Criteria

Under current CVP/SWP operations, LAR water temperatures exceed threshold tolerances for anadromous fish during critical life stages (as discussed in the preceding sections). Because the populations are already in stressful temperature conditions, even small increases in water temperature above the current CVP/SWP operations would result in adverse impacts to these species. The BDCP significance criterion do not consider the current condition of the sensitive species and habitat with respect to water temperature in the LAR. For example, significant impacts in the BDCP EIR/EIS were determined as follows:

> *"Physical modeling outputs each month and water year type were compared for between model scenarios at multiple locations to determine whether there were differences between scenarios at each location. A "difference" was defined as a >5% difference between the pair of model scenarios in at least one water year type in at least 1 month."* (DWR et al. 2013, p. 11-102).

The significance criteria in the Draft EIR/EIS are inadequate and incapable of identifying significant impacts. A <5% increase in mean monthly water temperature in the summer months (July-September) during CV steelhead rearing and/or in the fall during fall-run Chinook salmon spawning (primarily in November) would result in significant adverse impacts to these species. For example, a <5% water temperature change with existing summer temperatures at 68°F results in an increase of approximately 3.4°F, which would result in temperatures of approximately 71.4°F, well above the long-term upper tolerance limit for steelhead juvenile rearing (e.g., Cech and Myrick 1999; Bratovich et al. 2011). Similarly, a <5% temperature change in the existing fall-run Chinook salmon spawning temperature at 60°F results in an increase of approximately 3.0°F, which would result in temperatures of approximately 63.0°F, well above the spawning threshold and mortality water temperature threshold for incubating eggs (e.g., USFWS 1999; NMFS 2002; Reclamation 2008; Bratovich et al. 2011). Figures 4a and b shows the modeled 1922-2003 average monthly water temperatures. Under existing conditions, water temperatures are below 68°F in July and September, except in Critical years, and between 60-70°F in August of all water year types, except Critical years. Although the temperature significance criteria were not exceeded in the BDCP EIS/EIR analysis, water temperatures under the No Action Alternative (NAA) and Proposed Action Alternative are above the threshold criteria for CV steelhead and Chinook salmon survival, particularly in the drier years (>74°F in late summer months), and greatly exceed existing conditions.

3.0 CONCLUSION

The fatal flaw in the Draft EIR/EIS impact analysis is that under the NAA (which includes sea level rise, climate change, and future demand), the modeled CVP/SWP operations resulted in significant adverse effects to upstream resources, including CV steelhead and fall-run Chinook salmon in the LAR relative to the existing conditions (environment). These modeled operations are not reasonable or a proxy for future operations that would be allowed under the ESA.

The Draft EIR/EIS acknowledges that the CVP/SWP operations would need to change from those depicted. For example, on page 5-61 in DWR et al. (2013), the Draft EIR/EIS discusses operational changes that may need to occur to avoid dead pool conditions:

> *"Adaption measures would need to be implemented on upstream operations to manage coldwater pool storage levels under future sea level rise and climate change conditions. As described in the methods section, model results when storages are at or near dead pool may not be representative of actual future conditions because changes in assumed operations may be implemented to avoid these conditions."* (DWR et al. 2013; p. 5-61)

Further, the Draft EIR/EIS clearly states that future CVP/SWP operations would be different than the operations used for evaluating impacts of the BDCP:

> *"The CALSIM II simulations do not consider future climate change adaptation which may manage the SWP and CVP system in a different manner than today to reduce climate impacts. For example, future changes in reservoir flood control reservation to better accommodate a seasonally changing hydrograph may be considered under future programs, but are not considered under the BDCP. Thus, the CALSIM II BDCP results represent the risks to operations, water users, and the environment in the absence of dynamic adaptation for climate change."* (DWR et al. 2013; pg. 5A.A23)

The modeling developed for the Draft EIR/EIS, by their own admission, failed to address climate change and sea level rise in a manner that is reasonable, prudent, or representative of future hydrologic conditions in the upstream systems, including Folsom operations and resulting hydrology in the LAR. The Folsom operations in the NAA would jeopardize the continued existence of CV steelhead and fall-run Chinook salmon in the LAR. By comparing the environmental conditions in the Existing Condition and NAA, it is apparent that future CVP/SWP operations under climate change and sea level rise, as modeled, are unrealistic. Therefore, a revised operations model must be developed under the NAA that addresses climate change and sea level in a manner that is protective of upstream resources, including CV steelhead and Chinook salmon in the LAR.

The conclusions in the Draft EIR/EIS impact analysis are invalid because they are based on modeling that is not representative of future conditions and do not incorporate climate change adaptations in the CVP/SWP operations. The impact analysis was based on comparison of the NAA to Project alternatives under modeled operations that in all cases result in significant impacts to CV steelhead and Chinook salmon in the LAR compared to the existing condition. The fundamental error in the impact analysis is that it totally ignores these impacts. The analysis assumes that conditions in the NAA are representative of future conditions and compounds this error by modeling the Project alternatives using the same faulty operations. It

is not surprising that the impact analysis concluded that there would be no significant impacts to CV steelhead and fall-run Chinook salmon in the LAR – the environmental conditions under the NAA have already jeopardized the continued existence of the species. The conclusions in the alternatives analysis do not disclose impacts of the Project as required under NEPA and CEQA. It is solely the responsibility of the lead agency to ensure that the basis for comparison in the impact analysis is reasonable and an accurate representation of future conditions. Basing the impact analysis on unrealistic modeling for the CVP/SWP and ignoring the associated adverse effects on CV steelhead and fall-run Chinook salmon in the LAR fails to inform the public of the BDCP's probable environmental impacts.

Further, the impact analysis fails to disclose the impacts of the Project because it co-mingles the effects of climate change, sea level rise, future demand, and implementation of the Project. In the analysis, the Draft EIR/EIS concludes:

> *"These results are primarily caused by four factors: differences in sea level rise, differences in climate change, future water demands, and implementation of the alternative. The analysis described above comparing Existing Conditions to Alternative 1A* [used for Alternative 4 as well] *does not partition the effect of implementation of the alternative from those of sea level rise, climate change and future water demands using the model simulation results presented in this chapter."* (DWR et al. 2013; pp. 11-405; 11-411; 11-445; 11-455; 11-518).

Therefore, the Draft EIR/EIS is inadequate and does not provide sufficient information to evaluate Project effects on CV steelhead and fall-run Chinook salmon in the LAR. To comply with NEPA and CEQA, the impacts analysis must be revised to disclose project impacts.

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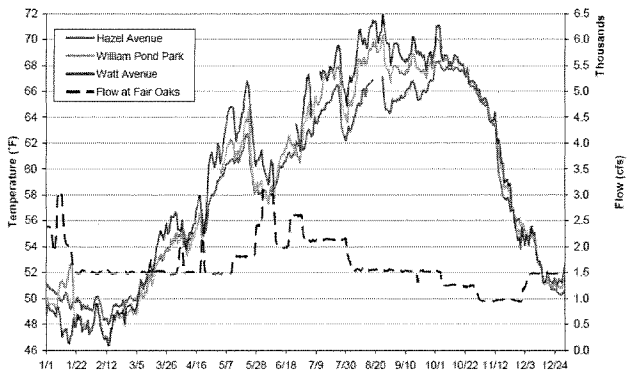
FIGURES

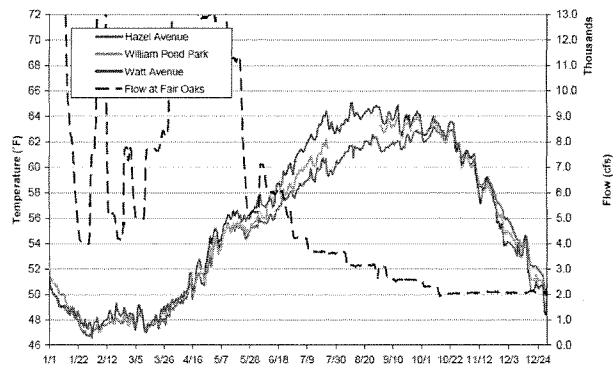
BDCP1511

Figure 1. American River Water Temperature and Flow at Monitoring Sites on the Lower American River in Dry and Wet Years.

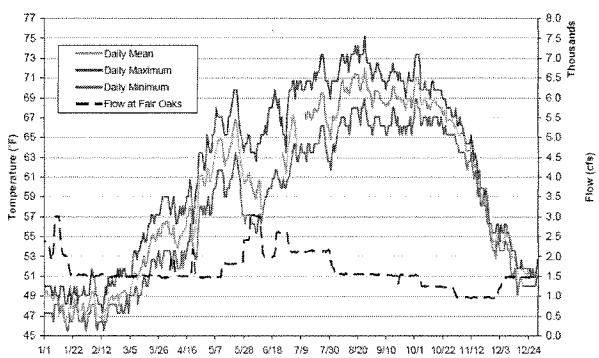
Dry year, measured daily average water temperatures (2001).



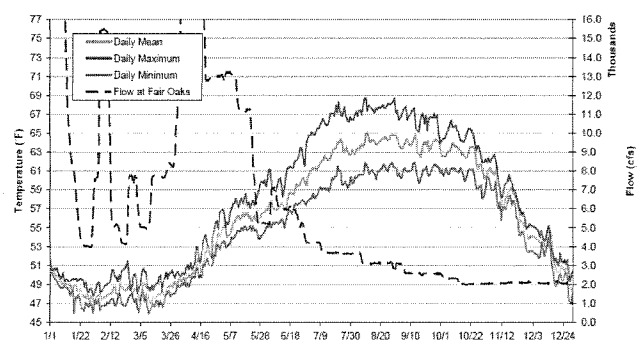
Wet year, measured daily average water temperatures (2006).



American River at Watt Avenue, Dry year, daily average minimum and maximum water temperatures (2001).



American River at Watt Avenue, Wet year, daily average minimum and maximum water temperatures (2006).



Source: Figures 11-16 to 11-19 in Reclamation 2008.

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Figure 2. Measured Lower American River Daily Average Water Temperatures below Folsom Dam, at Hazel Avenue, William B. Pond Park, and Watt Avenue and Flow at Fair Oaks Avenue (1998-2012).

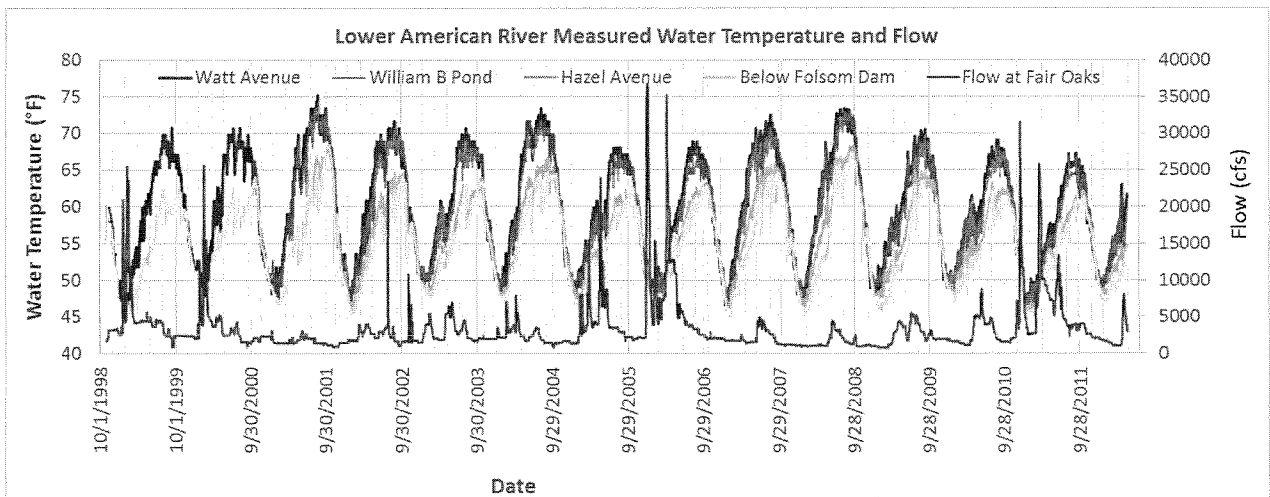

Figure 3. Measured Lower American River Monthly Average Water Temperatures below Folsom Dam, at Hazel Avenue, William B. Park, and Watt Avenue and Flow at Fair Oaks Avenue (1998-2012).

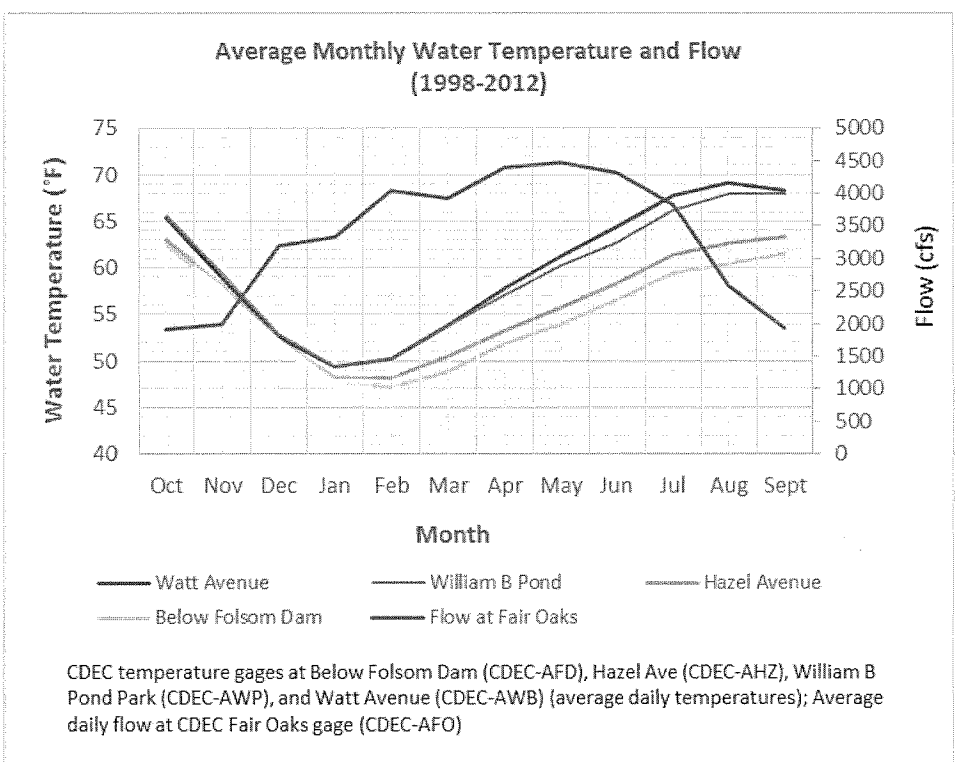

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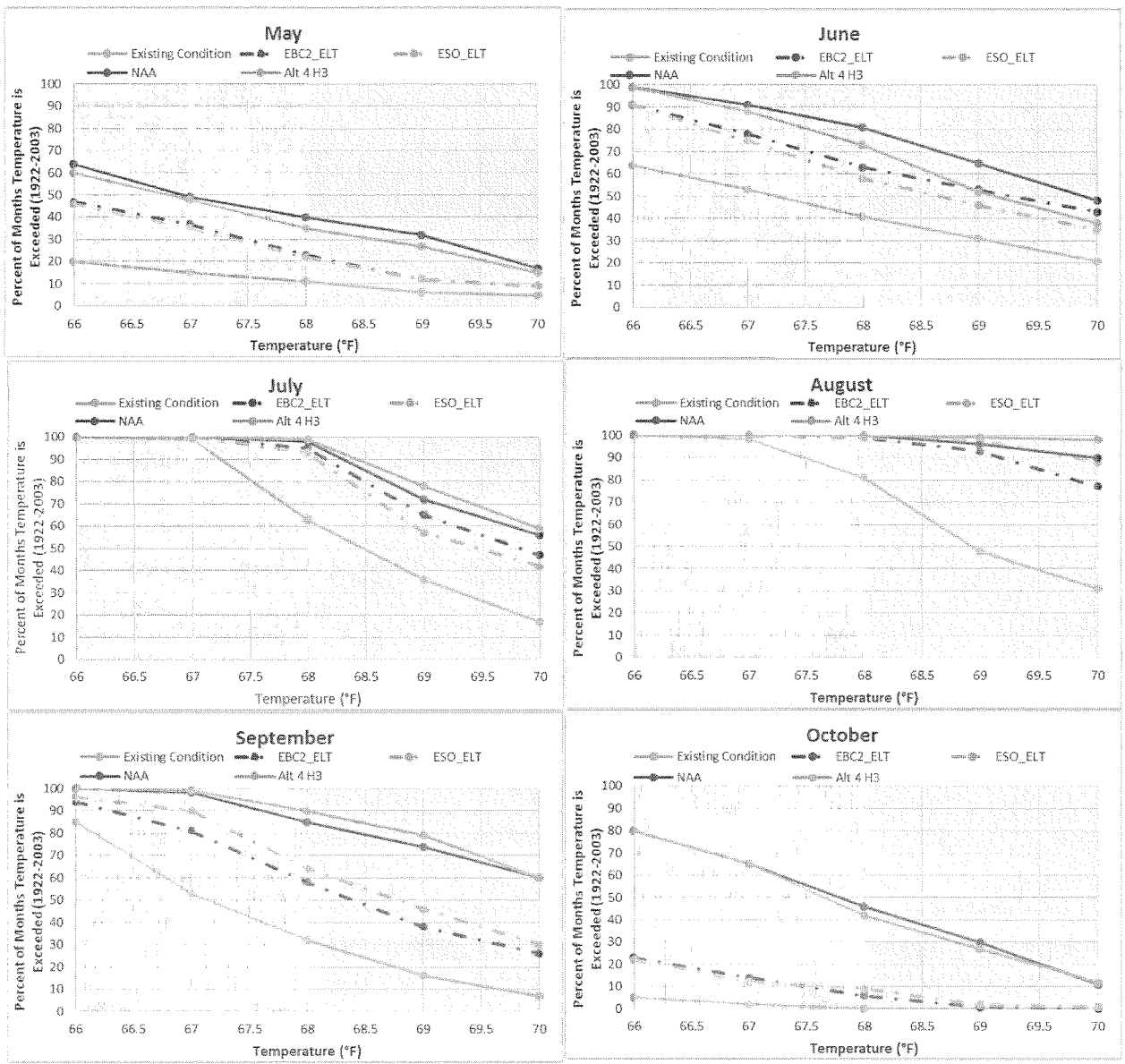
Figure 4a. Percent of Months during 1922-2003 Period during which Mean Monthly Water Temperatures under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4, H3) Scenarios (Early and Late Long-term) in the Lower American River at Watt Avenue Exceeded Temperature Thresholds, May through October.



Source: DWR 2013. Table 5C.5.2-237. Orange and yellow background colors in summer months show temperature threshold of 68°F for steelhead rearing.

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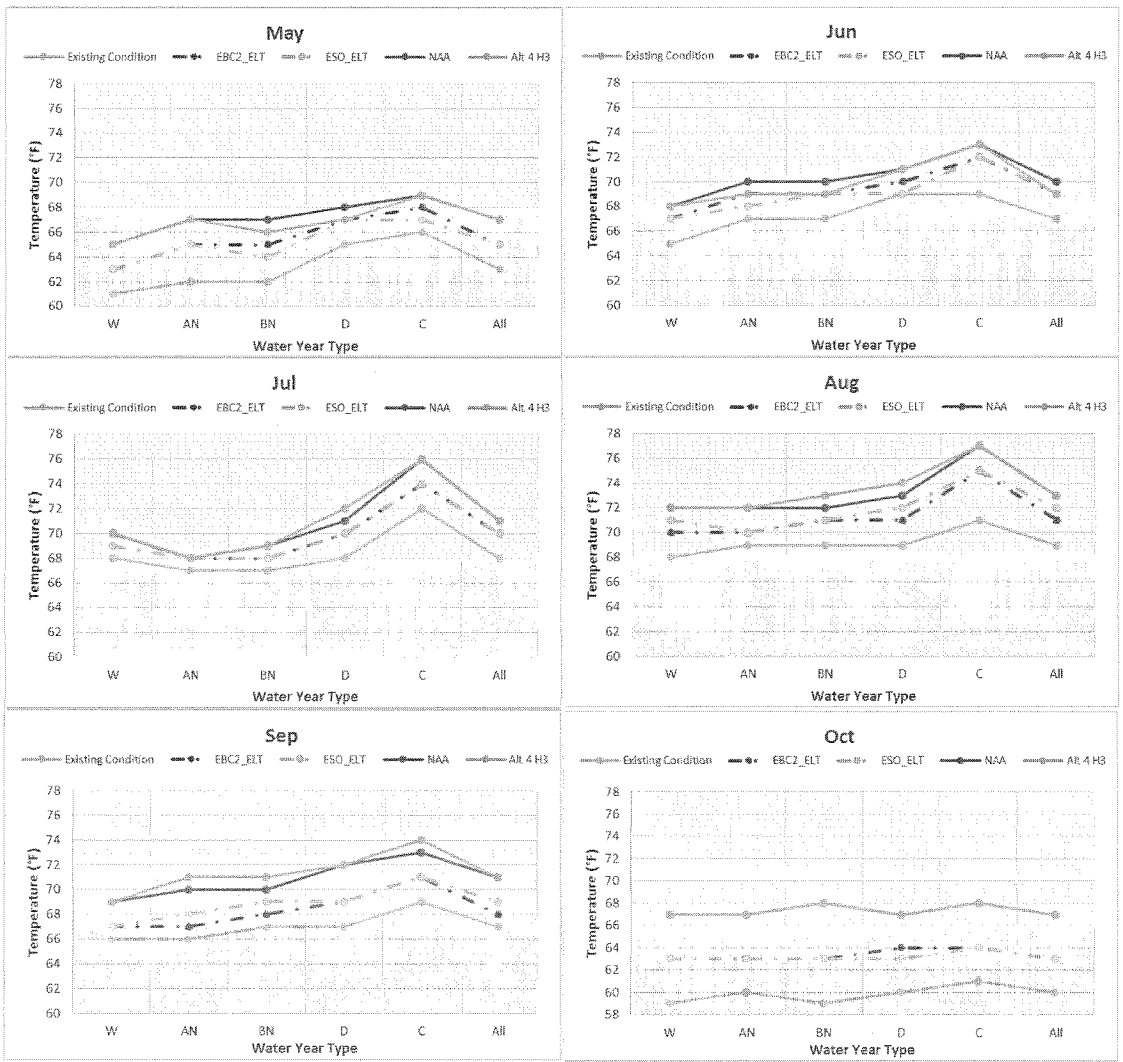
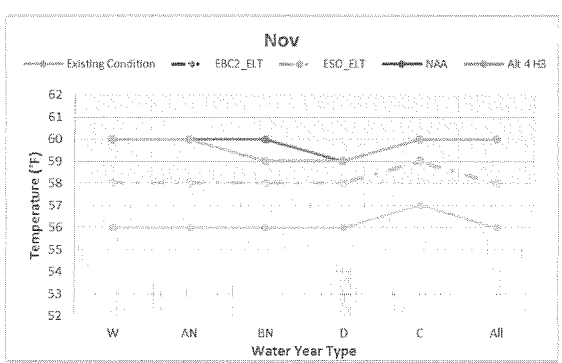
Figure 4b. Mean Monthly Water Temperature (°F) in the American River at Watt Avenue under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4, H3) (Early and Late Long-term).

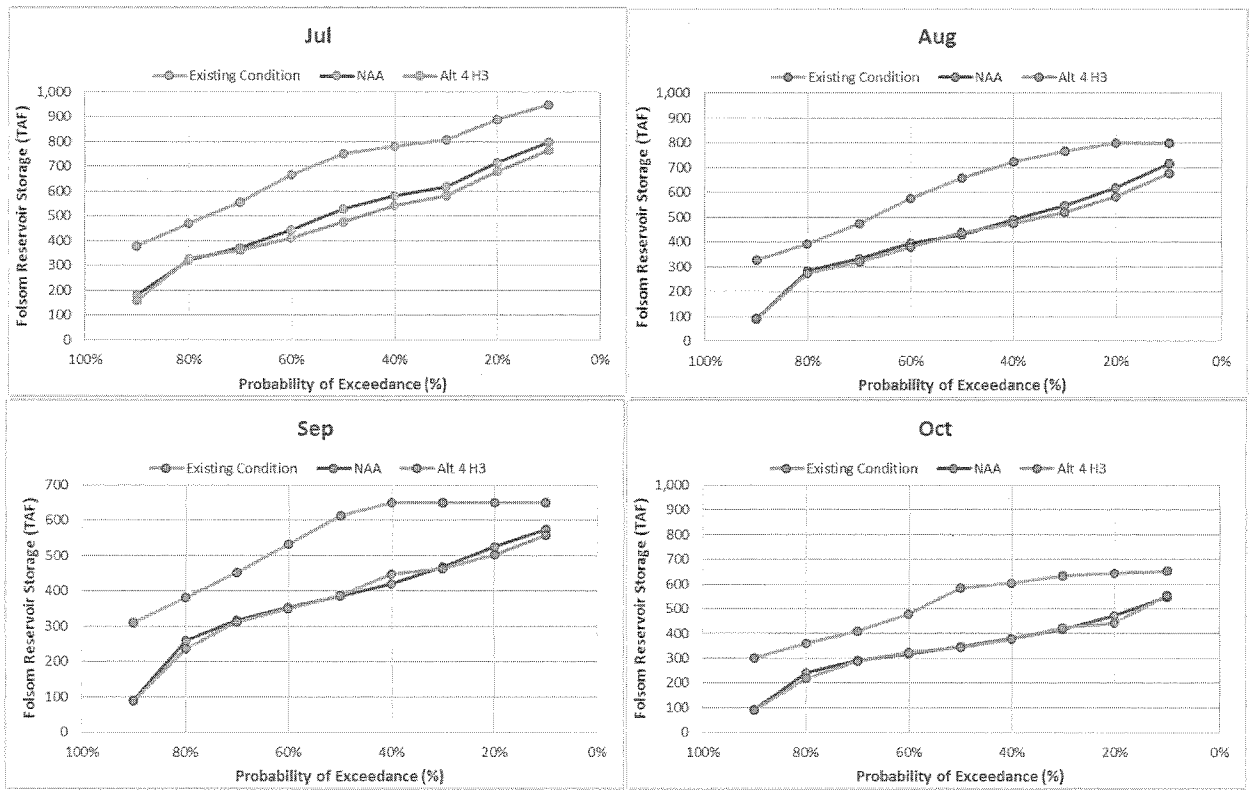




Orange and yellow background colors in summer months show temperature threshold of 68°F for steelhead rearing and in November a 58°F temperature threshold for Chinook salmon spawning.

Source: DWR et al. 2013 BDCP Table 11D.4.16 and DWR et al. 2013 EIR/EIS Table 5C.5.2-224 (early long-term scenarios only).

Figure 5a. Summer (July - October) Monthly Mean End-of-Month of Storage Folsom Reservoir Storage (TAF) under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4).



Source: DWR 2013. Tables C-4-1 and 2 and 7; Bay-Delta Conservation Plan EIR/EIS Appendix 5A Section C: CALSIM II and DSM2 Modeling Results

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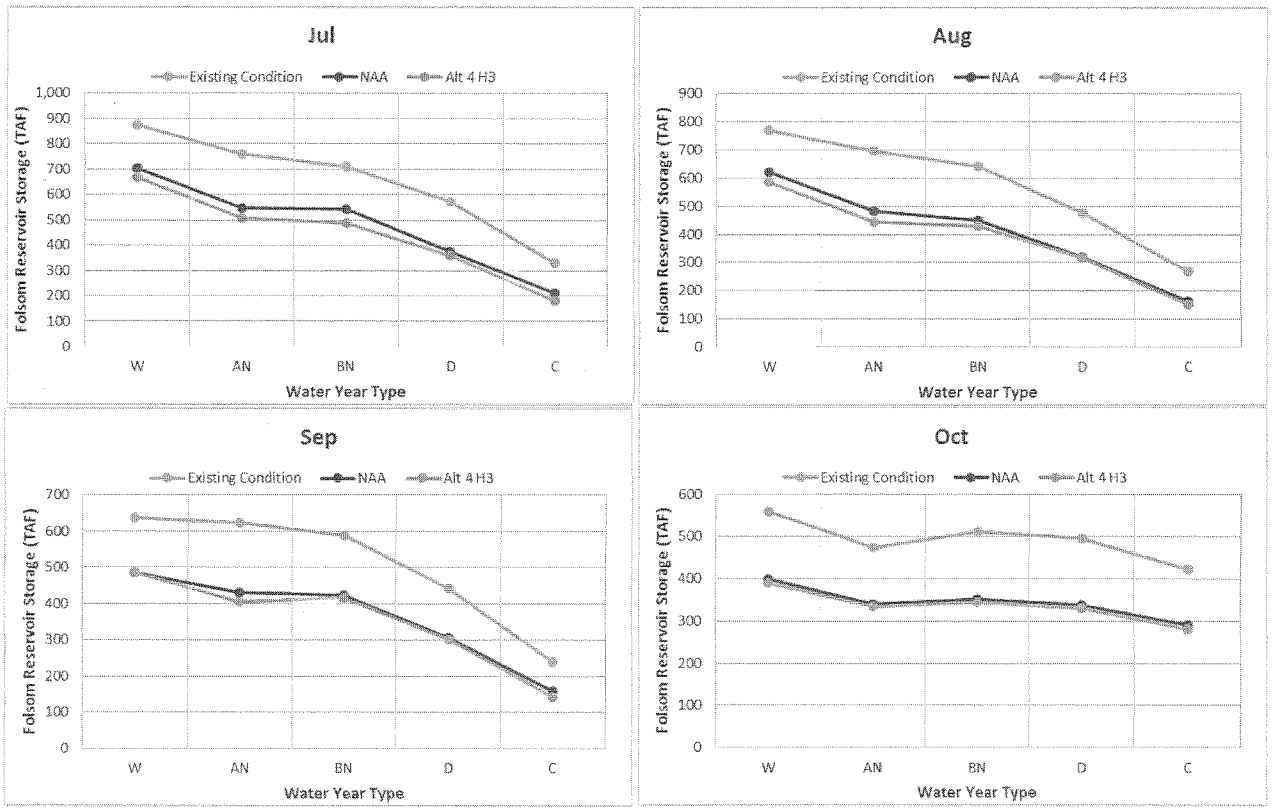
Figure 5b. Summer (July - October) Monthly Mean End-of-Month of Storage Folsom Reservoir Storage (TAF) under the Existing Condition, No Action Alternative, and Preferred Alternative (Alternative 4) by Water Year Type.



Source: DWR 2013. Tables C-4-1 and 2 and 7; Bay-Delta Conservation Plan EIR/EIS Appendix 5A Section C: CALSIM II and DSM2 Modeling Results

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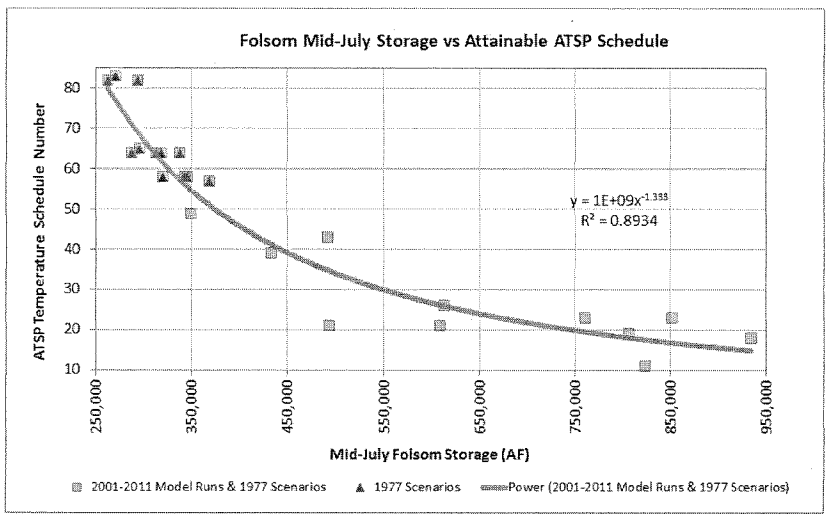
Figure 6. Folsom Reservoir Storage (TAF) in Relation to ATSP Temperature Schedule[1]. Higher ATSP Schedules Correspond to Warmer Summer Temperatures. All Schedules Larger than 55 Exceed Summer Temperatures of 70°F.

July



[1] *ATSP (Automated Temperature Selection Procedure); Lower ATSP schedules equal colder water temperatures; as identified in the lower American River Flow Management Standard*

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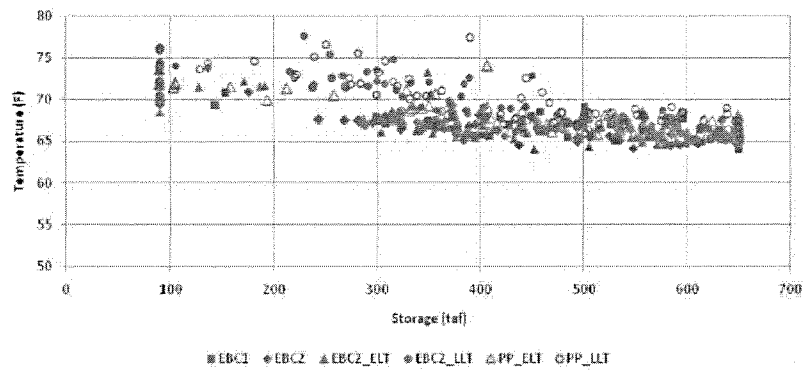
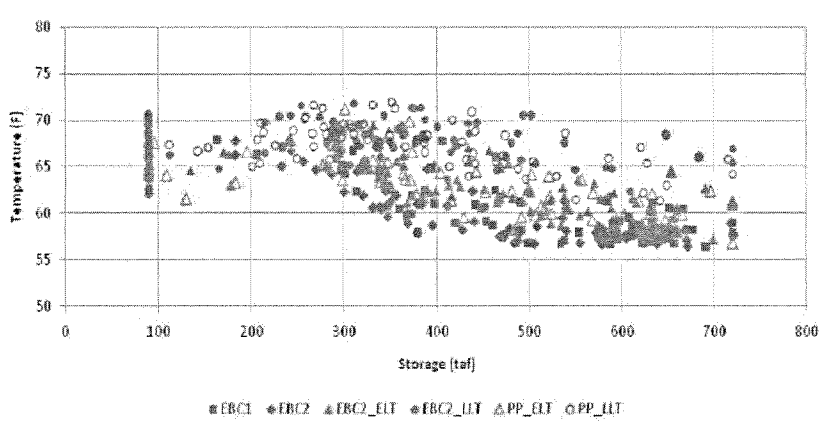
Figure 7. Folsom Reservoir Storage (TAF) in Relation to Water Temperature (°F) at Nimbus Dam (September and October) under the Existing Condition (EBC1), No Action Alternative (EBC2_LLT), and Preferred Alternative 4, H3 (PP_LLT).

September



October



Source: Modified from: Reclamation et al. 2013; Figures Appendix 29C-17a and b. The same data are also included in Figures 5.A.2.5-24 and 25. 70°F red line added; acceptable rearing habitat is <70°F.

ELT = Early Long-term 2025; LLT = Late long-term (2060); EBC = Existing Biological Condition; PP = Proposed/Preferred Project as defined in DWR 2013.

From: Friend, Janiene@DWR <Janiene.Friend@water.ca.gov>
Sent: Monday, July 21, 2014 11:29 AM
To: bdcp.comments@noaa.gov
Subject: FW: Draft Implementation Agreement for the BDCP Comments - City of Brentwood
Attachments: PE - Wulff-NMFS re Draft IA Comments 07.18.14.pdf

Forwarding

Thanks,
Janiene Friend

From: Germann, Katherin [mailto:kgermann@brentwoodca.gov]
Sent: Monday, July 21, 2014 11:26 AM
To: Friend, Janiene@DWR
Subject: Draft Implementation Agreement for the BDCP Comments - City of Brentwood

Mr. Mark Cowin,

Please find attached a copy of the City of Brentwood's comments to the Draft Implementation Agreement for the Bay Delta Conservation Plan.

Thank you,
Katie

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OFFICE OF THE CITY MANAGER

July 18, 2014

Ryan Wulff, NMFS
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

RE: Bay Delta Conservation Plan Comments

Dear Mr. Wulff:

The City of Brentwood appreciates the opportunity to comment on the Draft Implementation Agreement (IA) for the Bay Delta Conservation Plan (BDCP). This Agreement is one of the critical elements that needs to be in place if the BDCP process is to succeed. Given the importance of the Agreement, the City is very disappointed at the Agreements critical omissions both in agencies not party to the Agreement, and fundamental protections of water quality and beneficial uses for the Delta. Legally senior water rights with higher urban priorities seem to be bypassed by export projects using Section 7 and 10 ESA consultation decisions to bypass the rights of In-Delta users. The following are specific issues the City has with the Agreement:

- The USBR and SWRCB need to be signatories to the Agreement. The Bureau operates the largest and more senior export project and has a defined role in the IA. Simply stating that they will negotiate their own IA leaves a major "hole" in this document. The SWRCB with its various water quality decisions will need to be involved in the Annual and Operating 5 Year Plans. How it will be involved, and when it will assert its authority in the process needs to be defined in the IA.

- The IA, with the exception of one statement, ignores the protection of water quality in the Delta and for senior Delta water rights holders. How the IA protects beneficial uses of the Delta beyond water supply and ecosystem restoration is left silent. The required Annual and Operating 5 Year Plans do not address water quality at all.

- The IA governance structure includes state and federal contractors but ignores consultation or protection of potentially impacted water rights holders unless they join the BDCP process, the cost and requirements for this joining are not defined.

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- The IA is premised on the foundation that State and Federal Contractors have paid for the ESA consultations and protections offered in the ESA permits. It does not explain how senior water right holders will be protected with their existing ESA permits or diversions as the new BDCP ESA permits are issued.

The Draft IA appears to be a "rough draft" work in progress document. It does lay out a process for moving forward with ESA protections with certain commitments from all parties currently listed in the Agreement. However, it does not include all relevant parties and leaves protections for water quality and Senior Water rights holders in the dark.

Thank you for soliciting our input.

Sincerely,

Paul R. Eldredge

Paul R. Eldredge, P.E.
City Manager

cc: Congressman John Garamendi
Congressman George Miller
Congressman Jerry McNerney
California Resources Agency/Secretary John Laird
Dept. of Water Resources, Director Mark Cowin
Senator Mark DeSaulnier
Senator Lois Wolk
Assemblyman Jim Frazier
Contra Costa County Board of Supervisors
Brentwood City Council
Brentwood Department Directors
ECCID, General Manager Pat Corey
Contra Costa Water District, General Manager Jerry Brown
State Water Project Contractors, General Manager Terry Erlewine
USBR, Regional Director David Murillo
SWRCB, Board Chair Felicia Marcus

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CITY OF FOUNTAIN VALLEY

CITY HALL 10200 SLATER AVENUE FOUNTAIN VALLEY, CALIFORNIA 92708

THE OFFICE OF THE MAYOR (714) 593-4403 FAX: (714) 593-4494
Website: www.fountainvalley.org Email: vprpud@fountainvalley.org

July 17, 2014

Mr. Ryan Wulff, NMFS
650 Capitol Mall, Suite5-100
Sacramento, CA 95814

RE: Comments Regarding Alternative 4 of the Bay Delta Conservation Plan

Dear Mr. Wulff:

The City of Fountain Valley is pleased to submit comments on the Draft Bay Delta Conservation Plan (BDCP).

The City of Fountain Valley is a retail water supplier in Orange County that is governed by a publicly elected City Council.

In spite of the world-class efforts of agencies in Orange County to provide greater water supply certainty for eight percent of California's population and the $200 billion economy they represent, Orange County remains dependent on imported water to meet approximately 45 percent of its average annual demand, with the State Water Project (SWP) deliveries from the Delta meeting approximately half of those needs. The Delta ecosystem and water supply conveyance problems have long been recognized, and have remained in a continuing state of degradation, conflict, and stalemate.

Many years and hundreds of millions of dollars have been spent on study efforts while the delta system continues to be used for water conveyance in a manner for which it was not intended. The longer it takes to implement the resolution, the more expensive it will become. The stalemate has been punctuated by droughts, floods, economic losses, environmental degradation and litigation every decade since the construction of the SWP in the 1960s. We can no longer delay action in the Delta, and urge the State and federal government to quickly move forward with the Preferred Alternative. Ailing to act and move forward is not an acceptable alternative.

In recent years the endangered species biological opinions for protection of Delta and Longfin Smelt and Chinook Salmon have resulted in massive cutbacks in exports by over 1.5 million acre-feet per year and without the BDCP further cuts of another 1.0 million acre-feet per year could occur with new endangered species listing according to the BDCP briefing documents. This situation is untenable and a solution must be found to stop this hemorrhaging of this critical foundation of water supply to southern California. The BDCP is the best hope we have and it must be approved and implemented in a timely and cost-effective manner.

We offer the following specific comments on the BDCP.

1. <u>We strongly support the BDCP Preferred Alternative (No. 4) and oppose the No Action Alternative</u>: It is critical to the state's economy and environment that both the State and federal government expeditiously follow through with the decision for adopting and implementing the BDCP.

2. <u>Co-Equal Goals</u>: The BDCP must be implemented in a manner consistent with the co-equal goals adopted by the State. Preferred Alternative (No. 4) is consistent with the Delta Reform Act of 2009's co-equal goals.

3. <u>New Facilities and In-Delta Operational Flexibility</u>: The modernization of the Delta conveyance system is essential in order for habitat restoration and conservation to have its intended effect; Preferred Alternative (No.4), which incorporates the 9,000 cubic feet per second (cfs) three intake, twin tunnel conveyance system, provides the best balance between operational flexibility and modernizing the conveyance system for environmental benefit and water supply reliability.

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4. Reduced Future Reliance: The 2009 Delta legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent "self-reliant." While our major efforts in these areas will continue, it is important to note that "reduced reliance" does not equate to and was never intended to require a move to 100 percent "self-reliance" and the notion of co-equal goals was never intended to result in a future with significant reduction of exports from levels achieved before the 2008 bio-opinions.

5. Plan Implementation and Regulatory Assurance: The BDCP must provide the needed implantation and regulatory structure and assurances to help achieve the co-equal goals.

    a. To us, this means that it is virtually impossible to predict the outcome of the BDCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS.
    b. Furthermore the means that changed circumstances under the operation of the BDCP, including the potential for new species listing, is incorporated in such a manner to result in a minimum impact on future water supply exports.

6. Sound Science: It is critical that sound science is provided in order to assure the long-term success of the BDCP. We strongly support the inclusion of independent scientific investigation and research to be included in the BDCP.

7. Economy, Environment and Water Management: The State Water Project (SWP) is critically important to the Orange County economy, environment and water management. Implementation of the BDCP is critical to Orange County's future.

    a. Orange County and our agency have invested heavily to diversify our water portfolio but the SWP remains a critical source of low salinity water supply that is currently unacceptably jeopardized by the lack of sustainability of the current Bay-Delta system.
    b. Orange County relies on the SWP to support groundwater conjunctive use programs and water recycling programs – it is an essential part of our water reliability strategy that sustains our citizens and businesses.
    c. We support the 9,000 cfs twin tunnel Preferred Alternative (No. 4) provided reasonable assurances are included regarding governance and future decision-making in the process . We strongly advocate for a seat at the table for the water Permittees in the various oversight groups. The investment and decision-making must be stretched to achieve a positive outcome for both SWP and Permittees and the ecosystem restoration in a collaborative, partnership manner.

It is now time for the State and Federal government to adopt and move the BDCP to implementation in order to achieve the 2009 legislation's co-equal goals of improving water supply reliability and ecosystem restoration and improved function by implementing the BDCP Preferred Alternative (4).

Thank you for your time and consideration of these comments.

Sincerely,

Michael Vo
Mayor

From: Coats, Danielle <coatsd@emwd.org>
Sent: Tuesday, July 22, 2014 1:38 PM
To: bdcp.comments@noaa.gov
Cc: parlt@mwdh2o.com; rdavis1228@gmail.com; Cole,Kathy (kcole@mwdh2o.com); Walsh, Jolene
Subject: EMWD Comments on the Draft BDCP
Attachments: EMWD BDCP Comment Letter docx.pdf

Greetings:

EMWD is pleased to have the opportunity to submit the attached comment letter on the Draft Bay Delta Conservation Plan (BDCP) during the public comment period.

If you have any questions or concerns regarding the attached correspondence please feel free to contact me.

Best Regards,

Danielle

Danielle Coats
Public and Governmental Affairs
Eastern Municipal Water District
2270 Trumble Road
P.O. Box 8300
Perris, CA 92572-8300
Office: (951) 928-3777 ext. 4526
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E-mail: coatsd@emwd.org

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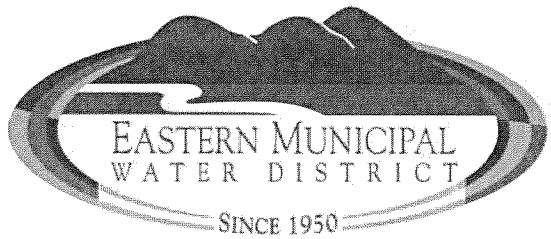

July 22, 2014

Bay Delta Conservation Plan Comments
Ryan Wulff, National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

RE: EMWD Comments on the Draft Bay Delta Conservation Plan (BDCP)

Dear Mr. Wulff:

Eastern Municipal Water District (EMWD), is submitting the following comments on the draft Bay Delta Conservation Plan (BDCP) and the related environmental impact statement/report as released on December 13, 2013 for consideration and inclusion in the public record. As a recipient of water from the State Water Project, EMWD has a keen interest in the BDCP, and appreciates the opportunity to submit comments on the public draft of the BDCP. EMWD has also provided comments on drafts of the Delta Plan, provided testimony at the Delta Stewardship Council (Council) field hearings, and has engaged in the process in a variety of other ways.

EMWD has a diverse water supply portfolio of 55-percent imported water, 25-percent recycled water, 15-percent local groundwater and 5-percent brackish desalinated water. On average, more than half of the imported water received by EMWD is through the State Water Project and Sacramento-San Joaquin River Delta (Delta). Although EMWD has a diverse water supply portfolio and has unprecedented levels of water use efficiency with one of the lowest per-capita use rates in the state (155 GPCD), the climate and population of the area will always require that EMWD receive imported water.

In recent years, both state and federal project deliveries have been repeatedly interrupted and reduced due to operational conflicts with threatened and endangered Delta species. Additionally, both projects risk complete failure given the vulnerability of the Delta levee system to catastrophic earthquake and flood events as there is a better than 63 percent chance of a magnitude 6.7 or higher earthquake occurring within the Delta region in the next thirty-years. An earthquake of this magnitude is estimated by economists to result in a $40 billion economic loss to the state and would threaten water supplies for Southern California, the Bay Area, the Central Coast and the Central Valley for up to three years. These risks are unacceptable, and conditions are expected to worsen unless steps are taken to mitigate these concerns.

Mailing Address: Post Office Box 8300 Perris, CA 92572-8300 Telephone: (951) 928-3777 Fax: (951) 928-6177
Location: 2270 Trumble Road Perris, CA 92570 Internet: www.emwd.org

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The proposed BDCP, being developed under provisions of the state and federal endangered species protection laws, is the most promising plan developed to-date to solve these challenges and resolve decades of conflicts between agricultural, urban, and environmental water interests. The BDCP represents a comprehensive solution that achieves California's co-equal goals of establishing a reliable water supply and restoring the Delta ecosystem for the benefit of all water users.

The release of the public draft BDCP is an important milestone in this eight-year stakeholder driven process. In a very detailed manner, the draft BDCP illustrates the complexity of the problems and highlights the need for a comprehensive approach to resolve conflicts in the Delta through a multi-species habitat conservation plan that protects the state's water resources and infrastructure.

We are supportive of the BDCP's environmentally superior proposed twin-tunnel conveyance system that isolates and protects drinking water supplies and helps restore natural flow patterns in the Delta for the benefit of native species; as well as the complementary habitat restoration, water quality, and predator control measures outlined in the BDCP. We also support the plan's recognition that changing conditions in the Delta will require ongoing scientific review and real-time monitoring so the plan can effectively adapt over time to emerging science and the evolving ecosystem. The draft plan also provides an important framework for a range of operational outcomes and level of certainty necessary for a final plan to merit investment by participating public water agencies and by the state and federal governments. Although key decisions remain related to cost allocations, permitted operations, outflow range, financing and other issues, we believe the current draft details a workable solution to the challenges facing California's water resources and the Delta.

The Metropolitan Water District of Southern California (Metropolitan), of which EMWD is a member, has established six benchmarks for a comprehensive Delta solution. These benchmarks, as identified below, are supported by EMWD and provide the basis for the analysis of the draft BDCP and comments provided in this letter:

1. *Provide Water Supply Reliability.* *Conveyance options need to provide water supply reliability consistent with the Department of Water Resource's most recent State Water Project Reliability Report (2005).*

   Comment: BDCP has the potential to regain State Water Project supplies and meet this benchmark. BDCP potential water supplies are within the range of recent twenty-year averages. For the participating public water agencies, reliable and adequate supplies are necessary to make this project financeable.

2. *Improve Export Quality.* *Conveyance options should reduce bromide and dissolved organic carbon concentrations. Existing in-Delta intakes cause direct conflict between the need to reduce organic carbon to meet stricter urban drinking water standards, and the need to increase carbon to promote a healthy food web for fish.*

   Comment: In addition to the overall treatment benefits of reduced bromide and dissolved organic carbon, the BDCP will also provide substantial salinity reduction benefits to southern California. Existing in-Delta supplies are in the range of 300 milligrams per liter in salinity levels (expressed as the concentration of Total Dissolved Solids, or TDS). Upstream supplies on the Sacramento River are in the range of 100 milligrams per liter TDS. The construction of intakes in the northern Delta, and BDCP's dual conveyance water operations

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strategy would provide a substantial reduction in salt loading in southern California. This is particularly important to EMWD for several reasons; but most notably the ability to sustainably manage our local groundwater basins which are periodically replenished with imported water during wet periods, and to maintain the viability of our recycled water program (which provides 25% of EMWD's supply) through source water salinity control. Maintaining EMWD's local supply portfolio through access to low salinity, high-quality imported water is critical to ensuring reduced the need for additional imported supplies.

3. *Allow Flexible Pumping Operations in a Dynamic Fishery Environment. Water supply conveyance options should allow the greatest flexibility in meeting water demands by taking water where and when it is least harmful to migrating salmon and in-Delta fish species. All options should reduce the inherent conflict between fisheries and water conveyance.*

   Comment: The new screened intakes proposed by BDCP in the northern Delta would eliminate reverse flow conditions when water is diverted in the north and lead to a far more natural flow pattern in the estuary – a critical component of ecosystem sustainability in the Delta.

4. *Enhance Delta Ecosystem. Conveyance options should provide the ability to restore fishery habitat throughout the entire Delta and minimize disruptions to tidal food web processes, and provide for fluctuating salinity levels.*

   Comment: The modernization of the Delta conveyance system as proposed by BDCP is an environmentally superior approach that is essential in order for the proposed habitat restoration to have its intended effect.

5. *Reduce Seismic Risks. Conveyance options should provide significant reductions in risks to export water supplies from seismic-induced levee failure and flooding.*

   Comment: The twin tunnels to transport northern Delta supplies would protect this critical supply from future disasters. The twin-tunnel subsurface design provides important operational redundancy and reduces risks associated with surface movement – such as levee failure and liquefaction – during earthquakes, allowing for the isolation of repairs if needed to specific tunnel segments, rather than compromising the entire Delta water supply with saline ocean water, should there be a multiple-island levee failure and flooding event. Seismic preparedness is crucial for this vulnerable segment of the statewide water delivery system.

6. *Reduce Climate Change Risks. Conveyance options should reduce long-term risks from salinity intrusion associated with rising sea levels. Intake locations should be able to withstand an estimated 1-to-3-foot sea-level rise in the next 100 years.*

   Comment: The proposed intakes in the northern Delta are upstream of predicted long-term salinity intrusion due to climate change. The future water system must be sized sufficiently to capture water when available in the face of climate change.

In addition to the previously addressed comments, the draft BDCP raises other issues that EMWD believes are important. These include:

- *Governance:* The final BDCP governance structure must provide for public water agencies to be full participants in the implementation process in a manner that maintains the existing

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authorities of the state and federal wildlife agencies. Metropolitan must be among the project permittees in order to assure its active participation in BDCP.

- *Assurances:* As a Habitat Conservation Plan under Section 10 of the federal Endangered Species Act (ESA) and a Natural Community Conservation Plan pursuant to Fish and Game Code Section 2800 et seq.; BDCP offers a path of regulatory stability for both the public water agencies and the wildlife agencies. It is important to better define and describe this regulatory stability so that the final BDCP offers a clearer choice between this approach and today's ineffective species-by-species approach to regulation and ESA enforcement.

- *Co-Equal Goals:* The Delta Reform Act of 2009 passed by the California Legislature established the co-equal goals of a reliable water supply for California and ecosystem restoration for the Delta. The BDCP must be implemented in a manner consistent with the co-equal goals.

- *In-Delta Impacts:* We are encouraged by recent changes in the proposed intake/tunnel project that will reduce by 50 percent the overall footprint of the project. While the hydrological simulation model in the BDCP analysis suggests that Delta salinity objectives may be exceeded in some instances, the DEIR/S explains that this is due to modeling anomalies. In any event, the project would be operated to meet all Delta Salinity Standards thus it is not expected to have a significant impact to local agriculture.

- *Habitat Restoration:* Habitat restoration, meanwhile, is expected to lead to a net increase of 50,000 local Delta-area jobs. Continued efforts to reduce in-Delta impacts and increase in-Delta benefits of BDCP will improve the final project.

Metropolitan and its member agencies, including EMWD, and our ratepayers have been investing in the State Water Project for more than four decades, and have additionally invested in regional storage and conveyance to allow Southern California to capture water when it is plentiful and reduce demands on imported supplies during dry and critically dry years. These investments are effectively stranded, if water deliveries from the project continue to degrade.

The State Water Project provides essential water supply and water quality benefits to Southern California and, as noted earlier, helps EMWD and the region achieve critical local water resource development objectives. When blended with the southland's other imported water source, the Colorado River, State Water Project water helps ensure water recycling and groundwater production is sustained. Recycling might otherwise be limited since Colorado River water is over twice the salinity level and recycling concentrates salts to levels that can exceed protective groundwater basin standards. Similarly, recharge of Colorado River water alone into many groundwater basins, including the principal potable water supply groundwater basin in EMWD's service area, would not be permitted under basin plan salinity objectives set forth by the State Water Resources Control Board.

The proposed BDCP is the most comprehensive effort ever undertaken to address the chronic water challenges facing the state and federal water projects in a manner that is protective of the Delta environment. We urge the state to move forward with the draft plan and focus on resolving those remaining issues needed to provide assurances that the plan will achieve California's co-equal goals of water supply reliability and ecosystem restoration in a cost-effective manner.

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Thank you again for providing the opportunity to comment on the draft BDCP. If you have any questions regarding this correspondence please contact me at (951) 928-6130 or by e-mail at jonesp@emwd.org, or EMWD's Sacramento advocate, Ron Davis at (916) 492-6082 or rdavis1228@gmail.com.

Sincerely,

Paul D. Jones II

Paul D. Jones II, P.E.
General Manager

Cc: Governor Jerry Brown
Senator Diane Feinstein
Senator Barbara Boxer
Congressman Ken Calvert
Congressman Duncan Hunter
Congressman Mark Takano
Congressman Raul Ruiz
Senator Joel Anderson
Senator Richard Roth
Senator Mike Morrell
Assemblywoman Melissa Melendez
Assemblywoman Marie Waldron
Assemblymember Brian Jones
Assemblymember Brian Nestande
Assemblymember Jose Medina

CUEL | CENTER ON URBAN ENVIRONMENTAL LAW

LEGAL RESEARCH ON NATURE IN CITIES AND THE NATURE OF CITIES

July 15, 2014

Via United States Mail and Electronic Mail

BDCP Comments
Ryan Wulff, National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, California 95814

BDCP.comments@noaa.gov

Re: CUEL Comments on *December 2013 Draft EIR/EIS* for Proposed Bay Delta Conservation Program (BDCP)

Dear Mr. Wulff:

The following comments are submitted by the Center on Urban Environmental Law (CUEL) at Golden Gate University School of Law. The focus of CUEL's comments is on Chapter 11 (Fish and Aquatic Resources) of the December 2013 Draft Environmental Impact Report/Environmental Impact Statement for the proposed Bay Delta Conservation Program (*December 2013 Draft EIR/EIS*). The *December 2013 Draft EIR/EIS* was prepared and circulated for public review pursuant to the California Environmental Quality (CEQA) and the National Environmental Policy Act (NEPA). CUEL's comments address the relationship between the proposed BDCP and the authority of the State Water Resources Control Board (State Water Board), the relationship between the proposed BDCP and the Ninth Circuit Court of Appeal's April 2014 decision on federal Endangered Species Act (ESA) compliance in *San Luis v. Jewell*, and CEQA/NEPA

compliance issues pertaining to information on baseline conditions in the *December 2013 Draft EIR/EIS*.

I. Approach to Fisheries in Current BDCP and *December 2013 Draft EIR/EIS*

There are several fisheries listed under the federal ESA present in the waters of the San Francisco Bay-Sacramento River-San Joaquin River Delta (Bay Delta), including species of smelt and salmon and steelhead trout. In connection with proposed activities that may adversely impact species protected species, the ESA contains provisions that allow parties who would conduct such activities to propose "habitat conservation plans/habitat conservation programs" (HCPs) to the federal wildlife agencies, the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Services (NMFS). Pursuant to Section 10 of the ESA, the federal wildlife agencies may only approve an HCP if the plan/program and underlying project activities "will not appreciably reduce the likelihood of the survival and recovery of the species in the wild."

There are two large water infrastructure projects that operate diversion facilities in the Bay Delta specifically and water diversion/storage facilities in the Sacramento River-San Joaquin River watershed more generally – the federal Central Valley Project (CVP) and California's State Water Project (SWP). The CVP is operated by the United States Bureau of Reclamation (Bureau of Reclamation) and the SWP is operated by the California Department of Water Resources (DWR). In addition to the CVP and the SWP, there are also many other non-CVP/non-SWP diverters of water and operators of water storage facilities in the Sacramento River-San Joaquin River watershed.

The BCDP process has been underway for many years and to date has focused on the relationship between the impacts of the water diversion/storage operations of the CVP and SWP on fish species listed under the ESA. More specifically, the Bureau of Reclamation and DWR have initiated development of the BDCP as a multi-species HCP pursuant to Section 10 of the ESA, with the goal of creating a plan/program that would enable the CVP/SWP to operate

going forward in a manner that would "not appreciably reduce the likelihood of the survival and recovery" of the endangered smelt, salmon and steelhead fisheries in the Bay Delta watershed.

There are several stressors that have contributed and are contributing to the decline of the smelt, salmon and steelhead fisheries that pass through the Bay Delta, but three in particular that are pertinent to evaluating the BCDP. The first stressor on these fisheries is the significant reduction in fresh water flows moving through the Bay Delta which has resulted in seawater intrusion and elevated salinity levels in the Sacramento River-San Joaquin River Delta. The second stressor on these fisheries is the problem of entrainment of fish in the CVP/SWP diversion pumps that pull water from the south Delta. The third stressor on these fisheries is the reduction in the amount and quality of habitat (particularly spawning habitat) due to changes in land uses (levees, development, fill) along waterways.

Of these three noted stressors, the multi-species HCP proposed as the BDCP has so far paid little attention to the first stressor (inadequate fresh water flows into and through the Delta) and in fact anticipates increased fresh water diversions (meaning a further reduction in fresh water flows). Instead of focusing on this first stressor, to date the BDCP has instead focused on the second stressor (entrainment in the south Delta CVP/SWP pumps) and the third stressor (reduced fishery habitat). To address the second stressor (entrainment of endangered fisheries in the south Delta CVP/SWP pumps) the BDCP has proposed shifting the main point of CVP/SWP diversion upstream from the south Delta to the north Delta, and then transporting this diverted water south in two tunnels. To address the third stressor (reduced fishery habitat) the BCDP has proposed a set of projects in the watershed to increase and improve spawning habitat.

The current BDCP approach to fisheries restoration and recovery aligns with the water supply interests of recipients of CVP water (mostly Central Valley farms) and SWP water (mostly cities) in that this approach does not call for curtailing CVP/SWP diversions of water. Equally important to recipients of CVP and SWP water, moving the point of diversion to the north Delta will place the CVP/SWP pumps in a location further upstream from the intruding seawater and rising salinity levels. Water with high salinity levels is not suitable for either irrigation or drinking water supplies. If the CVP and SWP are able to divert water further upstream as the

BDCP now proposes, then CVP and SWP water is not likely to be affected by the rising salinity levels/seawater intrusion further downstream in the Delta. The BDCP's proposed north Delta point of diversion would therefore help insulate the CVP and SWP (and the recipients of CVP/SWP water) from the adverse water quality impacts of their own diversions – impacts which are getting ever closer to the existing CVP/SWP diversion pumps in the south Delta.

The *December 2013 Draft EIR/EIS* contains analysis presented in support of the BDCP's approach to fisheries, which in essence is the proposition that the endangered smelt, salmon and steelhead in the Bay Delta will be able survive and recover even if additional fresh water is diverted for the CVP and SWP because the benefits of BDCP-proposals for reduced entrainment and improved fishery habitat will outweigh the adverse impacts of reduced fresh water flows.

II. Relationship Between Proposed BDCP and State Water Board Authority

A. State Water Board 2010 Public Trust Delta Flow Proceedings and Criteria

California's 2009 Delta Reform Act was enacted after preparation of the BDCP had already begun. Among other things, the 2009 Delta Reform Act required the State Water Board (by September 2010) to establish quantitative criteria for what instream fresh water flow was needed to protect public trust resources in the Delta. The purpose of requiring the State Water Board to develop these flow criteria was to establish a solid scientific foundation for the levels of fresh water flow needed to sustain the Delta's fisheries.

Section 85086 of the 2009 Delta Reform Act explained the relationship between the State Water Board and the BDCP, noting that the State Water Board public trust flow criteria adopted for the Delta were "for the purpose of informing the planning decisions for the Bay Delta Conservation Plan." That is, the public trust Delta flow criteria established by the State Water Board were intended to serve as a reliable objective benchmark to help evaluate the extent to which a proposed BDCP would effectively achieve fishery restoration.

In terms of the State Water Board public trust Delta flow criteria process set forth in the 2009 Delta Reform Act, California public trust law provides that the State of California has a continuing trustee obligation to preserve instream uses of water (e.g. fisheries) for the public's

benefit whenever feasible. Pursuant to previous decisions by the California Supreme Court and the State Water Board, the starting point for public trust determinations is to first identify the level of protection required to fully protect the public trust resources at issue, and to then evaluate whether such levels of full protection are economically and technically feasible.[1] Section 85086 of the Delta Reform Act directed the State Water Board to only make the initial public trust determination, that is to identify what level of instream flow was needed to fully protect Delta fisheries.[2]

After nine months of public comments and hearings, the State Water Board issued its public trust *Delta Flow Criteria Report* in August 2010. In this report, the State Water Board adopted the following criteria: 75% of the unimpaired Delta outflow from January through June; 75% of the unimpaired Sacramento River inflow from November through June; 60% of unimpaired San Joaquin River inflow from February through June. The August 2010 *Delta Flow Criteria Report* also compared its public trust flow criteria with historic flows over the past two decades, noting that during this period Delta outflows were 30% of unimpaired flow in drier years, Sacramento River inflows were 50% of unimpaired flow from April to June, and that San Joaquin River inflows were 20% of unimpaired flows in driers years and 50% of unimpaired flows in wetter years. This comparison made clear the State Water Board's scientific finding that, to fully protect the public trust fisheries in the Delta, there would need to be significant reductions in the amount of water diverted upstream of and from the Delta to increase the amount of instream flow going through the Delta.

The 2010 *Delta Flow Criteria Report* issued by the State Water Board was endorsed by NMFS (the lead federal agency responsible for salmon and steelhead fisheries listed under the Endangered Species Act). As noted above, along with the USFWS, NMFS is one of the federal wildlife agencies with responsibility for approving the proposed BDCP to ensure compliance with the ESA. In its July 2010 comment letter to the State Water Board, NMFS stated:

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[1] See *National Audubon Society v. Superior Court of Alpine County*, 658 P.2d 709 (1983) and *Mono Lake Basin Water Right Decision No. 1631* of State Water Board.

[2] Paul Stanton Kibel, *The Public Trust Navigates California's Bay Delta*, 51 Natural Resource Journal 35 (2011).

> The purpose of the flow criteria is to inform both the Bay Delta Conservation Plan process and the Delta Stewardship Council in their development of a comprehensive long-term Delta management plan. The State Water Board was successful in fulfilling this purpose by developing flow criteria through a public process, applying the best available science, and considering the broad goals of the planning efforts the criteria are intended to inform...The Delta flow criteria provide a solid foundation for considering how to manage Delta flows in a manner that is more beneficial to native aquatic species."[3]

The State Water Board's public trust Delta flow criteria were also praised in a July 2010 comment letter submitted jointly by the Bay Institute, the California Coastkeeper Alliance, California Sportfishing Alliance, California Water Impact Network, Defenders of Wildlife, Environmental Defense Fund, Natural Resources Defense Council, Planning and Conservation League, and Sierra Club California. This letter to the State Water Board stated:

> Our organizations collectively represent hundreds of thousands of Californians concerned about keeping the Bay Delta Estuary alive and healthy and restoring our dwindling salmon and other aquatic species. We applaud the draft [of the public trust Delta flow criteria] that you have prepared identifying the flow needs of the Estuary's public trust resources, and particularly commend your careful analysis of the overwhelming scientific support that has demonstrated for many years that we are, and have been, extracting too much water from the Estuary and its watershed to support those trust resources sustainably."[4]

While acknowledging that there are other non-flow stressors (such as entrainment in the south Delta pumps and reduced spawning habitat) that may also be contributing to the decline of the smelt, salmon and steelhead that pass through the Delta, the State Water Board's conclusion was that significant additional fresh water flows are an essential prerequisite to restore and sustain these fisheries.

B. State Water Board Review of BDCP Proposal to Change Delta Point of Diversion for CVP and SWP

As discussed above, to address the problem of fish entrainment, a central component of the proposed BDCP is to change to main point of diversion for the CVP and SWP from the south Delta to the north Delta (and to then convey this water south in two new proposed tunnels).

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[3] NMFS July 29, 2010 Comment Letter to State Water Board.
[4] Joint July 29, 2010 Comment Letter to State Water Board.

The entitlement of the CVP and the SWP to divert water from their current south Delta pumps is set forth in the terms in a series of appropriate water licenses issued to the Bureau of Reclamation and DWR by the State Water Board. These appropriative water licenses specify the "point of diversion" so to implement the BDCP (or at least the components of the BDCP involving the proposed new north Delta point diversion which would then deliver water into the proposed new tunnels) the Bureau of Reclamation and DWR would first need to petition the State Water Board to approve the proposed new north Delta point of diversion. In its review of a petition to modify the appropriative water licenses of the Bureau of Reclamation and DWR to change the point of diversion, California Water Code § 1257 provides that the State Water Board must determine the benefit of the proposed change to the "preservation and enhancement of fish and wildlife." If the State Water Board determines that the BDCP proposed north Delta diversion will not benefit the fisheries that pass through the Delta (because this change is expected to reduce rather than increase fresh water flows) then the State Water Board would have discretionary authority to deny the petition.

With this context in mind, in July 2013 the State Water Board submitted comments on the draft of the BDCP EIR/EIS. In its comments, the State Water Board criticized the draft BDCP and the draft BDCP EIR/EIS for failing to propose or evaluate an alternative for CVP/SWP operations that would reduce diversions and increase fresh water flow into the Delta, for overestimating the likely effectiveness of proposed fishery habitat projects, and highlighted that the proposed north Delta point of diversion constitutes a change in water rights subject to the review of the State Water Board.

In terms of the lack of BDCP proposals to increase fresh water flow into the Delta, the July 2013 State Water Board comments on the BDCP Draft EIR/EIS stated:

> "The decision tree for the Delta outflow include four operational scenarios. Compared to the no project alternative (which appears to the be appropriate comparison point for long-term effects) it appears that all of these operational scenarios decrease Delta outflow scenarios in the late long-term. The justification for this limited range of Delta outflow scenarios is not clear given that there is strong information on the possible need for more Delta outflow for

> the protection of aquatic resources and the uncertainty that other conservation measures will be effective in reducing the need for flow."[5]

The "strong information" referenced in the State Water Board's July 2013 comments on the BDCP Draft EIR/EIS would include the comprehensive body of scientific data and analysis submitted to the State Water Board in 2010 in conjunction with the proceedings that culminated in the August 2010 *Delta Flow Criteria Report.*

In terms of overestimating the likely effectiveness of the BDCP's proposed habitat conservation project, the July 2013 State Water Board comments on the BDCP Draft EIR/EIS stated:

> "The fishery and aquatic resource impact analysis does not appear to analyze scenarios in which conservation measures are not 100% successful...the EIR/EIS appears to assume that all of the conservation measures will be successful in meeting biological goals and objectives. The lack of certainty regarding the success of the conservation measures should be a consideration in the impact analysis and significance determinations reported in the EIR/EIS.[6]
>
> Here and other places in the document, aquatic natural community restoration appears to assume 100% success. Is there an assumption of success for any of the restoration projects? If so, it would be helpful to disclose that assumption and detail support for it."[7]

In terms of State Water Board role in reviewing and approving the BDCP's proposed change of diversion (to the north Delta) in CVP and SWP appropriative water licenses, the July 2013 State Water Board comments on the BDCP Draft EIR/EIS noted:

> "Before the State Water Board may approve a change in a water right permit or license needed to implement the BDCP, including a change to the point of diversion specified in the permit or licenses, the Board must find that the change will not injure any legal user of water (Wat. Code §1702). Information concerning the extent, if any, to which fish and wildlife would be affected by the change shall also be considered. (Wat. Code §1701.2). The State Water Board has an independent obligation to consider the effect of the BDCP on public trust resources and to protect those resources when feasible.[8]
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> . . .

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[5] July 2013 State Water Board Comment Letter on BDCP, page 4.
[6] July 2013 State Water Board Comment Letter on BDCP, pages 32-33.
[7] July 2013 State Water Board Comment Letter on BDCP, page 35.
[8] [8] July 2013 State Water Board Comment Letter on BDCP, page 2.

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> The Executive Summary (in the draft EIR/EIS) indicates the project proponents anticipate approval from the State Water Board for new SWP points of diversion in the Delta...It further states that such changes 'would not include changes in water rights; however, there are concerns that the BDCP could result in the potential for increased exports of water.' This statement is incorrect. Implementation of the BDCP will require changes to water rights and water rights requirements.[9]
>
> . . .
>
> Similar to the executive summary, the EIR/EIS states that the project proponents anticipate approval from the State Water Board for new points of diversion in the Delta for the proposed project. The EIR/EIS further states that such changes would not include changes in water rights, but there are concerns that the BDCP could result in the potential for increased exports of water. These statements are unclear and contradictory and should be clarified. The proposed project would result in changes to water rights and could potentially affect other legal uses of water. As explained above, these issues should be fully described and analyzed in the EIR/EIS."[10]

From a legal standpoint, the viability of the BDCP's current approach appears contingent on the State Water Board's discretionary approval of modifications to CVP/SWP appropriate water licenses to authorize the new proposed north Delta point of diversion. Yet, in its comments on the Draft BDCP and Draft BDCP EIR/EIS, the State Water Board has indicated its view that the current BDCP approach takes insufficient account of the need for additional fresh water flows into the Delta and that the current BDCP approach places unwarranted reliance on the anticipated effectiveness of the proposed habitat conservation projects. Moreover, the current BDCP approach does not take into account the findings and recommendations in the State Water Board's 201 *Delta Flow Criteria Report*.

Under these circumstances, it is unclear why the Bureau of Reclamation and DWR are confident and assume that the State Water Board will approve the water rights changes that are a prerequisite for the current BDCP to move forward.

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[9] July 2013 State Water Board Comment Letter on BDCP, page 8.
[10] July 2013 State Water Board Comment Letter on BDCP, page 9.

III. Relationship Between Proposed BDCP and April 2014 Ninth Circuit Court of Appeal's Decision on ESA in *San Luis v. Jewell*

As noted above, the BDCP is being proposed as a multi-species HCP pursuant to Section 10 of the ESA, and the USFWS and NMFS may only approve the BCDP if these federal wildlife agencies determine that the plan and underlying project activities "will not appreciably reduce the likelihood of the survival and recovery of the species in the wild." With this standard in mind, it is pertinent to examine the previous ESA- compliance approach taken by the USFWS in regard to endangered smelt fisheries in the Delta (which was upheld in April 2014 by the Ninth Circuit Court of Appeals in *San Luis v. Jewell*).[11]

The *San Luis v. Jewell* litigation involved a challenge by recipients of CVP/SWP water to the terms of an "incidental take permit" issued by the USFWS to the Bureau of Reclamation and DWR pursuant to the ESA. The basis for the inclusion of these USFWS terms in the incidental take permit was the analysis in the 2008 USFWS Biological Opinion (2008 BiOp) concerning the anticipated impacts of CVP/SWP south Delta pumping on the delta smelt. The purpose of the terms the USFWS included in this incidental take permit was to prevent CVP/SWP operations from resulting in a "take" of the endangered delta smelt. Under ESA regulations, a "take" is defined as "an act which kills or injures wildlife...Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding and sheltering."[12] Section 9 of the ESA prohibits the "take" of a species listed under the ESA unless the party undertaking the proposed action first obtains a lawful incidental take permit from the appropriate federal wildlife agency.

In the *San Luis v. Jewell* litigation, recipients of CVP/SWP water took aim at analysis in the 2008 BiOp and subsequent incidental take permit in which USFWS determined that, to protect and restore endangered delta smelt, CVP/SWP operations would need to be managed to ensure enhanced fresh water outflow to prevent rising salinity levels due to seawater intrusion. In its April 2014 ruling, the Ninth Circuit Court of Appeal rejected this challenge and upheld the

[11] No. 11-15871 (issued in April 2014).
[12] 50 CFR § 17.3.

USFWS determination that additional fresh water flow was needed to protect and restore delta smelt, explaining:

> "The FWS found that Reclamation and DWR's proposed operation 'are likely to negatively affect the abundance of delta smelt' by 'substantially decreasing the amount of suitable abiotic habitat for delta smelt." BiOp at 236-37. To address the loss of habitat, the FWS proposed...that Reclamation and the DWR must provide sufficient Delta outflow to maintain a monthly average X2 no more eastward than 74 km from the Golden Gate in wet years and 81 km in 'above normal' immediate water years. BiOp at 272, 369. The FWS has previously found that the amount and quality of spawning habitat available to delta smelt is linked to the location of X2. BiOp at 239,240. As we previously discussed, X2 is the point in the Bay-Delta estuary where the salinity is two parts per thousand...which is considered suitable spawning habitat for the smelt. X2 in turn, depends on Delta outflow, which is largely determined by the difference between the total inflow from the Sacramento and San Joaquin River and the total amount of water exported through the pumping station. BiOp at 236....As the BiOp found, 'CVP/SWP operations control the position of X2 and therefore are a primary driver of delta smelt habitat suitability.' BiOp at 234."[13]
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> . . .
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> "The BiOp, in analyzing the predicted location of X2, estimated that median X2 would move 10 to 15 percent farther upstream under the proposed action relative to the historic median X2 baseline. BiOp at 265."[14]
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> . . .
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> "As we have previously explained, as the combined pumping operations of the SWP/CVP removed hundreds of gallons of fresh water from the Bay-Delta , X2 – the salinity-defined location of the smelt's primary spawning habitat – shifts eastward towards the delta. BiOp at 373...The BiOp determined that the 'long-term upstream shift in X2 during fall has caused a long-term decrease in habitat area availability for delta smelt,' and it set forth an adaptive management program to minimize the effect of Project pumping on X2."[15]

In the *San Luis v. Jewell* litigation, the Ninth Circuit upheld the determination by the USFWS (in its 2008 BiOp) that additional fresh water flows into the Delta were necessary under the ESA to protect and restore delta smelt. In the currently proposed BDCP and *December 2013 Draft EIR/EIS*, however, the Bureau of Reclamation and DWR have presented a HCP that does not

[13] No. 11-15871 at pp. 74-75 (issued in April 2014).
[14] No. 11-15871 at p. 76 (issued in April 2014).
[15] No. 11-15871 at p. 86 (issued in April 2014).

provide additional fresh water flows and actually anticipates reduced fresh water flows. Yet, it is the USFWS (and its sister federal wildlife agency NMFS, which is responsible for endangered salmon and steelhead fisheries) that will ultimately determine whether the BDCP complies with the standards for HCP issuance pursuant to Section 10 of the ESA. If the 2008 USFWS BiOp found that increased fresh water flows into the Delta was needed (was a "primary driver") to protect delta smelt, it would follow that the USFWS would also be inclined to reject a BDCP (which is a multi-species HCP that covers the delta smelt) that disregarded the need for additional fresh water flows into the Delta and proposed to further reduce such flows.

Beyond the 2008 USFWS BiOp and the Ninth Circuit's April 2014 ruling in *San Luis v. Jewell*, there are additional reasons why the USFWS (and NMFS) may not be receptive to the current BDCP approach to fisheries restoration.

First, in March 2012, the USFWS prepared a draft "red flag" memo on the BDCP which found that that the BDCP's approach to fisheries "continues to downplay Bay Delta hydrodynamics as system-wide drivers of ecosystem services to the San Francisco Estuary...It is critical that the BDCP effects analysis forthrightly address the many important aspects of the dependency and its constituent species on flow...Until the roles of flows and flow alteration are properly developed in the effects analysis, the analysis will remain inadequate and potentially misleading."

Second, in November 2010 the California Department of Fish and Game (CDFG, a state wildlife agency) released a report titled *Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta* (*2010 CDFG Flow Report*). The *2010 CDFG Flow Report* (whose preparation was mandated under California's 2009 Delta Reform Act) began by explaining the agency's particular regulatory responsibilities in the arena of water resources: "As a trustee agency for the fishery resources in the State, the Department of Fish and Game has an interest in assuring that water flow into and out of the Delta is maintained at levels which are adequate for long-term viability of native fish and the aquatic resources they depend on."

The background section of the *2010 CDFG Flow Report* then noted:

> Fish declines coupled with hydrological and physical changes in the Delta suggest that the current water flow available for environmental resources is not adequate to maintain, recover, or restore the functions and processes that support native Delta fishes. Salmon in the Central Valley are also in decline. Two of the four runs of Chinook salmon are listed under the State and federal Endangered Species Act and fall-run Chinook salmon is at historic low abundance. Delta smelt is both State and federally listed as threatened and longfin smelt is listed under the California Endangered Species Act, reflecting their precipitous declines in abundance.
>
> Water flow through the Delta is one of the primary drivers of ecosystem function. The timing, magnitude, and quality of flows all influence habitat features such as temperature, turbidity, transport, residence time, nutrient loadings, pollutant dispersal and other factors.

The *2010 CDFG Flow Report* acknowledged that although the direct entrainment of fish in the Delta pumps has contributed in the declines of Delta fisheries, a "more important" effect may be the indirect effects caused by reduced instream flow caused by water diversion operations. The *2010 CDFG Flow Report* concluded: "[r]ecent Delta flows are insufficient to support native Delta fishes in habitats that now exist in the Delta and that "[f]low is the critical factor in maintaining suitable habitat conditions that support all or some of the life stages (spawning, rearing, and adult) of native fish species that depend on the Delta and its tributaries." Table 15 of the *2010 CDFG Flow Report* then went on to recommend specific numerical Delta outflow criteria, San Joaquin River base and pulse flows, and Sacramento base and pulse flows that were significantly higher than current flows.

Much like the State Water Board's 2010 *Delta Flow Criteria Report*, the *2010 CDFG Flow Report* found that the best available science established that significant increases in fresh water flow through the Delta and its two main contributing rivers were a prerequisite to restoring the Delta's fisheries. Although CDFG (renamed the California Department of Fish and Wildlife in 2013) does not have direct authority to approve HCPs under the ESA, it is foreseeable and likely that the USFWS and NMFS will take into account the finding of the *2010 CDFG Flow Report* in terms of evaluating whether the BDCP proposed by the Bureau of Reclamation and DWR complies with ESA requirements.

Third, in February 2014 the California Advisory Committee on Salmon and Steelhead Trout submitted comments on the BDCP.[16] The California Advisory Committee on Salmon and Steelhead Trout was established pursuant § 6920 of the California Fish and Game Code to advise CDFG on the protection of these fisheries. In its February 2014 comment letter to the Director of CDFG, this Committee stated:

> "BDCP promotes the unproven scientific hypothesis that habitat restoration can substitute for flow. However, the State Water Resources Control Board has already indicated that Delta inflows and outflows are presently insufficient to help listed species recover their former abundance. BDCP would reduce Delta outflow, which contributed to the decrease to salmon smolt survival rates modeled by the BDCP.
>
> The concept of improving riparian and subtidal habitat to create an aquatic food supply for the Delta to make up for too water diverted is an unproven theory that has been criticized extensively by federal agencies in their 'red flag' comments on the BDCP/
>
> . . .
>
> None of the alternatives considered in the BDCP Draft Environmental Impact Statement and report would lead to the recovery of Sacramento River Winter Run and Spring Run Chinook salmon. None of the alternatives analyzed reduces the amount of water diverted upstream of or within the Delta. None of the alternatives analyzed considers meeting or moving towards meeting the State Water Resource Control Board's Delta Outflow Criteria of 2010 that was specifically required by the legislature in 2009 to 'inform planning decisions for the...BDCP.'"

Fourth, in 2009, pursuant to the ESA the NMFS issued a BiOp for CVP/SWP operation impacts on endangered salmon/steelhead. Much like the 2008 USFWS BiOp for CVP/SWP operation impacts on delta smelt, the 2009 NMFS Bi-Op found that CVP/SWP operations would destroy or adversely modify the critical habitat of these fisheries, and therefore proposed increased flow requirements and curtailment of CVP/SWP diversions on the San Joaquin River.

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[16] February 26, 2104 Letter from California Advisory Committee on Salmon and Streelhead Trout to Charlton Bonham, Director of California Department of Fish and Wildlife.

Under these circumstances, again it is difficult to understand why the Bureau of Reclamation and DWR believe that the USFWS and NMFS are likely to determine that the current BDCP approach satisfies the HCP requirements of Section 10 of the ESA. To make this determination, the USFWS would need to disavow the findings of its 2008 USFWS BiOp for smelt, NFMS would need to disavow the findings of its 2009 BiOp for salmon and steelhead, and USFWS and NMFS would both need to disregard the findings and recommendations in the *2010 CDFG Flow Report* and the State Water Board's 2010 *Delta Flow Criteria Report*.

IV. CEQA/NEPA Compliance and Information on Baseline Conditions in *December 2013 Draft EIR/EIS*

A starting point for environmental impact analysis under both CEQA and NEPA is the information provided regarding "baseline conditions" (sometime also referred to as the environmental and regulatory "setting"). If the baseline conditions of the project are not accurately described, then the analysis in an EIR/EIS of a proposed project's impacts and effects on such baseline conditions will necessarily be flawed.

A leading case on CEQA baseline conditions is the California Court of Appeal's 2003 decision in *Friends of the Eel River v. Sonoma County Water Agency* (*Friends of the Eel River*). [17] This case involved a water agency project that would increase diversions of water from the Eel River, in which the petitioner alleged that the CEQA EIR section pertaining to impacts on Eel River salmon and steelhead species did not adequately describe baseline conditions. More specifically, the petitioner in *Friends of the Eel River* maintained that the EIR in question failed to disclose the previously documented impacts of diversions on salmon/steelhead fisheries and failed to disclose proposals from other agencies to curtail such diversions to protect these fisheries. In its decision, the California Court of Appeal agreed with the petitioner, finding that EIR's inadequate discussion of baseline conditions failed to properly set the stage for the project impact analysis that followed.

In terms of CEQA compliance, the facts and holding in *Friends of the Eel River* are particularly on point with respect to the BDCP's fisheries analysis. In both instances, the proposed projects

[17] 108 Cal.App.4th 859 (2003).

involved additional out of stream diversions that would reduce instream fresh water flow. In both instances, the waterways where the additional diversions were to take place involved declining salmon and steelhead fisheries where there had been detailed findings by other agencies that additional instream flow was needed to protect these fisheries. In *Friends of the Eel River* the California Court of Appeal ruled that the EIR's disregard and non-disclosure of the previous regulatory findings linking reduced fresh water flow to fisheries decline was inconsistent with CEQA's requirements concerning baseline conditions.

With these CEQA/NEPA standards in mind, and for reasons detailed earlier in this letter, the following portions of Chapter 11 of the *December 2013 Draft EIR/EIS* on baseline conditions appear vulnerable to challenge along the lines in *Friends of the Eel River*. Collectively, these portions of Chapter 11 of the *December 2013 Draft EIR/EIS* misrepresent the baseline conditions for fisheries through disregard and non-recognition of the critical role that reduced fresh water flows and rising salinity levels have played and are playing in the decline of smelt, salmon and steelhead in the Delta.

A. 11.1.5.1

This section is titled "Water Development and Conveyance" and contains a 4-page subsection under the heading "Water Diversions." In the subsection on "Water Diversions" there are 3 pages of discussion regarding the problem of entrainment of fish in the CVP/SWP south Delta pumps but no disclosure or discussion about well-established body of scientific evidence regarding the effects of CVP/SWP diversions on reduced fresh water flow, seawater intrusion and salinity (and how this salinity impacts smelt, salmon and steelhead).

B. 11.1.5.2

This section is titled "Hydrograph and Hydrodynamics Alterations" and contains an 8-page section on "Water Quality." In the subsection on "Water Quality" there is discussion of water quality impacts (on fisheries) related to nutrient input, ammonia, sediments, mercury, selenium, agricultural runoff, herbicides and pesticides. In the subsection on "Water Quality" there is no disclosure or discussion of water quality impacts (on fisheries) of salt/salinity resulting from seawater intrusion.

C. 11.2.1.2

Section 11.2.1.2 is titled "Long-Term Central Valley 2008 and 2009 USFWS and NMFS Biological Opinions." In Section 12.1.1.2, the *December 2013 Draft EIR/EIS* stated that the USFWS 2008 BiOp and incidental take permit included actions to "provide suitable habitat conditions" for delta smelt but made no mention of and did not disclose that these actions were specifically related to seawater/intrusion and salinity concerns and called for reduced CVP/SWP diversions to allow additional instream flow.

In Section 12.1.1.2, the *December 2013 Draft EIR/EIS* reported that a 2011 federal district court decision (issued by now retired Judge Oliver Wanger) had found the 2008 USFWS BiOp flawed and that the USFWS had been ordered issue a revised BiOp (suggesting that the conditions in the 2008 BiOp were no longer binding). As discussed above in this comment letter, in April 2014 the Ninth Circuit Court of Appeals (in *San Luis v. Jewell*) overturned and reversed the 2011 federal district court decision, and upheld the 2008 USFWS BiOp.

D. 11.2.1.8

Section 11.2.1.8 is titled "Clean Water Act" and notes that (pursuant to Section 401 of the Clean Water Act) the California State Water Board must certify that any activity subject to a permit issued by a federal agency meets all state water quality standards. This section does not disclose that that the issuance of an ESA incidental take permit for the proposed BDCP would be subject to State Water Board water quality certification, and that such was quality certification would address salinity levels (affected by seawater intrusions and CVP/SWP fresh water diversions). It should be noted that in its July 2013 comments on the BDCP, the State Water Board highlighted that the BDCP project proponents "should note that there are no waivers for Clean Water Act Section 401 Water Quality Certifications in the state of California."[18]

[18] July 2013 State Water Board Comment Letter on BDCP, page 30.

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E. 11.2.2.4

Section 11.2.2.4 is titled "The Salmon, Steelhead Trout and Anadromous Fisheries Program Act" and explains that in 1988 this legislation was enacted in response to reports that the natural production of salmon and steelhead in California had declined dramatically. Section 11.2.2.4 did not disclose that this 1998 legislation created the California Advisory Committee on Salmon and Steelhead Trout, and that (as discussed above in this letter) the California Advisory Committee on Salmon and Steelhead Trout submitted a letter to the director of the California Department of Fish and Wildlife that criticized the proposed BDCP for failing to address the need for additional fresh water flows into the Delta to restore salmon and steelhead fisheries.

F. Section 11.2 and Section 11.2.2.9

Section 11.2 is titled "Regulatory Setting" and its introduction states that "This section provides the regulatory setting for aquatic resources, including potentially relevant federal, state and local requirements applicable to the BDCP." Section 11.2.2.9 is titled "Sacramento-San Joaquin Delta Reform Act of 2009." Although the proceedings leading to the State Water Board's 2010 *Delta Flow Criteria Report* and the *2010 CDFG Flow Report* were explicitly required pursuant to the 2009 Delta Reform Act, there is no mention or disclosure of these proceedings or (or the findings/recommendations that resulted from these proceedings) in this section of the *December 2013 Draft EIR/EIS*. In Section 11.2.2.9 there is also no disclosure of provisions in the 2009 Delta Reform Act providing that the State Water Board's 2010 *Delta Flow Criteria Report* shall inform the planning decisions for the BDCP.

G. Section 11.4.1

This section is titled "Printed References" and lists all of the reports/written materials referenced and relied upon in the *December 2013 Draft EIR/EIS*. The State Water Board's 2010 *Delta Flow Criteria Report* and the *2010 CDFG Flow Report* are not listed in this section (nor are they mentioned or discussed anywhere in the text of the *December 2013 Draft EIR/EIS*).

V. Current BDCP Approach to Fisheries – Watching a Train Wreck in Slow Motion

There are politically and economically practical reasons that explain why the BDCP process has so far tried to avoid the issues of fresh water flow, seawater intrusion and salinity. CVP/SWP diversions in the Delta account for less than half of the total diversion in the Sacramento River-San Joaquin River watershed, with the majority of diversions occurring upstream of the Delta CVP/SWP pumps. Given this circumstance, the Bureau of Reclamation and DWR (and recipients of water from the CVP/SWP) have been understandably reluctant to assume the role of "sole guarantor" for ensuring fresh water flows in the Delta because from their perspective it seems that, equitably, upstream diversions should be curtailed as well.

These upstream diverters, however, are not formally a part of the BDCP (which focuses on CVP/SWP operations), and efforts to press for curtailment of upstream diversion are complicated by California's appropriative water rights system which generally provides that in times of water shortage/reduced supply "senior" appropriative water rights holders can take their full share before "junior" appropriators. Since most of the upstream diverters in the Sacramento River-San Joaquin River watershed hold appropriative water rights senior to appropriative water rights held by the Bureau of Reclamation and DWR for the CVP/SWP, under traditional California appropriative water rights principles these upstream diverters are likely to resist efforts to "equitably" share in the curtailment of diversions.

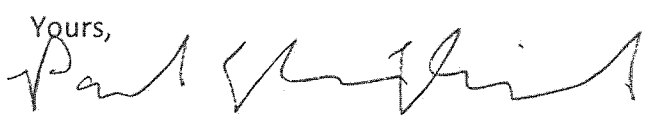
To be sure, the issues of fairness, equity and California appropriative water rights noted above are complex when it comes to allocating responsibility between the CVP/SWP and upstream diverters for ensuring there is adequate fresh water flow into the Delta. However, instead of acknowledging these complex issues head-on and trying to craft a feasible solution to navigate through them, with the BDCP process the Bureau of Reclamation and DWR have instead unfortunately attempted to dodge these issues altogether by adopting a fisheries restoration approach that simply ignores altogether the critical role of fresh water flow.

While one can appreciate why this approach was tempting to the Bureau of Reclamation and DWR (and the recipients of CVP/SWP water), it is an approach that is likely to fail because it

lacks scientific credibility. As explained above, the current BDCP approach is contingent on the State Water Board approving the proposal to change the CVP/SWP point of diversion to the north Delta and on the State Water Board issuing a Clean Water Act Section 401 water quality certification for the ESA incidental take permit, and on USFWS and NMFS approving the BDCP as an HCP that complies with Section 10 of the ESA. In light of the previous and repeated scientific determinations by the State Water Board, USFWS and NMFS regarding the need for additional fresh water flows to restore declining fisheries, however, it is questionable whether such agency approvals will be forthcoming. As also noted above, it is also questionable whether the non-disclosure of the well-documented scientific link between reduced fresh water flows and declining fisheries in the *December 2013 Draft EIR/EIS* is consistent with CEQA/NEPA requirements concerning disclosure of baseline conditions. Without these agency approvals, and without CEQA/NEPA compliance, the BDCP cannot move forward.

At this point, watching the BDCP process unfold is much like watching a train wreck in slow motion. Although many initially hoped the BDCP process would be grounded in credible science and would serve as a mechanism to address the hard political, legal and economic questions of how to reduce fresh water diversions in a manner that is fair and takes proper account of appropriative water rights principles, the BDCP has fallen short in both respects by opting to disregard entirely the question of fresh water flow. In doing so, the BDCP is likely to be rejected by the State Water Board, USFWS and NMFS, and has little chance of satisfying CEQA/NEPA requirements for disclosure of baseline conditions. The question (to strain the railroad metaphor) is whether the BDCP is too far down the track to halt its current course.

Yours,



Paul Stanton Kibel
Professor of Water Law and CUEL Co-Director

From: Jack Lindblad <jplindblad@gmail.com>
Sent: Tuesday, July 22, 2014 3:28 PM
To: BDCP.comments@noaa.gov
Subject: my request for you to expedite shipment of a dvd copy of BDCP EIR documents

This is my request for you to expedite shipment of a dvd copy of BDCP EIR documents.

Check out our campaign videos here.
And our social media hub here.

Jack Lindblad

818 785-2724
jplindblad@gmail.com

Like Lindblad For City Council on facebook | Follow me on twittter

From: Jack Lindblad <jplindblad@gmail.com>
Sent: Tuesday, July 22, 2014 3:31 PM
To: bdcp.comments
Subject: Request for you to extend Public Comment Period beyond July 29, 2014 of BDCP EIR documents

This is my request for you to extend Public Comment Period beyond July 29, 2014 of BDCP EIR documents.

Check out our campaign videos here.
And our social media hub here.

Jack Lindblad

818 785-2724
jplindblad@gmail.com

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On Tue, Jul 22, 2014 at 3:27 PM, Jack Lindblad <jplindblad@gmail.com> wrote:
This is my request for you to expedite shipment of a dvd copy of BDCP EIR documents.

Check out our campaign videos here.
And our social media hub here.

Jack Lindblad

818 785-2724
jplindblad@gmail.com

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Chambers of Commerce Alliance

VENTURA & SANTA BARBARA COUNTIES

July 14, 2014

BDCP Comments
Byan Wulff, NMFS
650 Capitol Mall, suite 5-100
Sacramento, CA 95814
Re: Support BDCP EIR/EIS Alternative #4

Mr. Wulff,

At our July 11, 2014 meeting the Chamber of Commerce Alliance of Ventura and Santa Barbara Counties voted to join the coalition in support of the Alternate #4 of the Bat Delta Conservation Plan. The State Water Project (SWP) is a vital component of Southern California's water system, providing roughly 30 percent of the region's water needs. However, 70 percent of the annual water demand for over 600,000 water users in southern Ventura County is met with state water supplies. While many efforts are underway to reduce our service area's imported water demand, it will continue to serve as a primary source for our drinking water supply and recycled water projects. As such, a reliable supply of imported state water is critical for the future social and economic vitality of Ventura County.

Southern California ratepayers have been investing in the State Water Project for more than four decades, and have additionally invested billions of dollars in regional storage and conveyance to allow Southern California to capture water when it is plentiful and reduce demands on imported supplies during dry and critically dry years. These investments are effectively stranded if water deliveries from the project continue to degrade.

We are supportive of the BDCP's proposed twin-tunnel conveyance system, known as Alternative #4, that isolates and protects drinking water supplies and helps restore natural flow patterns in the Delta for the benefit of native species, as well as the complementary habitat restoration, water quality and predator control measures outlined in the BDCP. We also support the plan's recognition that changing conditions in the Delta will require ongoing scientific review and real-time monitoring so the plan can effectively adapt over time to emerging science and the evolving ecosystem. The draft plan also provides an important framework for a range of operational outcomes and level of certainty necessary for a final plan to merit investment by participating public water agencies and by the state and federal governments.

We remain supportive of the efforts of Metropolitan and the other state and federal water contractors in the development of the BDCP and urge the state to move forward with the draft plan and focus on resolving those remaining issues needed to provide assurances that the plan will achieve California's co-equal goals of water supply reliability and ecosystem restoration in a cost-effective manner.

Sincerely,

Scott Eicher

Scott Eicher
Board President

c/o Ventura Chamber of Commerce • 505 Poli Street • Ventura, CA 93001
www.ChamberAlliance.biz • Info@ChamberAlliance.biz • 805.263.4600

PASADENA
CHAMBER OF COMMERCE
& CIVIC ASSOCIATION

BDCP1519.

July 15, 2014

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

Dear Mr. Wulff,

The Board of Directors of the Pasadena Chamber of Commerce would like to see a permanent resolution to the challenges facing water delivery systems and the environment in California. A safe, reliable and environmentally supportive water conveyance system for California is essential to our growth, economy and quality of life.

The Pasadena Chamber Board is supportive of the Bay Delta Conservation Plan. The Board favors an approach, such as Alternative 4, which provides for appropriate water conveyance and still preserves habitat and protects the ecosystem. The proposal also provides for seismic and other safety measures which will help protect citizens, habitat and the economy of California in the event of a disaster.

We certainly anticipate that the Bay Delta Conservation Plan can provide the resolution to california's water challenges and support approval of Alternative 4.

Thank you for your consideration.

Sincerely,

Paul Little
President and Chief Executive Officer

844 E. Green Street, Suite 208 ■ Pasadena, California 91101-5438
626-795-3355 ph ■ 626-795-5603 fax ■ www.pasadena-chamber.org

BDCP1520.

Sharon Jarvis
1432 South Tuxedo Avenue
Stockton, CA 95204

July 10, 2014

RECEIVED
JUL 15 2014
NAT'L MARINE FISHERIES SVS
SACRAMENTO, CA

BDCP Comments
Ryan Wulff, NMFS
650 Capitol Mall, Suite 5 – 100
Sacramento, CA 95814

Dear Mr. Wulff:

Thank you for the opportunity to comment on the draft Bay Delta Conservation Plan (BDCP). I am writing to express my concerns about the substantial adverse physical changes to the environment that the construction of three north Delta intake facilities and pumping plants will have on the historic communities of Freeport, Courtland and Clarksburg, including the scenic views along, and from, the river banks in those areas.

The proposed Intakes 2, 3, and 5 are large, industrial, concrete and steel intake structures, measuring approximately 55 feet from the river bottom to the top of the structure (rising 20 to 30 feet above the river surface), and extending 700 – 2,300 feet in length. The proposed pumping stations are approximately 70 feet tall and look similar to industrial warehouses. Each will have a surge tower 100 feet in diameter and between 60 and 75 feet in height.

As you may know, the Delta Reform Act of 2009 designated Freeport, Courtland and Clarksburg as legacy communities. All three of these Delta villages are icons of the unique, historic culture of the Delta, and would be adversely impacted by the construction of intake facilities and pumping plants in their vicinities. All three communities were steamboat landings during the Gold Rush era, and each has a distinct cultural and historic character based upon its history, architecture, riverside location, and views. The addition of intake facilities and pumping stations would result in reasonably forseeable adverse physical changes, as I discuss on pages 3 - 4, contrary to the California Environmental Quality Act (see Draft BDCP, Chapter 16, p. 16–1.)

Moreover, applying the standards of the Bureau of Land Management Visual Resource Inventory system (see Draft BDCP, Chapter 17, p. 17-40) to evaluate the scenic quality of the riverside landscapes in and around Freeport, Courtland and Clarksburg reveals that each little town and its environs has a high landscape sensitivity level. In the draft BDCP, a high landscape sensitivity level is defined as "special areas of interest, a higher number of viewers in the area, highly sensitive viewer groups present, high public interest in changes to the area, and high concern over how changes may affect adjacent land uses." (Draft BDCP, Chapter 17, p. 17-40, lines 33-36.) The riverfront from, and including, Freeport to Courtland, and from, and including, Clarksburg to Walnut Grove is

BDCP520

of great interest to drivers and their passengers on the river roads, boaters on the Sacramento River, tourists, and residents of the area. To tourists and residents, this area is of special interest due to its unique river character and the historic significance of the few remaining Gold Rush era river towns of Freeport, Courtland and Clarksburg. Due to its unusual river culture where farmland, riparian river banks, and small, historic towns intermix, along with the fact that few Gold Rush era towns still exist along the river, a greater number of viewers are drawn to this area than to nearby surrounding areas that are farther away from the river. Both tourists and residents are highly sensitive to changes that would alter the appearance of the river banks and historic towns. It is still possible to figuretively step back in time by visiting these historic towns of the Delta, and to imagine the river boats that once plied the Sacramento River between the towns. All of these aspects make public interest in changes to the area, and how such changes may affect the area and adjacent land uses, of high concern to the viewer groups mentioned above. Clearly, the historic communities of Freeport, Courtland and Clarksburg, including the scenic views along, and from, the river banks in those areas are sites of high landscape sensitivity levels.

The draft BDCP recognizes that "[t]he existing character of the landscape in areas of high sensitivity should be preserved. .... The level of change to the landscape should be very low and must not attract attention." (Draft BDCP, Chapter 17, p. 17-40, lines 35-38.) The modern, industrial-appearing, proposed intake facilities and pumping stations would completely alter the character of the landscape, which now is of farmlands, riparian river banks, and historic little towns. Considerable adjacent farmland would be destroyed through condemnation, the boring of the tunnels, and the storing of the earth and rock excavated from the building of the twin tunnels and the intake and pumping facilities, further altering the landscape. The level of change would *not* be low and it *would* attract attention, contrary to the mandate to preserve the existing character of the landscape in areas of high sensitivity. Instead, if the intake and pumping facilities are built, the historic aspect and feel of the area would be irrevocably damaged. The new facilities would stick out like a sore thumb.

According to the draft BDCP, the level of visual dominance of the proposed facilities, here specifically, the intake facilities and the pumping plants, is determined by assessing the contrast between the proposed facilities and their settings. (Draft BDCP, Chapter 17, p. 17-41, line 23.) In other words, how visually prominent is the proposed structure to a viewer? A project is deemed dominant if it "dominates the view and attracts more attention than other components of the setting." (Draft BDCP, Chapter 17, p. 17-41, lines 30-31.) How could the massive structures of the intake facilities and pumping stations do anything other than overshadow the riparian and historic settings where they would be located? The clash between the historic settings and the large, industrial appearance of the proposed intake facilities and pumping plants would dominate the view and draw the viewer's eye to the discordance between the areas of the river bank where the facilities would be and the areas of the river bank where they would not. They would be a jarring, modern intrusion to the historic appearance of the nearby

small Delta towns of Freeport, Courtland, and Clarksburg.

Finally, as stated in the draft BDCP, "[a] project's level of dominance can be measured by comparing the project's features with major features in the existing landscape. The combination of the visual dominance rating ... and the landscape sensitivity level ... [i]s used to determine the overall effect of project-related landscape changes on viewers." (Draft BDCP, Chapter 17, p. 17-41, lines 37-39; p. 17-42, line 1.) If one compares the current landscape of riparian and agricultural river views, and of the small Delta towns of Freeport, Courtland, and Clarksburg with the gigantic, planned, intake facilities and pumping plants, it is clear that the intake and pumping facilities would overwhelm the natural and historic views. The proposed structures would be totally contrary to the current views, and would redirect a viewers eye to them because of the complete clash in appearance between the low-lying, natural, and historic views with the out-of-character, large, industrial-appearing intake and pumping facilities.

As described in the draft BDPC, proposed Intakes 2, 3, and 5 are large, industrial, concrete and steel intake structures, which will rise 20 to 30 feet above the river surface, and sprawl 700 – 2,300 feet along the river bank. The proposed pumping stations would look similar to industrial warehouses, and be <u>over seven stories high</u>. The structures would violently clash with the surrounding rural landscape and pastoral river banks in both appearance and size. The height and length of the facilities would disrupt the historic Delta appearance in the Freeport, Courtland and Clarksburg areas with the addition of large, intrusive, modern, industrial structures towering over the current natural vegetation along the river bank and the existing low homes and buildings. Driving along the river roads or boating on the Sacramento River in these areas would no longer provide the uninterrupted riparian and historic river views which those of us who love the Delta value so highly. The people who live in these areas, many of whose families have been in the Delta for generations, would have their river views destroyed. For a resident of Clarksburg, the view from the River Road on the west side of the river would be of a huge, hideously out-of-character intake facility and pumping station.

Even the draft BDCP summarizes and concludes that the visual effects of the intake facilities and pumping plants would be adverse and incompatible with the exisitng visual environment. "Construction of Intakes 1-5 and the accompanying pumping plants ... would introduce visually discordant features into foreground and middleground views.... These elements would introduce visually dominant features that would be very noticeable to all viewer groups and would segment the visual landscape of the study area, reduce the amount of open space lands available to viewers, and eliminate valued visual resources." (Draft BDCP, Chapter 17, p. 17-95, lines 7-12.) "These changes ... would result in reductions to the visual quality in some locations [such as the towns of Freeport, Courtland and Clarksburg, and the river bank areas between them] and introduce dominant visual elements that would result in noticeable changes that do not blend and are not in keeping or are incompatible with the exisiting visual environment." (Draft

BDCP1520

BDCP, Chapter 17, p. 17-95, lines 37-40.) As such, the draft BDCP itself acknowledges that there are reasonably forseeable adverse physical changes which are contrary to the California Environmental Quality Act, and that the level of change to the landscape by proposed Intakes 2, 3, and 5, and their pumping stations is unacceptable and contrary to preserving the existing character of the landscape of high sensitivity leval as the Bureau of Land Management Visual Resource Inventory system requires.

If the Twin Tunnels, the intake facilities, and the pumping plants are built, the unique charm of the historic California Delta will be immeasurably damaged. Please stop this project before it is too late to repair the harm it will do.

Sincerely,

Sharon Jarvis

Sharon Jarvis

cc: Barbara Barrigan-Parrilla, Restore the Delta

3DCP1521.

The Honorable Edmund G. Brown Jr.
Governor, the State of California
State Capitol Building, Suite 1173
Sacramento, CA 95814

Mr. Ryan Wulff
National Marine Fisheries Services
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

RE: Concerns over proposed Delta plans

Dear Governor Brown and Mr. Wulff,

I'm writing you today, as a concerned citizen, to ask that any Delta solution developed by the state does not come at the expense of those who live and work in the Sacramento region. The proposed solutions in the Bay Delta Conservation Plan focus on solving the Delta's environmental problems and Central and Southern California's water supply needs. However, it continues to ignore the needs of Northern California upstream of the Delta. This poses serious risks to our economy, environment and quality of life.

In early 2014, I was shocked and saddened by the drought's impacts upon Folsom Lake and the lower American River. The lake and river are key to the Sacramento region's economy, lifestyle and environment and are crucial in providing water for California's water system and the Sacramento-San Joaquin Delta.

The current draft of the BDCP's Environmental Impact Statement/Environmental Impact report states that as the BDCP is implemented, Folsom Reservoir could go to "dead pool" approximately once every ten years Folsom Lake is crucial not only to our water supplies, but for the entire state. The BDCP acknowledges the possibility of Folsom Lake going dry, but the state is not proactively working toward solving this critical issue.

In this "dead pool" scenario, significant urban populations in Sacramento, Placer and El Dorado counties – including Granite Bay and the cities of Folsom and Roseville – would be essentially cut off from critical surface water supplies for several months. This would devastate the region's economy, devalue property and likely lead to depopulation of cities. It would also ultimately devastate the same environment that the BDCP is looking to restore -- the San Francisco- San Joaquin Bay Delta. These economic and environmental impacts would not only harm the Sacramento Region, but also harm the entire state.

The Sacramento region's water agencies, cities and counties have worked together on a comprehensive review of the current draft of the BDCP and its related documents and have identified fatal flaws. As a concerned citizen of California, I feel it is critical to reiterate the fatal flaws in the current draft of the BDCP.

The current draft of the BDCP is fundamentally inconsistent with existing water rights and contracts held by diverters from Folsom Reservoir (cities of Roseville and Folsom and San Juan Water District). The current plan does not meet the basic federal and state criteria to be considered complete. The BDCP lacks an operational plan for the proposed twin tunnels, and the overall governance of the twin tunnels is unclear. Without clarity in the BDCP about the operation of the twin tunnels, the impacts to Folsom

BDCP1521

Reservoir remain unclear and our region continues to face the potential of "dead pool" with no clear solutions.

With too many unanswered questions, errors and questionable assumptions, I strongly feel that the current draft of the BDCP should be considered incomplete. I ask that you direct the Department of Water Resources to do a better and more complete job and provide the public with a document that clearly defines a solution to the Delta and also supports a good, comprehensive water plan for all of California.

Sincerely,

[INSERT YOUR NAME AND ADDRESS]

R. L. Percival
512 6TH ST
Roseville, CA. 95678

cc: [INSERT NAMES OF CONGRESSIONAL, STATE SENATE AND ASSEMBLY REPRESENTATIVES]

From: JLucas1099@aol.com
Sent: Tuesday, July 22, 2014 3:25 PM
To: BDCP.Comments@noaa.gov; BDCP.comments@water.ca.gov
Subject: BDCP Comments on Draft BDCP and associated Draft EIR/EIS

July 22, 2014

Ryan Wulff
National Marine Fisheries Service
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

Subject: Comments on Draft Bay Delta Conservation Plan and associated Draft EIR/EIS

Dear Mr. Wulff:

As a private citizen who has attended local workshops and SCVWD panel discussions and read the BDCP Executive Summary documents on this extensive Draft Bay Delta Conservation Plan, I still find it difficult to address continuing concerns with complete confidence. However, as deadline is now, will try to be concise.

The most critical issues that Department of Water Resources seems to seek to solve in this upgrade to the Bay Delta conveyance system are to move entry point for fresh water intakes beyond increasing Delta salinity zone, and to assure a 9000 cfs supply without damaging San Francisco Estuary ecosystems and fisheries.

The BDCP Draft was not entirely clear as to how far and fast into Delta marshes these saline conditions are occurring, but it does not look as if proposed intake tunnels' point of entry will be viable for even half of life of 50 year project. Is this design flaw critical? The draft needs more precise data on elevation along lower reach of Sacramento River in respect to bay rise.

If Suisun Marsh is experiencing sufficient brackish water conditions to raise concern for duckling survival the salinity levels may not be in compliance with water quality criteria and required fresh water flows. Recently a State water official referenced average historical tidal flow at Chipps Island to be 170,000 cfs which is not the same as average historic Delta outflows of 10,404,731.3 cfs at Chipps Island. I may be unclear as to his exact frame of reference, but do feel Delta outflow data needs firm and consistent criteria.

Then, BDCP maps show 'Legal Delta' (Delta Flood Management Facilities, Figure 7.5) coupled with Suisun Marsh in manner to imply they are 'legally' linked as to water supply criteria when had thought establishment of conservation plan for Suisun Marsh had given it special guarantees. To be technical BDCP is a misnomer, and plan should be called Sacramento-San Joaquin Delta Plan as it doesn't address associated impacts of Delta flow to entire San Francisco Bay.

"Bay is an inlet of the sea", and Suisun Marsh in San Francisco Bay, merits management integral to entire Estuary. Estuary is defined as "a passage where tide meets river current; especially an arm of the sea at lower end of a river". I feel truncated scope of BDCP's review in regards flows and sediment transfer does not provide scientific integrity in project's EIR/EIS analysis of impacts to ecosystems. To ignore San Francisco Bay as a whole and South Bay marshes in particular, by CEQA and NEPA standards, is a deficient review.

Estimates of an 8 to 9 % reduction in sediment yield to estuary system by implementation of facility upgrade is a critical concern. South Bay Salt Pond Restoration efforts rely totally on sediment coming out of Delta.

It also has to be a concern how best to screen sediments from intake tunnels and keep 40' diameter tunnel maintenance at manageable levels. USGS records note that sediment load discharge in Sacramento River at Freeport on December 24, 1983 reached a maximum of 58,000 tons. At time of high winter flows wouldn't such a bedload impair intake tunnel function and impact water quality of prime stream flow transfer?

This conveyance systems touts reliance on gravity flow with both single bore and dual bore tunnels but still requires pumping plants at either end. In consideration of sediment loads in this reach of Sacramento River, and project's 30 mile length of dual bore tunnels, one would appreciate substantiation of credibility of science of design. In past experience find estimation of impacts of sediment transfer is Achilles heel of flood projects.

BDCP1522

Then, do have serious concern that burrowing 2 40 foot diameter tunnels through organic peat with high groundwater for thirty miles under fragile Delta Island sub-strata may cause levee or perhaps island collapse which might have irreversible domino effect on project area. Global warming and bay rise conditions continue to challenge integrity of Delta islands and levees, but pumping high groundwater may trigger soil failure.

Another impact, which do not believe is fully addressed is interruption by on-bank intake tunnels of historic anadromous fishery migration route up main stem of Sacramento River. The installation of facility structures will necessitate extensive loss of riparian vegetation and canopy, with attendant rise in stream temperatures. Despite armoring of river banks, design's current deflection of such magnitude will inevitably result in channel erosion and likely progressive head-cutting. Proposed mitigation measures cannot compensate for critical migratory corridor habitat degradation for Estuary's endangered and threatened Steelhead and Chinook Salmon runs.

Yolo Bypass is always going to present critical temperature challenges for cold water fisheries, even with a mature riparian canopy, which may not be acceptable to USACE flood control design for this floodplain. Do not find sufficient science in BDCP anticipating extent of global warming impacts on magnitude and timing of Sierra spring runoff in Sacramento River project area and on ecosystems of Estuary. This is a deficiency.

From past experience might comment that have found mitigation measures are likely to be more destructive of wetlands, riparian and marsh habitat than actual project. Case in point, #85 overpass of Coyote Creek at #101 in Santa Clara County permitted diversion of flows to marginal uplands, to create mitigation wetlands, which resulted in dry-back to main channel with loss of anadromous runs, and historic freshwaater marsh.

Adaptive management criteria should be precise with consideration of timing of pulse flows to support natural migratory cycles and historic fishery instincts to go with stream flow. Diversionary fencing to steer fish away from certain channels does not seem promising and likely to run afoul of recreation boating. I fear that BDCP 'conservation efforts' might tend to override autonomy of responsible, well functioning Delta user groups in impractical projects which would be a mistake.

Do appreciate Delta agriculture that makes multi-use of river water for crops (hopefully with minimal use of fertilizer), for humans, for wildlife vegetation, (such as rice stubble fields sustaining Pacific flyway migration), and then returns runoff to river with usable quality for downstream island.

If an ultimate earthquake does occur in Delta region these long term residents will be their only source of aid. General public support systems will be overwhelmed throughout State and highways likely be impassable. Water traffic will remain flexible and be lifeblood for entire region. So do not let BDCP overrule water rights and historic uses that may not appear neat but which are working successfully. Delta life, recreation and sports fishing offers freedoms of old west and project reach of Sacramento River impacts critical link in this.

As do not think BDCP project design for water conveyance upgrade is entirely viable or can be implemented without permanent degradation to San Francisco Bay and Estuary ecosystems, would like to offer alternative designs which believe are feasible. However, need to close at this time and will extend comment tomorrow.

Thank you for any kind consideration that you can give to these concerns.

Libby Lucas
174 Yerba Santa Ave.
Los Altos, CA 94022

From: Susan Harby <susanharby@aol.com>
Sent: Tuesday, July 22, 2014 11:50 AM
To: BDCP.Comments@noaa.gov
Subject: Protect the Delta, Deny Twin Tunnels Permit

Dear Mr. Ryan Wulff,

Hey , lets work on conserving our water not using it up in a generation while a few make huge profits on water rights and the construction of the Twin Tunnels in the Bay Area Delta. It is time to end corporate rule of this country and our state. The serious water shortage does not mean that we have to destroy our natural world in favor of large corporate interests. The twin tunnels may service the corporations, small farmers and residents of the central valley but it will be destructive to our communities and environment from Sacramento to San Francisco. The Delta is important to our fisheries, our water systems and the plain old beauty of the Bay Delta. Stop plans for the "Twin tunnels. I will invest to keep our Delta System in place and to stop corporate power from destroying our precious God-given resources. Please heed the following message.

I am writing to strongly oppose the "Twin Tunnels" project (aka Bay Delta Conservation Plan) that threatens to dewater the Sacramento-San Joaquin Delta for the benefit of a few water contractors and agribusinesses.

These tunnels would sharply reduce water flow throughout the delta and harm thousands of sensitive aquatic species, including chinook salmon, steelhead trout, smelt, and green and white sturgeon. The tunnels would also wipe out food sources and habitat for migratory birds and other wildlife that depend on a functioning delta ecosystem to survive.

The project's heads justify this killing by proposing future habitat restoration even as they readily admit uncertainty about where and how to make such a plan work. Further, the $25-$60 billion tunnels will rely on taxpayers to fund most of this restoration. Water is a public trust resource, and taxpayers shouldn't have to shoulder the burden of this project while water contractors turn a profit from exporting the delta's water.

California's water crisis is best solved by adopting a combination of water conservation, efficiency, reuse and desalination strategies for both cities and farms. The state and nation should invest in these proven strategies, instead of wasting tax dollars and sacrificing our precious natural resources. Please -- protect the delta and deny this project's permit.

Sincerely,

Susan Harby
2340 Silk Rd.
Windsor, CA 95492
US

From: Brandi Narvaez <bnarvaez@brandinarvaez.com>
Sent: Monday, July 21, 2014 1:28 PM
To: BDCP.Comments@noaa.gov
Cc: Brandi Narvaez
Subject: BDCP - Public Comments

Brandi Narvaez
617 Rialto Drive
Vacaville, CA 95687
707-446-9520
Email: bnarvaez@brandinarvaez.com

July 21, 2014

BDCP Comments
Ryan Wulff, NMFS
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814
Email: BDCP.Comments@noaa.gov

Regarding: BDCP Public Comments

Dear Mr. Wulff,

I am writing as a concerned citizen of the great state of California, specifically Solano County, regarding the Bay Delta Conservation Plan (the Plan). After anticipating the release of the Plan and investing considerable time in reading segments of the thousands of pages available I am compelled to write with my public comment. I am wildly concerned about the monetary factors (costs & funding), environmental impacts, and legal aspects of this plan.

The draft of the Plan does not adequately cover the cost components of this monumental plan: to both build and operate. And frankly plans developed and executed by the state of California are notorious for being budgeted poorly. Example being the recently built eastern span of the Bay Bridge; originally estimated at $1 Billion; final cost was $6.4 Billion. Clearly the ability to estimate sizable projects is akin to having a crystal ball, but the sheer magnitude of this plan even with the contingencies seem to be significantly under budget. Furthermore in section 8.3.4.2.1 it was alarming to read that full funding is not really known at this point for all aspects of the Plan; "one scenario under consideration is bond funding" There is absolutely no guarantee that Californians will approve a water bond this year or in the near future, or that any bond they do approve will include funding for BDCP. Furthermore, it is highly doubtful that Congress will fund $4 billion toward a habitat conservation plan for California as described in the BDCP presently. Frightening that with a proposed ~$50 Billion project these documents are not directly clear on how it would be funded in totality

From a budget perspective the Plan also seems blatantly serving the water contractors who are "committed to funding" the full cost of Conservation Measure 1 (CM1 – aka 'the tunnels') as referenced in Table 8.41. Why wouldn't they want to fund the very measure that brings them precious water supply and with it profit? It suits their needs and they are willing to pay for it. If they want the water, shouldn't they pay for the remaining measures it would take to protect the species, conserve habitats, and restore communities left decimated in the wake of their water grab? They cannot be allowed to take the water without funding the remainder of the project, that should not in good conscious be left for tax payers nor rate payers in this state to absorb.

BDCP 1524

I was further offended by the comments in Section 8.3.4.4 "The costs of CM1 and associated mitigation and conservation are affordable by the ratepayers of the urban and agricultural agencies receiving federal and state water supply delivered through the Delta. The benefits of the preferred project to these ratepayers will exceed the total costs of CM1 and associated mitigation and conservation." – But given what I read in Section 8.3.4.2.1 regarding bond funding scenarios under consideration that statement does not appear to be true. It is only true as it pertains to building the tunnels in CM1, not the remainder of the conservation measures therefore the full plan. The comments are offensive because it speaks to the ever increasing demand of the Southern California rural and urban rate payers who want the water from the Delta and the greed water contractors.

Another example I found of greed versus what should be a genuine conservation plan: Table 8-45 documents personal income levels for the rate payers of the water. Basically this reads as; they can pay for the water grab, so they should be allowed to have it. The comment directly following the table is "not only is BDCP affordable, but the benefits to the ratepayers will exceed the total cost to contractors." Again the Plans own written words highlight the focus on the profit of the water contractors and not the destruction left in their wake with 21 other Conservation Measures left unfunded.

After scrutinizing the budgetary components of the Plan I looked at impact. Which was even more startling, a conservation plan with 22 measures is too broad, will be difficult to implement and it would appear BDCP has created for itself the largest loophole ever as referred to in the Plan as "Adaptive Management - as the implementation of the Plan evolves there is the opportunity to reduce uncertainly over time" in Section 3.6.4.2 While I agree with this concept overall, that plans must change as more data is known, it would also appear that this creates the opportunity for species to become extinct, for land and other conservation measures to 'fall out of plan' because of "adaptive management". The entire section on Adaptive Management in the Executive Summary reads as a loophole and self-serving to the purpose of the Plan if you read between the lines.

In Section 1.2, Planning Goals and Conservation Objectives I was relieved to see many of the conservation measures listed directly as objectives. Since the list was bullet format and not numbered or sequenced it did seem strange to see the objective of CM1 listed later in the list. "Provide a means to implement covered activities in a manner that complies with applicable state and federal fish and wildlife protection laws..." Given the water contractors aren't willing to fund the full project, i.e. the full set of conservation measures why should the fisheries and agencies give them the 'take permits' they need? And if this plan cannot guarantee those take permits for the water contractors why should CM1 be allowed at its astonishing cost and with the destruction it will cause?

I further was alarmed about impact statements in Table 31.1 which literally outline "no feasible mitigation to address this impact" – much of which was related to ground water supplies. Implies that under construction of CM1 while taking precious open water resources from the Delta the groundwater will also be compromised? So those who reside in the area are meant to suffer years of construction projects and irreparable ground water damage? Shocking that this plan would be willing to compromise the health and wellbeing of entire communities by affecting their groundwater!

The more and more I read, the more and more I was angered by the BDCP. It did strike me actually as illegal as well. How can a plan like this be allowed under existing legislation; i.e. Water Code Section 85020-85023 outlines the policy of the State of California as it pertains to the Delta. This legislation was passed recently, in 2009, which outlines clearly that regional areas should be reducing their dependencies on Delta fed water resources through other measures. The entire BDCP is in direct conflict with that legislation. It would appear the entire BDCP has no legal basis, or should I be so bold as to say, the BDCP is illegal according to the State of California.

I do have a compliment to the Plan as published; the photos provided in the Executive Summary were breathtaking. The Delta is an amazing place; the animals, birds, fish, the landscape, the habitat, the entire ecosystem that supports Northern California deserves to be conserved and respected. I am saddened to say the BDCP does not provide the Delta the appropriate conservation. I researched other conservation plans as referenced in your executive summary; the Great Lakes project was quite interesting and their objectives clearly defined the conservation they intend to do; clean-ups, prevention of invasive species, health of the shorelines – those are the topics for us to focus on in a Delta Conservation Plan. I would encourage you to actually and literally be inspired by their work and not just in print.

BDCP1524

I would love nothing more than to see the Delta restored, cleaned, and enhanced. This plan as presented by the BDCP does NOT accomplish those objectives; it is a water grab project which reads like a profit center for the water contractors. Through my reading and review I've come to believe it is underfunded, focuses blatantly on the financial benefits of the water contractors supplying Southern California, it has irreparable impact and consequences to the Delta coupled with a ridiculous loophole written by the Plan for the Plan. Finally it would appear this proposed plan is basically illegal in accordance with legislation already in place to protect the Delta.

I would welcome any healthy discussion about my comments regarding the Bay Delta Conservation Plan, I can be reached at the above email address at any time.

Sincerely,

Brandi Narvaez

From: Meese, Robert <rjmeese@ucdavis.edu>
Sent: Monday, July 21, 2014 3:40 PM
To: BDCP.Comments@noaa.gov
Subject: comments on draft BDCP for tricolored blackbird

I have been working with tricolored blackbirds for 10 years and was the statewide coordinator for the 2014 Tricolored Blackbird Statewide Survey. I have the following comments on the draft Bay Delta Conservation Plan:

Appendix 2A.23.2.1: does not take into account the results of the 2014 Statewide Survey, in which a population estimate of 145,000 birds was derived. In no way have population numbers stabilized, rather a steep decline in numbers persists. The results of the Statewide Surveys prior to 2008 are not directly comparable to those of 2008, 2011, and 2014 due to large differences in methods and levels of effort. The 2014 Statewide Survey was believed to be the most comprehensive yet, with 802 known locations surveyed but only 143 of these were found to be occupied by 145,000 birds.

Appendix 2A.23.3.1: The Plan Area could support breeding by many thousands of birds if existing nesting substrates were managed properly. For example, the marsh associated with the Hay Road landfill in Solano County is contoured for geese, not tricolored blackbirds. If it were to be recontoured correctly to provide tricolor habitat, as its permit requires, it could support breeding by 5-10,000 birds. There are numerous examples of poorly maintained nesting or potential nesting substrates in the Plan area and it is well within the historic breeding range of the species. The Plan area could contribute substantially to tricolored blackbird conservation by providing far more extensive breeding opportunities as there is much productive foraging habitat in the Plan area.

Appendix 2A.23.4.2: The Plan area is the dominant known wintering area of the species. I and Ted Beedy observed a visually estimated 50,000 tricolors on a private ranch just north of Birds Landing, Solano County, October 28, 2007. The precise roost site is unknown and ought to be determined and protected.

Appendix 2A.23.4.3: The nestling interval is 10-14 days, there is no evidence of a "transition" from hatchlings to fledglings in 24 days, and the entire breeding cycle takes about 32 days, not 45. Fledglings are independent from adults in 4-6 days, except for off-colony feedings, which may persist a few days longer.

Appendix 2A.23.6. Tricolored blackbird will be considered for possible emergency listing under CESA on August 6, 2014 at the Fish and Game Commission meeting in San Diego.

2A.23.8. Recovery Goals. The Conservation Plan has a conservation target of 750,000 birds, although this may change if the species is listed under CESA on August 6, 2014.

Robert J. Meese, Ph.D.

BDCP1526.

Harbor City/Harbor Gateway
CHAMBER OF COMMERCE
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Celebrating 75 Years
From the Past and into the Future

Form Master #9

July 21, 2014

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

Dear Mr. Wulff,

I'm writing to express my strong support for Bay Delta Conservation Plan Alternative #4, which offers the best solution to protect our water supply while restoring the environment.

Without taking action, a single major earthquake in the San Joaquin River Delta could knock out 30 percent of Southern California's drinking water supply for up to a year! Bay Delta Conservation Plan Alternative #4 is the best approach to prevent such catastrophe while also creating and saving 1.1 million jobs and restoring and protecting 145,000 acres of habitat for 57 protected species of fish and wildlife.

It is vital that this plan move forward, and I appreciate the opportunity to register my strong support.

Sincerely,

Joeann Valle

Joeann Valle
Executive Director

BDCP1526

From: Joeann <Joeann@hchgchamber.com>
Sent: Monday, July 21, 2014 10:54 AM
To: BDCP.Comments@noaa.gov
Cc: 'Tracy Rafter'
Subject: Bay Delta Conservation
Attachments: Bay Delta Conservation.docx

Thank you for taking the time to read this email

Joeann Valle
Executive Director
Harbor City/Harbor Gateway Chamber of Commerce

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