

NORTH DELTA WATER AGENCY

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July 29, 2014

Via hand delivery and E-mail (BDCP.Comments@noaa.gov)

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

Subject: Comments of the North Delta Water Agency on the Draft Bay-Delta Conservation Plan and EIR/EIS

Dear Mr. Wulff:

In 1981, the North Delta Water Agency (NDWA or Agency) and the Department of Water Resources (DWR) executed its *Contract for the Assurance of a Dependable Water Supply of Suitable Quality* (1981 Contract), a copy of which is attached to this letter as **Exhibit A**. The Agency values and respects DWR as a contractual partner and appreciates its commitment to maintain the assurances provided to North Delta water users for the last thirty-three years.

On the eve of the parties signing the contract, DWR stated the benefits to North Delta landowners of becoming a SWP Delta water contractor would be receiving “more water, or water of better quality, than they did before” the construction of the Central Valley Project and State Water Project.¹ Based on DWR’s long-standing good faith in performance of these obligations for the past three decades, we submit these comments to raise serious concerns regarding the department’s ability to continue ensuring these water supply and quality protections over the next half century, if the Bay Delta Conservation Plan (BDCP or Plan) is implemented as currently proposed.

To secure this contractual right and the rights of Agency landowners to adequate water supply and quality, NDWA submits these comments on the Draft BDCP and the accompanying Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

¹ DWR Director Ronald Robie quoted in the Sacramento Bee, “Water Payment Progress Helped By Fear Of Canal.” (March 21, 1980).

These comments also are being submitted on behalf of the following districts that exist and operate, in whole or in part, within NDWA:

- Reclamation District 501
- Reclamation District 551
- Reclamation District 563
- Reclamation District 900
- Reclamation District 999
- Reclamation District 2060
- Reclamation District 2068
- Maine Prairie Water District

Because the BDCP states that the Plan and supporting documents are incorporated into the EIR/EIS, NDWA's comments on the BDCP should also be considered comments on both the Plan and EIR/EIS.

I. PRELIMINARY PROCEDURAL COMMENTS AND CONCERNS

The release of the BDCP Plan and EIR/EIS for public comment and review is premature due to the failure of these documents to satisfy the requirements of the California Environmental Quality Act (CEQA), the National Environmental Protection Act (NEPA), the federal Endangered Species Act (ESA), the California Natural Communities Conservation Planning Act (NCCPA) and the Delta Reform Act. Nonetheless, NDWA submits these comments in order to exhaust its administrative remedies and preserve its legal standing should this project proceed toward permitting and implementation without first addressing the numerous deficiencies identified in this letter.

The Agency's primary reasons for rejecting the adequacy of these documents for public comment at this point in the environmental review process are as follows:

A. Inadequacies Inhibit Ability to Properly Evaluate Project Impacts

The NDWA contends the release of the BDCP and EIR/EIS is premature due to fundamental inadequacies that prevent the public and decision-makers from being fully informed of the project description and scope, and the severity of the project's environmental impacts if implemented as currently proposed.

Due to the voluminous, internally inconsistent, and disorganized nature of the BDCP and EIR/EIS,² the NDWA has been forced to incur considerable time and expense in order to develop these comments. Included in the costs incurred by the Agency are: (i) the cost of retaining an engineering consultant with expertise in hydrologic modeling (MBK Engineers) to review and comment on the flawed modeling that underlies the Plan's Effects Analysis; and (ii) the cost of retaining a fisheries biologist (Dave Vogel) to evaluate the credibility of the

² See, e.g., Panel to Review California's Draft Bay Delta Conservation Plan, *A Review of the Use of Science and Adaptive Management in California's Draft Bay Delta Conservation Plan* (2011); accessed at: http://www.nap.edu/openbook.php?record_id=13148 ("The lack of an appropriate structure creates the impression that the entire effort is little more than a post-hoc rationalization of a previously selected group of facilities, including an isolated conveyance facility, and other measures for achieving goals and objectives that are not clearly specified.") ["NAS comments"]; Delta Independent Science Board, *Review of the Draft EIR/EIS for the Bay Delta Conservation Plan* (May 15, 2014), available at http://deltacouncil.ca.gov/sites/default/files/documents/files/Item_9_Attachment_3.pdf. ("The DEIR/DEIS provides an exhausting wealth of information about the Delta and the likely impacts of the proposed alternatives. However, this wealth of information and data is not organized in a way that can usefully inform difficult public and policy discussions.") ["ISB Comments"].

conclusions reached concerning fisheries impacts and environmental benefits contained in the Plan's Effects Analysis and EIR/EIS. The findings and recommendations of these consultants are set forth in the following attachments, which are submitted with this letter and incorporated herein by reference:

Exhibit B:

Vogel, D., *Comments on the Public Draft Bay-Delta Conservation Plan (BDCP) and Draft BDCP Environmental Impact Report/Environmental Impact Statement* (June 6, 2014).

Exhibit C:

Bourez, Walter, *Report on Review of Bay Delta Conservation Program Modeling* (June 14, 2014);

Exhibit D:

MBK Engineers, *Technical Comments on Bay-Delta Conservation Plan Modeling* (July 29, 2014)

B. The Plan and EIR/EIS Ignore Independent Science Reviews and Federal Agency Assertions of Inadequacy

Several independent science reviews of the Plan, EIR/EIS, and the Effects Analysis in particular have been conducted. All of these reviews have questioned the scientific methodologies and conclusions reached in regard to BDCP's ability to contribute to the recovery of listed or covered species. These reviews have all been particularly critical of the biological benefits claimed in the BDCP and the EIR/EIS. These scientific experts have also identified serious flaws in the Conservation Measures, in the modeling and Effects Analysis, and in the environmental impacts analysis and conclusions.³

DWR's decision to release the Plan and EIR/EIS despite requests by federal agencies to do otherwise, and DWR's failure to resolve the serious concerns raised by these independent science review panels and federal agencies in the prior two Administrative Drafts⁴ is both perplexing and concerning.

C. The Plan and the EIR/EIS Must Be Substantially Revised and Re-Circulated for Public Review and Comment

Over the past several years, there have been hundreds, perhaps thousands, of comments and suggestions for changes in the BDCP submitted by other Cooperating, Responsible, and Trustee Agencies (e.g., SWRCB, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Bureau of Reclamation, Delta Stewardship Council, Delta reclamation districts, etc.), non-governmental organizations, and members of the public (e.g., Delta Counties Coalition, Local Agencies of the North Delta, DSC Independent Science Board, etc.) . Few, if any, of these comments and suggestions have been addressed in the current Plan or the EIR/EIS.

³ Vogel, D., *Comments on the Public Draft Bay-Delta Conservation Plan (BDCP) and Draft BDCP Environmental Impact Report/Environmental Impact Statement* (June 6, 2014) ["Vogel Report"]; *See also* NAS and ISB comments.

⁴ Fish and Wildlife Service (FWS) and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), *"Red flag" comments regarding the September 2011 draft of the Bay Delta Conservation Plan* (April 2012). *See also* "Federal Agency comments on the Bay Delta Conservation Plan (BDCP) Second Administrative Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS)" (July 2013).

The following are a few examples of numerous major omissions not analyzed, disclosed, or mitigated in the EIR/EIS that constitute significant “new information” and warrant recirculation under CEQA and NEPA:

- The effects on BDCP project design, location, and operation from DWR complying with SWP operational obligations and limitations associated with contractual assurances in the northern Delta not being adequately quantified or addressed in the Plan or EIR/EIS.
- The Water Supply Chapter fails to identify the combined adverse impacts from the Groundwater, Water Quality, Health, and Agriculture Chapters (Impacts: GW-1, GW-2, GW-3, GW-4, GW-5, GW-7, WQ-5, WQ-7, WQ-11, WQ-14, WQ-18, WQ-22, WQ-26, PH2, and AG-2, AG-4) resulting in a significant adverse water supply impacts on the Delta region.
- The Water Supply Chapter fails to include lowered surface water elevations from reduced flows and tidal flux as significant adverse impacts on the overall local water supply and water quality in the Delta region.
- The Surface Water, Groundwater, and Water Supply Chapters fail to identify the specific and serious public safety, economic, and environmental impacts (including water quality impacts) caused by both raised and lowered surface water and groundwater elevations.
- The Surface Water, Water Supply, and Recreation Chapters all fail to identify the significant adverse impacts of lowered surface water elevations on other beneficial uses (e.g., recreational boating and commercial navigation, marinas and yacht clubs, hunting clubs, fishing) in the Delta region.
- The Surface Water Chapter fails to identify the substantial modification of the location and configuration of the Sacramento River Flood Control Project (SRFCP) facilities (levees, bypasses, weirs, and pumping stations) proposed in CMs 1-10 or to analyze the localized and system-wide public safety impacts.
- The Surface Water Chapter fails to provide an emergency response and evacuation or recovery plan for flood events during the 10-year construction of CM1.

In order to adequately address the concerns raised in these comments from NDWA, comments on the Plan and the EIR/EIS submitted by other commenters and previous comments submitted by federal agencies and interested parties, it will be necessary for DWR and the Bureau of Reclamation to substantially modify the project’s design, location, size, and operations. A reconfigured BDCP will of course result in environmental impacts that are different from those analyzed in the Plan and the EIR/EIS. Accordingly, it is NDWA’s position that recirculation of the BDCP and the EIR/EIS will be required under CEQA, NEPA and other applicable state and federal law.

D. Summary of Primary Procedural Concerns

DWR’s decision to release for public comment a BDCP Plan and EIR/EIR despite multiple requests by federal agencies not to do so raises fundamental questions about the ability of the DWR to discharge its various statutory obligations in a fair and impartial manner. So, too, does the overwhelming criticism of these documents from independent scientific review panels and several Responsible, Cooperating, and Trustee agencies as well as elected officials. The NDWA

considers the premature release of legally inadequate documents to be an act of bad faith on the part of the State of California that has placed an undue hardship on the Agency and the public. This act will only serve to further undermine the credibility of the BDCP as a biologically justified project, and to erode the public's trust in DWR and the State to uphold statutory, regulatory, and contractual obligations to protect the value of the North Delta's unique ecosystem, water supply, agricultural community and socioeconomic environment.

II. INCORPORATION OF APPENDICES AND OTHER COMMENTS BY REFERENCE

A. Supplemental Comments and Informational Attachments

While the comments in this letter contain the bulk of the NDWA's comments, we have created a Reference Library to include additional documentation supplementing or supporting comments contained herein. The documents in the Reference Library are the prior comments submitted by NDWA during the BDCP process. They must be considered by DWR, and the federal action agencies must be included in the administrative record for the Plan and EIR/EIS. Likewise, the attachments to this letter must be considered by DWR and the federal action agencies and must be included in the administrative record for the Plan and EIR/EIS.

B. Comments on BDCP by Other Entities

The NDWA hereby incorporates by reference the comments submitted in this proceeding by the North State Water Alliance, the Sacramento Valley Water Users, and the County of Sacramento, as though fully stated herein. NDWA hereby joins the comments submitted in this proceeding by:

- North State Water Alliance;
- Sacramento Valley Water Users;
- Sacramento County;
- San Joaquin County;
- CA Central Valley Flood Control Association.

III. SUMMARY OF NDWA'S SUBSTANTIVE COMMENTS ON THE DRAFT PLAN AND EIR/EIS AS CURRENTLY PROPOSED

As discussed in Part IV of this letter, DWR and NDWA executed a *Contract for the Assurance of a Dependable Water Supply of Suitable Quality* in 1981 (1981 Contract). DWR's compliance with the binding terms of the 1981 Contract is not discretionary.

Moreover, the legal standards that govern DWR's discharge of its obligations under the 1981 Contract are quite different from the legal standards that govern DWR's discharge of its obligations under CEQA and other applicable law. For example, while CEQA requires DWR to implement feasible mitigation measures to reduce significant impacts of the project to less-than-significant levels, DWR may not, as a matter of contract law, choose not to comply with the specific requirements of the 1981 Contract based on a determination of infeasibility. As discussed in detail below, the 1981 Contract requires DWR to meet specific obligations –

including assurances concerning water quality, maintenance of surface water elevations and prohibitions against modification of flow patterns – that rise above and beyond what is required under CEQA/NEPA or permits issued under ESA/CESA. Maintaining compliance with the 1981 Contract will also require substantial modification to the proposed BDCP project configuration and operations as well as to the governance structure and oversight of BDCP implementation.

The Plan and EIR/EIS indicate that implementation of Alt. 4 would violate several provisions of the 1981 Contract, including (but not limited to) the following:

- Alteration of existing water elevations to the detriment of North Delta channels and water users (lower tidal flows in Sutter and Steamboat Sloughs, as well as attenuation of tidal elevations associated with increased flooded habitat creation);
- Alteration of natural flow patterns (reverse flows created at Georgiana Slough and Delta Cross Channel) to the detriment of North Delta channels and water users; and
- Creating seepage and erosion damage to the lands, levees, embankments, or revetments adjacent to Delta channels from BDCP conveyance and habitat projects changing the estuary's hydrodynamics.

Beyond the requirements of the 1981 Contract, the Plan and EIR/EIS fail to satisfy the requirements of the federal Endangered Species Act (ESA), the California Natural Communities Conservation Planning Act (NCCPA) and the Delta Reform Act. More specifically, the Plan and EIR/EIS fail to:

- Accurately and comprehensively assess the current ecological conditions and compare to full extent and severity of potential adverse impacts;
- Utilize the best available science;
- Protect listed or covered species consistent with HCP/NCCP laws;
- Comply with state and federal law governing economic analysis of public water infrastructure;
- Develop an appropriate range of feasible alternatives;
- Provide balanced, unbiased governance and oversight of the project;
- Assess the full scope and intensity of likely project impacts;
- Properly mitigate impacts to, and provide any direct benefits for, residents, communities and local governments in the Plan Area; and
- Properly identify or mitigate for cumulative impacts that will occur in the Plan Area over the 50-year term of the HCP/NCCP permits.

In summary, release of the Plan and the EIR/EIS was premature and has caused an undue financial hardship on the NDWA and other persons and entities within the North Delta to prepare these comments due to the documents' serious inadequacies.

IV. FACTUAL BACKGROUND

A. North Delta Water Agency History

Beginning approximately 160 years ago, farmers within the area now comprising NDWA began reclaiming lands from flooding, appropriating water to beneficial use and establishing vibrant agricultural communities pursuant to the federal Swamp Land Act of 1850.⁵ In the 1930s, the U.S. Bureau of Reclamation (Bureau/USBR) began constructing the Central Valley Project (CVP), damming the major tributaries on the Sacramento River and holding back substantial quantities of the Delta water supply. Before government reservoirs began withholding much of the Sacramento River system's high winter flows, the Delta channels stored sufficient fresh water to sustain water quality in the northern Delta throughout and often beyond the irrigation season.

This natural phenomenon of the Sacramento-San Joaquin Delta in its natural state acting as a freshwater reservoir instead of a stream is commonly referred to as the Delta Storage Concept.⁶ Historically, the Carquinez Strait acted as a confined outlet for the salty water, thus protecting the Delta as a freshwater estuary for most of the time.⁷ This sustained freshwater quality remained long after the inflow subsided from the several rivers that feed into the Delta. This Delta freshwater "storage" effect is evidenced by water quality monitoring conducted in the western Delta since 1914 by the East Contra Costa Irrigation District. These records show that water of usable quality was continuously available at that location throughout the entire irrigation season during the period between 1914 and the completion of the Shasta dam in the 1940s, except during severe drought conditions experienced in October of 1931.⁸ In addition, because the tides raised surface water elevations twice a day, a supply of water always remained physically available in the Delta.

Since the SWP and CVP water supply operations commenced, however, the reduction of naturally occurring high flushing flows from upstream storage combined with the pull of the State and federal export pumps have contributed to the intrusion of salinity into the Delta.⁹ Now, the SWP and CVP water conveyance project operations have effectively transformed the natural

⁵ Arkansas Swamp Lands Act, Act of September 28, 1850, codified at California Public Resources Code Section 7552, 7552.5.

⁶ See Basye, George "The Delta Storage Concept." (November 21, 2009) **EXHIBIT E.** Credit Consulting Engineer Gerald H. Jones with the development and promulgation of the original concept.

⁷ *Id.*, See also Thomas H. Means, *Salt Water Problem, San Francisco Bay and Delta of Sacramento and San Joaquin Rivers* April 1928, pp 9-10: "Under natural conditions, Carquinez Straits marked, approximately, the boundary between salt and fresh water in the upper San Francisco Bay and delta region of the two tributary rivers—the Sacramento and San Joaquin.... At present [1928] salt water reaches Antioch every year, in two-thirds of the years running further [sic] upstream. ... The cause of this change in salt water condition is due almost entirely to the works of man." [Quoted in Water Resources Department, Contra Costa Water District "Historical Fresh Water and Salinity Conditions in the Western Sacramento-San Joaquin Delta and Suisun Bay: A summary of historical reviews, reports, analyses and measurements (Technical Memorandum WR10-001) (February 2010)]

⁸ Water Resources Department, Contra Costa Water District "Historical Fresh Water and Salinity Conditions in the Western Sacramento-San Joaquin Delta and Suisun Bay: A summary of historical reviews, reports, analyses and measurements (Technical Memorandum WR10-001) (February 2010)

⁹ Hanak et.al, *Managing California's Water: From Conflict to Reconciliation* (Public Policy Institute of California 2011). ("Delta farmers complained of increasing salinity in their water supplies as upstream diversions and combined CVP/SWP operations depleted more of the natural flow.")

Delta freshwater “reservoir” into more of a flowing stream, resulting in relatively minor decreases in outflow that can have a serious impact on Delta water quality. These changed conditions are the basis for DWR executing a water supply availability and quality contract with the NDWA.

As it did with landowners along the Sacramento River, the United States conducted extensive studies and negotiations to provide contractual assurances for a sufficient supply for water right holders in the northern Delta. Discussions with Delta landowners were protracted, however, due to the complex issues of both water quantity and quality. The issues only intensified with the construction of the State Water Project by DWR in the 1960s.

In 1973, the NDWA was formed by a special act of the Legislature to represent northern Delta interests in negotiating a contract with both the Bureau and DWR in order to mitigate the water rights impacts of the CVP/SWP Projects.¹⁰ Representing nearly one-half of the legal Delta, the Agency’s boundaries encompass approximately 300,000 acres. This includes all of that portion of the Sacramento-San Joaquin Delta, as defined in Water Code Section 12220, situated within Sacramento, Yolo and Solano Counties.¹¹ NDWA’s boundaries also include portions of northeastern San Joaquin County, including New Hope Tract, Canal Ranch and Staten Island.

After undertaking extensive analysis, study, and review between 1974 and 1979, the Bureau, DWR, and the NDWA collectively determined the outflow necessary to meet water quality standards for irrigated agriculture, reviewed the paramount water rights of landowners within North Delta’s boundaries, and evaluated the Delta channels’ historical function as natural seasonal storage for purposes of executing a water supply and quality contract.

B. The 1981 Contract

In 1981, DWR and NDWA executed a *Contract for the Assurance of a Dependable Water Supply of Suitable Quality* (1981 Contract), which remains in full force and effect.¹² The crux of the 1981 Contract is a guarantee by the State of California that, on an ongoing basis, DWR will ensure through the operation of the SWP that suitable water will be available to satisfy all agricultural and other reasonable and beneficial uses in all channels within NDWA’s boundaries.¹³ Specifically, the State must furnish “such water as may be required within the Agency to the extent not otherwise available under the water rights of water users.”¹⁴

¹⁰ North Delta Water Agency Act, Chapter 283, Special Statutes of 1973.

¹¹ ENGINEER’S REPORT AND REPORT OF THE ASSESSMENT COMMISSIONERS FOR THE NORTH DELTA WATER AGENCY ASSESSMENT ADJUSTMENT: Pursuant to Article XIII D of the California Constitution (November 3, 2010) Available at <http://www.northdeltawater.net/assessments.html>

¹² Contract for the Assurance of a Dependable Water Supply of Suitable Quality (1981 Contract). A copy of this contract is attached to this letter. Note that by reference to this contract, NDWA intends to reference all relevant Memoranda of Understanding, including the memorandum of understanding dated May 26, 1998 (MOU). This MOU provides that DWR is responsible for any obligation imposed on NDWA to provide water to meet Bay-Delta flow objectives, so long as the 1981 Contract remains in effect. This agreement was formed in connection with the hearings that preceded the State Water Resources Control Board’s adoption of Water Right Decision 1641. In Decision 1641, the State Water Board made the following findings and determinations: “Based on the agreement, the SWRCB finds that the DWR will provide the backstop for any water assigned to the parties within the NDWA as specified in the MOU. This decision assigns responsibility for any obligations of the NDWA to the DWR consistent with the MOU.” (Decision 1641 at 66). The latter findings and determinations were upheld by the trial and appellate courts that subsequently reviewed Decision 1641.

¹³ 1981 Contract Art. 8(a)

¹⁴ Id.; 1981 Contract Art. 8(b)

The 1981 Contract specifies year-round water quality criteria.¹⁵ It also contains provisions pertaining to physical hydrologic changes,¹⁶ obligating DWR to provide specific remedies, including limitations on the operations of the SWP.¹⁷ In return for the benefits received, NDWA makes an annual payment to DWR.¹⁸ NDWA further expressly consents to the export of water from the Delta “so long as this contract remains in full force and effect and the State is in compliance herewith.”¹⁹

C. Provisions of the 1981 Contract Relevant to the BDCP

The NDWA’s 1981 Contract contains numerous provisions that protect water users and channels in the North Delta from harm caused by changes in SWP water conveyance infrastructure and operations.

The Recitals section contains important background principles that are critical to understanding the parties’ intent in entering into the Contract and direct relevance to the actions proposed in the water conveyance and related habitat restoration projects contained in the BDCP.

Most notably, the contract:

- i. Binds the State to: “[m]aintain within the Agency a dependable water supply of adequate quantity and quality for agricultural uses and, consistent with the water quality standards of Attachment A, for municipal and industrial uses, that the State will recognize the right to the use of water for agricultural, municipal, and industrial uses within the Agency, and that the Agency will pay compensation for any reimbursable benefits allocated to water users within the Agency resulting from operation of the Federal Central Valley Project and the State Water Project, and offset by any detriments caused thereby.”²⁰
- ii. Acknowledges that the construction and operation of the CVP and SWP have previously and will continue to change the regimen of the rivers and tributaries of the Sacramento-San Joaquin Delta, specifically altering from unregulated flow to regulated flow in Delta channels, and that the CVP and SWP’s regulation of these flows at times “[a]lso alters the elevation of water in some Delta channels.”²¹
- iii. Asserts that “[g]eneral welfare, as well as the rights and requirements of the water users in the Delta, require that there be maintained in the Delta an adequate supply of good quality of water for agricultural, municipal and industrial uses.”²²
- iv. Reaffirms by inclusion Part 4.5 of Division 6 of the CA Water Code’s statutory requirement that “[a]ffords a first priority to provision of salinity control and maintenance of an adequate water supply in the Delta” and “*relegates to lesser priority all exports of water from the Delta to other areas for any purpose.*”²³

¹⁵ 1981 Contract, Art. 2

¹⁶ *Id.* at Art. 6

¹⁷ *Id.* at Art. 12

¹⁸ *Id.* at Art. 10.

¹⁹ *Id.* at Art. 8(e)

²⁰ 1981 Contract, p. 1, Recital (a) [emphasis added]

²¹ *Id.* at Recital (d) [emphasis added]

²² *Id.* at Recital (f) [emphasis added]

²³ *Id.* at Recital (g) [emphasis added]

- v. Recognizes that NDWA “[a]sserts that water users within the Agency have the right to divert, are diverting, and will continue to divert, for reasonable and beneficial use, water from the Delta that would have been available therein if the FCVP and SWP were not in existence, . . .”²⁴

The Contract’s articles of agreement also contain a series of provisions directly relevant to the BDCP as operational constraints on DWR’s discretion in relation to the design, size, and location of new SWP water conveyance and related habitat restoration projects as currently proposed in BDCP. Within the four corners of the contract, the State:

- i. Commits to operate the SWP to provide water quality “[a]t least equal to the better of: (1) the standards adopted by the SWRCB as they may be established from time to time; or (2) the criteria established in this contract . . .”²⁵
- ii. Will not exceed certain salinity levels at specific locations within NDWA; to wit, the “[14]-day running average of the mean daily EC at the identified location shall not exceed the values determined from the Attachment A.”²⁶
- iii. Pledges that the water quality criteria in the Contract “[m]ust be met at all times except for a transition period . . .”²⁷
- iv. Further “[a]grees not to alter the Delta hydraulics in such a manner to cause a measurable adverse change in the ocean salinity gradient or relationship among the various monitoring locations shown on Attachment B and interior points upstream from those locations, with any particular flow past Emmaton.”²⁸
- v. Binds itself in case of changes in natural flow direction or water surface elevations in Delta channels and remedies for damages to water users. Specifically, the State must “[n]ot convey SWP water so as to cause a decrease or increase in the natural flow, or reversal of the natural flow direction, or to cause the water surface elevation in Delta channels to be altered, to the detriment of Delta channels or water users within the Agency. If lands, levees, embankments, or revetments adjacent to Delta channels within the Agency incur seepage or erosion damage or if diversion facilities must be modified as a result of altered water surface elevations as a result of the conveyance of water from the SWP to lands outside the Agency after the date of this contract, the State shall repair or alleviate the damage, shall improve the channels as necessary, and shall be responsible for all diversion facility modifications required.”²⁹
- vi. Provides assurances in regards to water availability and diversion rights. Specifically, the state agrees that “[w]ater of such quality shall be in the Delta channels for reasonable and beneficial uses on lands within the Agency, and said diversions and uses shall not be disturbed or challenged by the State so long as this contract is in full force and effect.”³⁰

²⁴ Id. at Recital (h) [emphasis added]

²⁵ 1981 Contract p. 2, Art. 2(a)(i) [emphasis added]

²⁶ Id. at Art. 2(a)(iii) [emphasis added]

²⁷ Id. at Art. 2(a)(iiii) [emphasis added]

²⁸ Id. at Art. 2(b) [emphasis added]

²⁹ Id. at Art. 6 [emphasis added]

³⁰ Id. at page 3, Art. 8(a)(i) [emphasis added]

- vii. Acknowledges Agency landowners' water rights by stating that "The State recognizes the right of the water users of the Agency to divert from the Delta channels for reasonable and beneficial uses . . ." and in exchange for payments received under the Contract the State is obligated to "[f]urnish such water as may be required within the Agency to the extent not otherwise available under the water rights of water users."³¹
- viii. Adds additional affirmation regarding the State's intent on water rights in the NDWA by committing itself to "[d]efend affirmatively as reasonable and beneficial" their release of SWP stored water in order to "provide and sustain the qualities established in this contract . . ." and prevents the State from examining such uses of SWP water unless a court determines "[t]hat all uses of water exported from the Delta by the State and by the United States, for agricultural, municipal, and industrial purposes are reasonable and beneficial, and that irrigation practices, conservation efforts, and groundwater management within areas served by such exported water should be examined in particular."³²
- ix. Provides that, in consideration of the benefits offered by the State under the 1981 Contract, the Agency explicitly consents to "[t]he State's export of water from the Delta so long as the contract remains in full force and effect and the State is in compliance . . ." with the provisions contained in the Contract.³³
- x. Consents to provisions in the remedies section of the Contract that would impose significant operational constraints and limitations on DWR's water supply management if "[t]he water quality in Delta channels falls below that provided in this contract, then, at the request of the Agency, the State shall cease all diversions to storage in SWP reservoirs or release stored water from the SWP reservoirs or cease all export by the SWP from Delta channels, or any combination of these . . ."³⁴

D. NDWA's Good Faith Participation in the BDCP Process

The NDWA recognizes the importance of achieving the State's coequal goals of "providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem."³⁵ Moreover, in the 1981 Contract the NDWA expressly consented to the State's export of water from the Delta *so long as DWR/SWP complies with its obligations under the 1981 Contract.* (1981 Contract para. 8(e); emphasis added).

Accordingly, the Agency has actively engaged in the development of the BDCP as an act of good faith, to assure that adequate protection measures are applied to the design, location, size and operation of the conveyance and habitat projects, and to also: 1) protect its rights under the 1981 Contract; and 2) assure compliance with all applicable state and federal laws and regulations relating to protection of the North Delta ecosystem, communities, economic and public safety activities, water rights (including riparian, pre-1914, and post-1914 appropriative rights) and area-of-origin statutory protections.

³¹ Id. at page 3, Art. 8(a)(ii) [emphasis added]

³² Id. at Art. 8(d) [emphasis added]

³³ Id. at Art. 8(e) [emphasis added]

³⁴ Id. at page 4, Art. Article 12(a) .

³⁵ Public Resources Code Section 29702(a)

Over the past several years the Agency has invested significant time and expense to participate in the BDCP process, including, but not limited to:

- Serving as an active member of BDCP Steering Committee³⁶
- Serving as a cooperating Agency under NEPA with USBR³⁷
- Serving as a member of the BDCP Governance and Finance Committees
- Submitted Cooperating Agency Comments, 1st & 2nd Admin Drafts and other related BDCP documents³⁸
- Submission of numerous letters.³⁹

NDWA has a clear statutory mandate to assure that the lands within the North Delta have a dependable supply of water of suitable quality sufficient to meet present and future needs in accordance with the 1981 Contract.⁴⁰ For this reason, NDWA has repeatedly asserted during the various Delta planning processes that any projects, programs, and actions pursued in the name of coequal goals, including the BDCP, must: 1) be based on the best available science; 2) be consistent with the contractual obligations of the State under the 1981 Contract; and 3) be undertaken in compliance with all applicable state and federal law.

E. Summary of Background Facts

NDWA's successful negotiation of a water supply and quality contract with the State in 1981, and its more recent efforts to actively participate and provide expertise in the development of the BDCP Plan and EIR/EIS have proven the Agency's willingness to act in good faith as a water contractor with DWR. The comments provided here, as well as the NDWA comments provided during the process of developing the BDCP, seek to incorporate compliance with the 1981 NDWA Contract into the design, location, and operation of the Plan's Conservation Measures, ensure that the impacts associated with the proposed project are properly described and analyzed, and require mitigation of project impacts in accordance with applicable law.

V. ECONOMIC IMPACTS AND FISCAL ASSURANCES

A. Economic Evaluation of BDCP Is Inadequate and Biased

The NDWA is concerned about inherent inequities that exist in the assumptions the cost-benefit analysis consultants used to develop the Finance Chapters in the BDCP and EIR/EIS based on the Agency's participation as a member of the Finance Committee and the documentation provided in public venues. Following are examples of questionable data and biased assumptions applied to BDCP's economic analyses:

- ***Inconsistent No Action Alternative (NAA)*** – The BDCP EIR/EIS' Existing Conditions Assumptions for State Water Project and Central Valley Project⁴¹ uses USFWS/NMFS

³⁶ See Reference Library: June 11, 2008 NDWA letter requesting admittance and MOU with USBR

³⁷ See Reference Library: May 7, 2013] NDWA letter requesting Cooperating Agency status and MOU with the Bureau

³⁸ Refer to comments in the Reference Library, April 16, 2013 – July 31, 2013.

³⁹ See the Reference Library, generally.

⁴⁰ North Delta Water Agency Act, Chapter 283, Special Statutes of 1973.

⁴¹ Appendix 3D Section 3D.3.1.2 (page 3D-3).

BiOps as the assumption for the NAA. However, the BDCP's economic consultant publicly confirmed his analysis used lower export water delivery assumptions potentially as low as 3 MAF, which is substantially lower than existing conditions, arbitrary, and inconsistent with the BDCP EIR/EIS No Action Alternative. To be credible and consistent with BDCP documents the assumptions used in the BDCP cost-benefits should *not* differ or deviate from the BDCP EIR/EIS.

- ***Favors Quantifying Benefits, While Ignoring Harm*** – The BDCP economic analyses spend a greater level of effort in researching, analyzing, and quantifying the positive impacts (benefits) than assessing the negative impacts of the project in the Plan Area. Consultants favored quantifying positive impacts without equal quantification of negative impacts in the Plan Areas of: water quality and reliability, construction emissions, soil erosion, flood risk, and GHG benefits.
- ***Greater Emphasis on Quantifying Impacts for Exporters Than Delta/ Other Impacted Parties*** – Analysis primarily focused on quantifying the positive impacts (benefits) to the water export service areas than quantifying the negative impacts to in-Delta water users and natural resources. This inequitable level of effort prevents a comprehensive and unbiased quantification or comparison of who benefits and who is harmed by the project.
- ***Minimizes Delta Impacts*** – The Task Order for development of the BDCP economic analysis refers to the *permanent* conversion of over 45,000 acres of Delta farmland to aquatic and terrestrial habitat as a “short-term” loss of cultivated land.⁴² Permanent means forever, so under BDCP this farmland would be gone for good – and so would the food grown on those acres.
- ***One-Sided Analysis*** - Water quality improvements for Delta water exporters were emphasized, but the analysis failed to quantify the reduced water supply reliability for in-Delta water users resulting from the degraded water quality identified in EIR/EIS Chapter 8 *Water Quality*.

The BDCP economic analysis is also strangely silent on Delta local government and community impacts. This is a significant omission in light of the fifty-two “Significant and Unavoidable Impacts” imposed upon local agencies. Moreover, the economic analysis fails to acknowledge the commitments made to the Delta Counties Coalition by the BDCP managers during the development of the Plan.

Finally, the BDCP has failed to follow existing state and federal guidelines governing the comprehensive development of cost-benefit analyses for public water projects: “Economics and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies” (P&G) and the “Department of Water Resources Economic Analysis Guidebook.”

Significantly, DWR's Guidebook states: “DWR should also broaden the economic analysis to include regional economic development (RED) or other social effects (OSE) accounts, which can significantly assist in the decision-making process. The RED account is particularly important if a proposed plan will have significantly different effects upon regions that might otherwise be irrelevant to the NED national perspective.” As described below, the BDCP certainly represents different benefits and impacts between Northern and Southern California.

⁴² Architectural & Engineering Contracts Task Order (October 22, 2012; December 2012) at 3.

RECOMMENDATION: DWR must undertake objective and comprehensive cost-benefit and socioeconomic analyses. The new effort must be consistent with applicable economic analysis standards and independently peer-reviewed for accuracy and efficacy of the methodology, assumptions, models, and results. The independent analysis should specifically describe, analyze, and quantify the adverse impacts to the Plan Area (Delta) that are identified in the EIR/EIS such as:

- The cumulative impacts to in-Delta water supply (agriculture and drinking water) from 7 significant and “unavoidable” adverse impacts identified in *Water Quality Chapter 8*;
- The cumulative impacts to levee stability and Delta flood risk from CM1 steel pile driving, dewatering lowering groundwater 10-20 feet, sediment loading, 9 cofferdams in the Sacramento River and tributaries, and damage from erosion, seepage, and overtopping.
- The cumulative impacts to Delta agriculture from land conversion, seepage damage, water quality degradation, soil contamination (salinity absorption), blocked access to parcels, and lower water elevations (surface and groundwater) stranding diversion intakes and wells.

B. 1981 Contract Compliance Costs Are Not Included in the Finance Chapter or the Underlying Economic Analysis

Costs to comply with the 1981 Contract will be incurred in the environmental review, design, construction and operational phases of the BDCP (assuming, *arguendo*, that the project is constructed), so DWR’s binding obligations under the 1981 Contract will most certainly have economic repercussions for BDCP during the 50-year implementation. Yet neither the Finance Chapter of the Plan, nor the economic analyses upon which that chapter is based, mention or quantify the costs of complying with the 1981 Contract. This is a significant oversight, and casts doubt on the credibility of the financial analysis that underlies the Plan.

RECOMMENDATION: Amend the Plan (Chapter 8) to acknowledge the financial obligations associated with implementing measures to comply with DWR’s assurances to NDWA in the 1981 Contract and include Contract compliance costs into the BDCP’s Annual Work Plan and Budget (Sec. 6.3.1).

RECOMMENDATION:BDCP must conduct a new cost-benefit and socioeconomic analysis quantifying the following examples of potential fiscal impacts to BDCP if Contract remedies are invoked, (references to relevant provisions of the 1981 Contract are shown in parentheses) including compensation by DWR during Plan’s 50-year implementation such as:

- Implementing physical or operational measures necessary to maintain water quality in North Delta or providing engineered alternatives for water supply or other remedies (Articles 2 and 6);
- Curtailments of SWP reservoirs (storage or releases) and exports from the Delta if the Contract water quality criteria are not maintained (Article 12);
- Modification to existing local diversion facilities as a result of altered water surface elevations, or changes in natural flows that are detrimental to North Delta channels and water users, including seepage and erosion damage to lands, levees, embankments, or revetments (Article 6);

- Compensation paid under special contract claims procedure if Emergency Provisions are invoked (Article 4);
- Reduction in reimbursable benefits allocated to water users with the Agency for detriments to North Delta channels and water users resulting from BDCP operations resulting in reductions in payments by the Agency (Article 9);
- Damage claims for harm to crops caused by the Project's impacts (e.g., grapes, kiwis, apples, pears and cherries, are extremely sensitive to seepage within the plant root zones and alfalfa, which is widely grown throughout the Delta, is very sensitive to salinity in irrigation water, corn is unable to establish itself in soil with a high salt content, and salinity introduced into soils have long-term effects that require additional water to leach salts out (Article 2); and
- Litigation costs incurred by DWR to affirmatively defend use of SWP water to meet Contract's water quality criteria as reasonable and beneficial, including examination of all beneficial uses, irrigation practices, conservation efforts, and groundwater management in Service Areas of the SWP and CVP (Article 8);

C. Local Assessment Payments and Willing Sellers Must Be Conditions of Permit

Like other local agencies dependent on property assessments to fund its core functions, NDWA would incur a significant loss of assessment revenues from the proposed conversion of approximately one-third of its land base from private to public ownership. NDWA is concerned that the massive conversion of land in its jurisdiction proposed by BDPC may seriously impede the Agency's ability to administer and enforce the 1981 Contract. Local government agencies in the Plan Area need a reliable mechanism and funding source to replace lost local government revenues (taxes, assessments), including NDWA and reclamation and other special districts within NDWA, resulting from conversion of lands to habitat, water supply infrastructure and other actions associated with implementation of BDCP.

DWR and USBR not only have a duty under CEQA and NEPA to identify these significant fiscal impacts; they also have a duty to mitigate these impacts. Moreover, the 1981 Contract imposes other, contractual obligations on DWR including, *inter alia*, the implied covenant of good faith and fair dealing, not to take actions that undermine the Agency's ability to perform under, or enforce, the 1981 Contract.⁴³

Put more plainly, the BDCP must incorporate permit terms and conditions in the Plan, Implementing Agreement, and EIR/EIS to ensure that the NDWA remains whole. Without such binding assurances the remaining landowners within NDWA would be left with a proportionally higher share of the Agency's fixed and administrative/ overhead costs.⁴⁴ Resolution of this matter is additionally critical to the Agency because state agencies do not have a good track record of paying local property taxes and assessments, forcing NDWA and other local government agencies to sue for recovery.⁴⁵ In fact, the three largest delinquent landowners who have not paid current NDWA assessments are State agencies.⁴⁶

⁴³ Special Act, Sec. 115-4.1

⁴⁴ The Agency incurs substantial costs related to engineering, management, consulting, and other necessities related to administration of the Contract and protection of water rights and water quality.

⁴⁵ See, e.g., *North Delta Water Agency v. CA Department of Fish & Game* (Case No. 06AS03923); *Manteca Unified School Dist. v. Reclamation District 17* (fees for school assessments); *Kruger, Harold* "Levee District 1 tells

Using the Agency's current assessment rates for FY 2014-15, the annual amount of lost revenues would range from \$310,000 to \$772,000 if all 100,000 acres proposed for conversion to public ownership in the NDWA are in fact converted.⁴⁷ To put the severity of this fiscal impact into perspective, using the Agency's recently approved budget (FY 2014-15) as a comparison point, the removal of 100,000 acres from NDWA's assessment base would equate to a 27 percent to 67 percent reduction to its annual budget (revenues.) There is nothing co-equal about such a disproportionate fiscal burden being placed on NDWA its landowners.

The Delta Reform Act (approved by the State Legislature in 2009) includes a specific statutory requirement for BDCP to enter into contracts (or make other arrangements) to pay full mitigation of property taxes and assessments levied by local government agencies and districts for all lands used in the construction, location, mitigation, or operation of the new Delta conveyance facilities.⁴⁸ The BDCP proponents should be required to enter into similar binding agreements with local agencies for the acreage in the Plan Area proposed for habitat restoration, particularly since most of these acres are existing regulatory requirements of the CVP/SWP as acknowledged in Table 3.2-1 of the Plan, "Consistency of the BDCP with Requirements of Recent Biological Opinions."

Finally, the concept of willing sellers is a foundational element of environmental land acquisitions, but is missing from BDCP. "Taking" private land in order to provide endangered species Incidental "Take" Permits to DWR and USBR in order to benefit regions outside the Delta by the delivery of "up to full contract amounts" as stated in the BDCP Project Purpose sends the wrong message to Delta residents; significantly reduces any opportunity for cooperation from them on the implementation of the Project Goals and Objectives; and is contrary to state and federal constitutional protections and eminent domain law.

The California State Legislature thought a "willing seller" policy was important enough to include as a requirement for the Delta Conservancy (Cal. Pub. Res. Code § 32366) which is designated in the Delta Reform Act as a primary State agency to implement ecosystem restoration in the Delta. The California Legislature clearly intended that the "willing seller" policy would apply for North Delta habitat acquisition and the BDCP Plan and Implementing Agreement must do the same.

RECOMMENDATION: Insert language in the Plan *Governance* Chapter 7 and *Finance* Chapter 8 acknowledging the obligations of the State to financially offset "any detriments" to North Delta channels and water users resulting from the operation of the CVP and SWP, as required by the 1981 Contract,⁴⁹ and declare DWR's commitment to enter into a binding

Caltrans to pay up" Appeal-Democrat (November 2, 2013). Available at http://www.appeal-democrat.com/levee-district-tells-caltrans-to-pay-up/article_510ee3bf-be28-53ca-8b52-449318e471a5.html?mode=jqm

⁴⁶ Specifically, the Department of Fish and Wildlife (whose assessments are offset by DWR contact payment reductions pursuant to a settlement in the above case, Case No. 06AS03923), Caltrans, and the Department of Parks and Recreation.

⁴⁷ The broad variation in revenue is due to the variation in benefit assessment charged by NDWA pursuant to Proposition 218, and varies according to the landowner's water right. Those with riparian lands pay \$3.10 per acre, while those with no apparent water right or with post-1954 (newer) water rights pay up to \$7.72 per acre. For information about NDWA assessment rates, go to <http://www.northdeltawater.net/assessments.html>.

⁴⁸ Cal. Water Code § 85089(b)

⁴⁹ 1981 Contract Recitals, p. 1

agreement to mitigate lost assessment revenues associated with implementation of all actions under CMs 1-22.

RECOMMENDATION: As a permit condition, require⁵⁰DWR to negotiate and execute a binding agreement with NDWA prior to implementation of BDCP providing for a providing for a reduction of 1981Contract payments for any lands transferred from private to public ownership (whether owned by State, federal, or local agencies) for purposes of implementing CM1 and meeting the Plan’s habitat restoration goals in CM-2-22, including Biops/FRPA mandates identified in Plan Chapter 3, Table 3.2-1. This is consistent with BDCP’s existing obligation under the Delta Reform Act (Water Code § 85089 (b)) to enter into contracts for payment of local agency tax or assessments for all lands associated with implementation of CM1 conveyance facilities.

RECOMMENDATION: Require the Implementation Office to track and the Annual Progress Reports to disclose the number of acres that are purchased each year for “the construction, location, mitigation, or operation of new Delta conveyance facilities” so that a proper accounting can be kept of the in-lieu property taxes and assessments that CVP and SWP water contractors are responsible for paying to local government agencies in accordance with Water Code § 85089(b).

RECOMMENDATION: Mandate, via a requirement inserted into the Plan Chapter 8 and a condition inserted into the HCP/NCCP permit requirements and Implementing Agreement requiring the BDCP Proponents to also “pay for all property tax or assessments levied by local governments or special districts for all lands used in the construction, location, mitigation, operation, maintenance, or management of BDCP habitat conservation projects and activities.” The commitment must provide for increases in the rates due to inflation and other economic pressures. This commitment should be additionally memorialized by DWR immediately executing MOUs with each local agency with affected revenues upon purchase of BDCP-related lands in impacted agency’s jurisdiction including lands in Plan Chapter 3, Table 3.2-1 and Chapter 6, Section 6.2 *Interim Implementation Actions* related to (but not limited to) the following processes that will be credited in BDCP under this section:

- Fish Restoration Project Agreement (FRPA);
- Federal Biological Opinions for jeopardy associated with the continued operation of existing SWP and CVP South Delta pumps; and
- OCAP or any other regulatory requirements such as meeting existing statutory fish-doubling requirements as obligations under the CVPIA.

RECOMMENDATION: Revise the Plan and Implementing Agreement to specifically adopt as terms and conditions the “willing seller” policy for all lands and easements acquired for implementing any actions in CMs 2-22 with an explicit prohibition of using eminent domain for habitat actions stated very clearly.

⁵⁰Via language inserted into the Plan’s *Finance* Chapter 8, or other appropriate section

D. Inadequate Funding Assurances Prevent Approval of HCP/NCCP Permits

The precarious and elusive nature of the BDCP's ability to fully fund permit activities is illustrated by the failure of the Plan to identify reliable sources of money to pay the Project costs disclosed in Chapter 8, despite state and federal laws requiring a fiscally sound funding plan for HCPs and NCCPs.

Section 10 of the ESA requires the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to ensure the applicant for an incidental take permit (ITP) has sufficient funding available to implement an HCP,⁵¹ including specifying the sources of funding to implement mitigation measures to minimize impacts to the covered species in the plan.⁵² Where perpetual funding is required to implement any mitigation measures, the HCP must establish programs or mechanisms to generate those funds,⁵³ because an applicant for an ITP cannot rely on speculative future actions of others to fund activities related to an HCP.⁵⁴

At least two HCPs in California have been invalidated due to the uncertain nature of funding to support the activities contemplated in the species conservation plans: 1) City of San Diego's HCP;⁵⁵ and 2) City of Sacramento's HCP for the Natomas Basin was invalidated due, in part, to inadequate funding assurances.⁵⁶ In the City of San Diego's case, the city prepared an HCP that needed funding to acquire land for a "preserve" and to administer the plan for the life of the incidental take permit. San Diego's proposed source of funding relied on future actions, consisting of future regional plans with other local jurisdictions, raising the sales tax, or issuing bonds, which would require voter approval.

While San Diego promised to use its "best efforts" to implement the financing and land acquisition components of the plan, the federal court found that the proposed funding source was unreliable and speculative, concluding the USFWS could not rationally accept that the City would "ensure adequate funding" as contemplated by the ESA. Like the San Diego and Natomas HCPs, the BDCP fails to demonstrate adequate funding will in fact be available for land acquisition, administration of the HCP or the future mitigation required for issuance of an ITP. BDCP has been criticized in recent independent science reviews and intensively questioned by the Delta Stewardship Council about relying on future water bonds being approved by California voters, particularly in light of several delays of the water bond drafted in 2009 to even appear on the ballot. The precariousness of BDCP's funding is exacerbated by waffling on how much funding is even needed according to the introductory paragraphs of the Plan's Funding Chapter (Chapter 8) where the document qualifies the entire funding discussion as being based on a "programmatic level" estimation of project costs.

⁵¹ 16 U.S.C. Sections 1539; *Southwest Center for Biological Diversity v. Bartel* (S. Dist. Cal. 2006) 457 F.Supp. 2d 1070, 1105.

⁵² 16 U.S.C. §§ 1539(a)(2)(A), (B).

⁵³ U.S. Department of the Interior, *Habitat Conservation Planning And Incidental Take Permit Processing Handbook* (November 4, 1996) Fish and Wildlife Service

⁵⁴ *Southwest Center for Biological Diversity v. Bartel* (S.D. Cal. 2006) 470 F.Supp. 2d 1118, 1155, 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. 1274, 1280-1282.

⁵⁵ *Southwest Center for Biological Diversity v. Bartel*, *supra*, 470 F.Supp. 2d at p. 1118.

⁵⁶ *National Wildlife Federation v. Babbitt*, *supra*, 128 F.Supp. 2d at p. 1274

Another fatal defect in BDCP Financing Chapter 8 is the intentional deferral of funding responsibilities,⁵⁷ to an Implementation Office, which will, at some unspecified future time, develop annual capital and operating budgets.⁵⁸ Indeed, the BDCP itself admits the Plan is not intended to establish an allocation of costs or repayment responsibilities; instead, finance plans will be developed separately by “various funding agencies” through future discussions.⁵⁹ Intended to serve as an NCCP under California law, the BDCP also fails to meet the funding mandates of this Act. The NCCPA demands an Implementing Agreement detailing, among other things: 1) provisions “specifying the actions [CDFW] shall take ... if the plan participant fails to provide adequate funding”; and 2) “mechanisms to ensure adequate funding to carry out the conservation actions identified in the plan.”⁶⁰

The BDCP also relies on federal funding sources – sources that require future action by Congress to authorize the ongoing expenditure of funds or new authorizations to provide funding for BDCP activities over 50 years. However, the BDCP financing scheme conveniently ignores the federal Anti-deficiency Act which prohibits, among other things, (i) the creation of obligations in excess of amounts already appropriated, and (ii) the commitment of the federal government to pay funds not yet appropriated. Relying on funding sources that exceed current federal authorizations or require the future appropriation of funds, does not constitute an available or reliable funding source as required in HCP and NCCP permits.

Finally, the certainty of reliable funding being available for mitigation implementation, reimbursement of in-lieu assessments, payment of 1981 Contract violation remedies, or compensation to third parties for damages caused by BDCP is even more suspect and elusive according to Section 14.3 of the BDCP Implementing Agreement which explicitly absolves BDCP Permittees from providing any additional financial compensation beyond the level specified in the Plan.

RECOMMENDATION: Approval of HCP and NCCP permits and authorizations must be deferred until BDCP can demonstrate the availability of reliable funding sources, such as securitized endowments, to fully fund the implementation, monitoring and adaptive management, and 50-year management of all conservation and mitigation measures.

E. Inadequate Funding Assurances Require Establishment of Endowments

As mentioned previously, the acquisition of 158,000 acres of property in the Plan Area (Delta) to create habitat will result in the transfer of ownership from private to public, resulting in substantial local government tax and assessment revenue losses. If these payments are lost (or even simply delayed as a result of budgeting-process vagaries) the Agency might not be able to operate. There is zero benefit to the NDWA or its water users from widespread restoration of habitat within NDWA, but the loss of assessment revenue as a result will be fiscally devastating to the Agency’s annual revenues which are solely dependent on assessments collected from landowners.

⁵⁷ BDCP EIR/EIS, p. 8-2.

⁵⁸ BDCP EIR/EIS, p. 8-1

⁵⁹ BDCP EIR/EIS, p. 8-2.

⁶⁰ (Fish and Game Code, § 2820(b)(3))

This is particularly concerning to the NDWA since neither the federal nor state government has a good track record of paying local property taxes and assessments to the counties, cities, reclamation district, or other special districts. Therefore, long-term, reliable funding mechanisms unencumbered by the vagaries of legislative appropriations, such as an endowment fund, must be included as a condition of the Implementing Agreement, in order to offset both the lost assessment revenue and the potential disruptions to the 1981 Contract.

Endowments are common funding tool used in HCPs to generate annual management funding over long time horizons. In an interest-bearing endowment, revenues are funded up front or in increments in an amount sufficient to generate enough yearly income to fund annual project management. Because only the interest is available for use and the principal is not withdrawn, an endowment is non-wasting, and provides a perpetual source of funding.

In contrast, "Payments in Lieu of Taxes" are payments to local governments that help offset losses in property taxes due to non-taxable State government lands within the agency's boundaries. While endowments are lasting, enduring financial arrangements, in-lieu payments are subject to the whim of the annual budgets.

Costs incurred by DWR actions to avoid or remedy 1981 Contract violations, or pay in-lieu assessments to NDWA, are not theoretical and should be budgeted in a way that recognizes the fiscal gravity and significant impact to the Agency.

More broadly, the Agency is concerned about the availability of funding to implement mitigation measures for the hundreds of individual actions called for in *Avoidance and Minimization Measures* (Plan Appendix 3.C) and for the 750 impacts identified in the EIR/EIS. According to a California Department of Fish and Wildlife report on species conservation plans, one of the challenges the eleven conservation plans had in common was: "Costs for management and monitoring were universally underestimated and, as a result of scant resources, these programs have been largely under-funded and inadequately staffed."⁶¹

Currently, the Plan Chapter 8 on BDCP financing provides muddled recommendations when dealing with endowments and other long-term funding mechanisms rather than dependable assurances – as can be seen in these excerpts:

- Section 8.4.1 says, "Endowment funds may be advanced on a short-term basis," and "Management, restoration, or monitoring actions *may be deferred until funding sources are available*" [emphasis added; this offers only uncertainty and ambiguity]
- Section 8.4.2 says, "The Authorized Entities will not be required to provide land, water, or monetary resources beyond their commitments in this Plan in the event of a shortfall in state or federal funding."
- Section 8.3.7.2 on the other hand indicates a commitment that BDCP will in fact have endowment funds, "It is assumed these costs will be paid from a nonwasting endowment that will be funded over the course of the permit term." "Under CM11 *Natural Communities Enhancement and Management*, an endowment will be established for post-permit term costs of CM3 through CM10."

⁶¹ See *Comparative Review of Governance Structures for Ecosystem Management* (November 2006). Available at <https://www.dfg.ca.gov/habcon/nccp/publications.html>.

Section 8.4.3 also mentions having a “target size” for an endowment to fund management and monitoring after the permit term, but fails to indicate the amount of the target.

RECOMMENDATION: To comply with NDWA contractual obligations and the requirements of state and federal law stated above, the BDCP must clearly describe all sources of funding for all elements of the BDCP and require as a condition in the permits and Implementing Agreement the establishment of multiple, long-term, and reliable funding mechanisms such as endowments to fund all aspects of BDCP over the 50-year life of the plan. Specifically, the BDCP must provide endowments or other durable methods of funding the following:

- The Mitigation Monitoring Plan, including the hundreds of individual actions called for in the *Avoidance and Minimization Measures* (Plan Appendix 3.C), and any actions necessary to avoid or remedy 1981 Contract violations;
- The Plan’s Monitoring and Adaptive Management Program;
- Management contingency assumptions (Sec. 8.4.1);
- Payment of in-lieu property assessments (via an endowment or other stable and steady source of income) for lands associated with CM1 (Water Code § 85089(b)) and for habitat/conservations lands transferred from private property in the North Delta pursuant to execution of MOU with Agency. The endowment or other long-term, reliable funding mechanism must pay for both a) the contract price of water to rise, as laid out in the 1981 Contract,⁶² and b) the price of assessments to rise in accordance with the limits set by the voters and the North Delta Water Agency Board.⁶³ Payment of Agency assessments using BDCP funding is appropriate, given the original purpose of the 1981 Contract.⁶⁴

RECOMMENDATION: Chapter 8 of the Plan must provide more details on specific amounts to be deposited into each endowment fund at start-up and annually thereafter, including the total “target size” stating when endowments will be considered fully funded.

F. Inappropriate Transfer of CVP/SWP Delta Export Water Contractor Costs Onto Public and Plan Area

There are significant inadequacies and inequities contained in the BDCP’s current funding strategy that require substantial modification to prevent serious economic harm to the North Delta region.

An in-depth review of the BDCP’s funding strategy reveals an attempt to receive economic benefits that absolve BDCP proponents of future responsibility to provide any future compensation, land, or water supply beyond what is specified in the Plan for the next 50 years while transferring costs for regulatory obligations of the federal Biological Opinions and for absorbing economic and environmental degradation from 52 “significant and unavoidable”

⁶² Article 10, providing that the contract price for North Delta Water Agency water can rise by as much as 25 percent every five years (5 percent each year).

⁶³ North Delta Water Agency Assessment Adjustment (approved by voters in 2011).

⁶⁴ See MBK Engineers report, *Assessment Commissioners for the North Delta Water Agency Assessment Adjustment Pursuant to Article XIII D of the California Constitution* (2010) (“The Agency’s Contract payment was based on the average annual deficiency in the water supply available to meet the water supply and water quality requirements of water rights of the lands within the Agency. The Contract payment represents the majority of the Agency’s annual costs.”)

adverse impacts on to other parties. In addition, the BDCP displays a serious disregard for financial obligations under the Delta Reform Act, other Delta protection statutes, area-of-origin, and other responsibilities.

For instance, the BDCP suggests that state and federal contractors are only responsible for 12.6% of the costs of CM4. (BDCP, Table 8-41.) The rationale is that only a small portion of restoration occurring under CM4 is currently required by the USFWS Biological Opinion for the Long-term Operational and Criteria Plan. However, the BDCP fails to disclose that tidal restoration will also serve to mitigate the adverse impacts of locating new SWP diversion facilities in the North Delta – in other words, is mitigation for implementation of CM1. In fact, according to the Plan Effects Analysis CM4 and CM5 are necessary to reduce the frequency and severity of reverse flows created in the Sacramento River at the Delta Cross Channel and Georgiana Slough from the construction of new SWP pumping facilities in the North Delta (CM1). Accordingly, the cost of CM4 and CM5 should be borne by CVP and SWP water contractors because these actions mitigate the operational impacts of the North Delta intake facilities (CM1), which solely benefits the water contractors at great expense to the Delta water quality, environment, and economy.

Imposing the costs of most of the BDCP’s Programmatic conservation measures on the general public when those activities should be funded by the BDCP Proponents receiving the benefit of improved water quality and supply reliability and some extraordinary long term sweetheart deals certainly does not appear to be co-equal. Particularly in light of the adverse economic impacts imposed on the Delta with degraded water quality, community blight from building abandonment, and crippling of an agricultural paradise going back to the Civil War in order to achieve benefits in export service areas.

The most valuable benefits directly conferred upon CVP and SWP Delta export water contractors is the 50-year HCP “No Surprises” protection⁶⁵ (Section 14.0 of the BDCP Implementing Agreement) from future ESA obligations and the explicit NEPA Project Purpose, repeated many times throughout the BDCP documents, to “restore and protect the ability of the SWP and CVP to deliver up to full contract amounts.” This is partially achieved by maximizing water supply for SWP and CVP relative to the Annual Operating Plan according to the “Real-Time Operational Decision-Making Process” described in Plan Chapter 3, Section 3.4.1.4.5.

Under the No Surprises regulatory assurances policy, once the incidental take permit has been issued the federal government will not require additional conservation or mitigation measures, including land, water (includes quantity and timing of delivery), money, or restrictions on the use of those resources covered in the Plan.⁶⁶

The Plan’s Implementing Agreement acknowledges as much:

“[T]he USFWS and NMFS shall not require the Permittees to provide additional land, water or other natural resources, or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond the level provided for under the BDCP, this Agreement and the Federal Permits with respect to Covered Activities without the consent of the Permittees.”⁶⁷

⁶⁵ 63 FR 8859, Feb. 23, 1998.

⁶⁶ 63 FR 8868

⁶⁷ *Implementing Agreement for the Bay Delta Conservation Plan, Section 14.3*

This means that if the status of a covered species in the HCP unexpectedly declines any time during the 50-year permit term, the primary obligation for undertaking additional conservation measures rests with the federal government, other government agencies, or other nonfederal water users and/or landowners who have not yet developed HCPs. So, if the BDCP fails to improve species or causes further decline of covered fish as predicted in the federal Red Flag comments, Delta and northern California water users or taxpayers may end up responsible for conditions caused by CVP/SWP operations.

The nexus for the federal agencies providing these regulatory assurances is the purported benefits to be achieved by implementation of Conservation Measures, including CMs2-22 which, according to Red Flag comments and the Plan's own Effects Analysis, are needed to offset the numerous significant adverse effects of CM1 on covered species and their habitats.

Allowing the burden to supply extra outflows be the responsibility of other legal users of water for the next 50 years, expecting other landowners to sacrifice their property for habitat restoration, and asking other taxpayers to fund the BDCP while the economic and regulatory benefits accrue to CVP and SWP export service areas would be inequitable and an illegal re-direction of impacts to the North Delta and Northern California region.

In the aggregate, the aforementioned direct benefits accruing to CVP/SWP Delta export water contractors as a result of BDCP is an argument for *all* Plan and EIR/EIS costs to be borne by BDCP proponents.

RECOMMENDATION: Revise Plan Chapter 8 and the Implementing Agreement to clarify that in exchange for the benefits received (50-year shielding from ESA, explicit prohibitions from contributing additional flows from CVP/SWP for 50 years, explicit intent to deliver full contract amounts) BDCP Proponents are responsible for all costs associated with implementing conservation actions (including mitigation of actions) identified in Plan Chapter 3, Table 3.2-1 and all mitigation measures associated with construction and operation of CM1 including any other actions in the CMs that mitigates the impacts of CM1. Other examples include any costs associated with compensating for harm to other parties arising from implementation of BDCP conservation measures, including water users in the Plan Area harmed by degraded water quality as described in EIR/EIS Chapter 8 or separate permitting actions like changing D-1641 salinity compliance from Emmaton to Three Mile Slough.

RECOMMENDATION: Insert a Table into Chapter 31 of the EIR/EIS that estimates the number of acres and approximate locations of lands to be used for mitigation of CM 1 so that local agencies with assessments, like the NDWA, can evaluate the potential revenue loss and seek payment under Cal. Water Code § 85089(b).

RECOMMENDATION: Require the Implementation Office to track and the Annual Progress Reports to disclose the number of acres that are purchased each year for “the construction, location, mitigation, or operation of new Delta conveyance facilities” so that a proper accounting can be kept of the in-lieu property taxes and assessments that CVP and SWP water contractors are responsible for paying to local government agencies in accordance with Water Code § 85089(b).

RECOMMENDATION: Insert a condition into the HCP/NCCP permit requirements and Implementing Agreement requiring the BDCP Proponents to “pay for all property tax or

assessments levied by local governments or special districts for all lands used in the construction, location, mitigation, operation, maintenance, or management of BDCP habitat conservation projects and activities.” This commitment should be additionally memorialized by executing MOUs with each local agency with affected revenues upon purchase of BDCP-related lands in impacted agency’s jurisdiction. The commitment must provide for increases in the rates due to inflation and other economic pressures.

RECOMMENDATION: Mandate, via a requirement inserted into the Plan Chapter 8, that the CVP and SWP Service Contractors be financially responsible for paying all local in-lieu property assessments to NDWA for all lands purchased for purposes of complying with habitat restoration mitigation requirements contained in (at minimum):

- Fish Restoration Project Agreement (FRPA);
- Federal Biological Opinions for jeopardy associated with the continued operation of existing SWP and CVP South Delta pumps;
- OCAP or any other regulatory requirements such as meeting existing statutory fish-doubling requirements as obligations under the CVPIA.

VI. BDCP GOVERNANCE AND OVERSIGHT

A. Improper Transfer of SWP Decision-Making Authority

Under the BDCP, State Water Project Delta export water contractors and federal Delta export water service contractors (collectively “BDCP Proponents”) are given new extraordinary decision-making authority as voting members of BDCP’s primary decision-maker – the Authorized Entities Group (AEG). Under this proposed SWP/CVP management scheme, the BDCP Proponents’ influence, power, and authority would also extend to participation on the Implementation Board, Adaptive Management Team, the Stakeholder Group, Real-Time Operations Team, and even as Supporting Entities.

According to Table 7-1 the Authorized Entity Group (AEG) has final authority over:

- Selection of the Program Manager;
- Oversight, administration, and approval of program funding, contracting , and resources;
- Oversight and implementation of conservation measures;
- Implementation of outreach, compliance monitoring and reporting requirements;
- Contracting for and acquisition of interests in real and personal property, and obtaining permits and other authorizations; and
- Review and approval of Annual Work Plan, Annual Budget, and Annual Delta Water Operations Plan.

Although exceptions to AEG authority purportedly excludes control over SWP/CVP “water operations,” the AEG will still hold the purse strings for SWP/CVP management and water operations and as members of the Real-Time Operations Team. As such, these export water contractors will be included in the water operations decision-making process for “developing

adjustments to CM1 operations, in real-time,” in order to “maximize water supply for SWP and CVP relative to the Annual Operating Plan” according to Plan Chapter 3, Section 3.4.1.4.5. As a result, SWP/CVP export service contractors with junior water rights will be allowed to participate directly in decision-making while holders of senior water rights and contractual entitlements, such as NDWA, are excluded.

According to the EIR/EIS, as BDCP proponents the SWP/CVP Delta water export contractors will also decide all of the discretionary issues related to mitigation implementation such as whether a remediation measure is “feasible” or “cost-effective” as well as control development of all studies regarding baseline conditions and project impacts that have been deferred.

The extensive role of the BDCP proponents as Authorized Entities in virtually every aspect of BDCP governance raises fundamental questions. Most importantly, will the State of California continue to manage the State Water Project for the benefit of all citizens of the State, or will a small group of project beneficiaries in effect manage and operate the SWP? The authority that would be granted to the BDCP proponents under the BDCP is simply unprecedented. Such a transfer of authority over state and federal public works far exceeds the scope, jurisdiction and authority of the HCP/NCCP processes or the original legislative intent of the state and federal statutes authorizing the two water conveyance projects.

The proposed transfer of power over the CVP and SWP to the Delta water export contractors represents a clear transfer of the state and federal government’s sovereign authority over the operation and management of these projects. Such a transfer could interfere with DWR’s performance of its specific binding obligations under the 1981 Contract with NDWA. NDWA objects to the proposed transfer of decision-making authority to the state and federal export contractors; such action would diminish DWR’s ability to comply with its obligations under the 1981 Contract to operate the SWP to “maintain within the Agency a dependable water supply of adequate quantity and quality.”⁶⁸ This transfer of authority would also limit the State’s ability to “affirmatively defend” the reasonable and beneficial uses of water by NDWA landowners.⁶⁹

RECOMMENDATION: BDCP governance must be significantly realigned to put representatives of holders of senior water rights and contractual entitlements, such as NDWA, on equal footing with the state and federal export contractors regarding BDCP governance. The HCP/NCCP permitting agencies must reject the BDCP governance structure and process as currently laid out in Chapter 7 of the Plan. As the lead agency, DWR must re-engage stakeholders to develop a governance structure that more appropriately distributes decision-making authority among all stakeholders, particularly other SWP contractors that will be directly impacted by BDCP implementation, such as NDWA.

B. The Plan Must Incorporate 1981 Contract Into BDCP Implementation and Oversight Program

The Agency could only find cursory references to the NDWA and the 1981 Contract in the Plan, two of which are merely footnote acknowledgements of the Contract. As the Agency asserts in comments above, the assurances provide to NDWA by DWR are particularly relevant to BDCP’s

⁶⁸ 1981 Contract at Art. 8(e).

⁶⁹ *Id.* at Art. 8(d).

proposed SWP and CVP water operations because the 1981 Contract significantly constrains such operations.⁷⁰

NDWA's prior comments also establish the fiscal ramifications if the terms and conditions of the 1981 Contract are violated as a result of BDCP operations. Despite DWR's long-standing acceptance and commitment to uphold the provisions of the Contract, NDWA is concerned about DWR's ability to do so based upon the anticipated outside influence imposed on management of the SWP for the next 50-year under the governance structure proposed in BDCP.

Of particular concern to the Agency is the Plan's failure to acknowledge the nature and extent of DWR's obligations to operate the SWP in compliance with the 1981 Contract, and the failure to include the 1981 Contract in the BDCP's annual reporting program.

NDWA, by virtue of the vote approving the Contract that occurred in 1981, consented to the export of water from the Delta "so long as this contract remains in full force and effect *and the State is in compliance herewith.*"⁷¹ By virtue of signing the Contract, the State bound itself to affirmatively defend the use of water by North Delta landowners.⁷² Accordingly, since NDWA is also a SWP contractor (although not a BDCP proponent because receives no benefits from the Project) it is appropriate to incorporate compliance with the 1981 Contract into the BDCP governance, oversight, and budgeting process in order to prevent or mitigate for any potential contractual breach which the State of California would be liable.

RECOMMENDATION: In order to ensure future compliance with the 1981 Contract, the annual operating and monitoring plans and reports should include, without limitation, the following:

- Annual Delta Water Operations Plan, Sec. 6.3.2
- Annual Progress Report, Sec. 6.3.3
- Annual Water Operations Report, Sec. 6.3.4
- Annual Work Plan and Budget, Sec. 6.3.1
- Five-Year Comprehensive Review, Sec. 6.3.5
- Adaptive Management and Monitoring Program, Sec. 3.6

RECOMMENDATION: Incorporate the specific year-round water quality, flow, and elevation criteria of the 1981 Contract as metrics to be achieved in the Annual Delta Water Operations Plan, in order to prevent or mitigate for any potential contractual breach for which the State of California would be liable.

⁷⁰ This would apply to Contract violations caused by loss of water quantity or water quality, harm from surface water elevations, damage from seepage, harm caused by overland facilities, damage to existing flows and diversions, or any other provisions identified in Articles.

⁷¹ Art. 8(e) [emphasis added]

⁷² Id. at 8(d), DWR, CA Natural Resources Agency and U.S. Dept. of the Interior, "What is the BDCP", Available at <http://baydeltaconservationplan.com/AboutBDCP/WhatistheBDCP.aspx> DWR, CA Natural Resources Agency and U.S. Dept. of the Interior, "What is the BDCP", Available at

<http://baydeltaconservationplan.com/AboutBDCP/WhatistheBDCP.aspx> (Providing that "The State agrees to defend affirmatively as reasonable and beneficial the use of water required to provide and sustain the qualities established in this contract.")

RECOMMENDATION: Disclose in the Annual Water Operations Report any operational changes, remedies for damages caused by prior year’s BDCP operations that were implemented, and any significant physical modifications made to SWP facilities (i.e., alternative water supply infrastructure) implemented as a result of complying with water quality and supply obligations under the 1981 Contract. This disclosure would provide transparency for decision-makers, and could operate to mitigate for any potential contractual breach for which the State of California would be liable.

RECOMMENDATION: Add the 1981 Contract to the list of items that must be tracked in the BDCP’s Annual Progress Report, Adaptive Management and Monitoring Program, and the Five-Year Comprehensive Review. To avoid contractual breach, the EIR/EIS and these documents should require “compliance “ with any and all DWR and USBR contractual obligations still in full force and effect that are associated with the operations of the SWP and CVP, including the NDWA 1981 Contract.”

RECOMMENDATION: Request a map be added to the EIR/EIS Chapter 1 Appendices that depicts the NDWA’s boundaries and seven water quality monitoring locations specified in the 1981 Contract.

RECOMMENDATION: Incorporate into the Annual Work Plan and Budget a description of any anticipated actions and costs associated with remedies to alleviate or eliminate any 1981 Contract violations incurred over the previous fiscal year or projected for the next fiscal year. This would provide transparency, and serve as a mitigation measure to ensure that any contractual breaches caused by the BDCP are mitigated.

C. Extraordinary Amount of Mitigation Requires Increased Governance and Oversight

The Plan, Chapter 6 *Plan Implementation*, Chapter 7 *Governance*, and Chapter 8 *Implementation Costs and Funding Sources*, devotes a great deal of attention to responsibility for implementation of actions necessary for the construction of CM 1 and to showing scheduled progress in meeting the biological goals and objectives applicable to all programmatic natural community and species conservation measures. However, the Plan lacks the same level of commitment and oversight regarding the effective implementation of the thousands of individual mitigation actions required in a tiered and bifurcated project (Project Level and Programmatic Conservation Measures) of this size, being constructed over several decades.

NDWA could only find passing mention of mitigation implementation or effectiveness in Plan Section 6.3 *Planning, Compliance, and Progress Reporting* or Section 7.1 *Roles and Responsibilities of Entities Involved in BDCP Implementation* or anywhere else dealing with HCP/NCCP permit compliance.

Under NEPA, mitigation includes avoiding, minimizing, rectifying, reducing over time, or compensating for an impact.⁷³ CEQA contains similar requirements. In order to ensure compliance with HCP terms and conditions, permitting agencies will need to have a robust tracking mechanism to monitor whether the thousands of discrete mitigation actions listed in the EIR/IES chapters⁷⁴ and contained in the *Avoidance and Minimization Measures* (Plan Appendix

⁷³ 40 CFR § 1508.20

⁷⁴ As well as those contained in the *Avoidance and Minimization Measures* (Plan Appendix 3.C).

3.C) are being implemented properly, and that the mitigation measures are performing as intended to reduce the seven hundred and fifty significant impacts listed in the EIR/EIS.⁷⁵ In accordance with NEPA/CEQA, the BDCP permitting agencies must be clear with each other and transparent with the public as to who is proposing each mitigation measure, and who will monitor and enforce measures that are adopted as terms and conditions of the approved permits.⁷⁶ Failure to ensure the implementation and effectiveness of these mitigation measures will result in a substantial increase above the fifty-two “Significant and Unavoidable” adverse impacts expected to be imposed on human and environmental resources from the implementation of BDCP according to the EIR/EIS (Chapter 31).

NDWA could find no mitigation monitoring plan, governance oversight entity, or adaptive management process specifically described for developing replacement mitigation measures in the event that an action portrayed in the EIR/EIS is ineffective. The BDCP complicates the tracking and governance of mitigation even further by incorporating existing mitigation requirements from previous ESA processes (specifically, the requirements of existing Biological Opinions governing Delta operations) into the Conservation Measures.⁷⁷

Of most concern to the NDWA is the potential for breach of the 1981 Contract by DWR that could result in substantial adverse impacts on water users and the physical and human environment in the North Delta, if BDCP fails to properly implement compliance measures and/or mitigation measures to avoid or remedy violations of the 1981 Contract.

RECOMMENDATION: BDCP permitting agencies must assure, by memorializing in the Implementing Agreement and as permit terms and conditions, an equal level of attention and oversight to the proper and timely implementation of feasible mitigation measures to reduce project impacts to a less-than-significant level, in accordance with applicable law. In order to protect Delta-as-Place in accordance with the coequal goals of the Delta Reform Act, and to properly implement its mitigation, the Plan must define:

- The entity responsible (among construction contractors, NMFS, USFWS, DWR, USBR, BDCP Implementation Office, and the other key players)) for the timing and implementation of mitigation actions⁷⁸ contained in the EIR/EIS’s Mitigation Measures and Plan Appendix 3.C, *Avoidance and Minimization Measures* including the development of hundreds of studies, field surveys, avoidance protocols, reports, best management practices, etc. to be implemented during all phases of the project from design to maintenance, monitoring, and adaptive management;

⁷⁵ ICF International, *Impacts, Mitigation Measures, and Conclusions for Alt. 4 in the 2nd Administrative Draft of the BDCP EIR/EIS* (May 2013).

⁷⁶ See, e.g., *NEPA and CEQA: Integrating State and Federal Environmental Reviews*, Draft for Public Review and Comment, March 2013, the U.S. Council on Environmental Quality (CEQ) and CA Governor’s Office of Planning and Research

⁷⁷ See Plan Chap. 3, Table 3.2-1 Consistency of the BDCP with Requirements of Recent Biological Opinions; See also existing “OCAP” biological opinions, available at <http://www.fws.gov/sfbaydelta/cvp-swp/cvp-swp.cfm>; Reclamation Board, *Remanded Biological Opinions on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project* (March 2012). Available at <https://www.federalregister.gov/articles/2012/03/28/2012-7488/remanded-biological-opinions-on-the-coordinated-long-term-operation-of-the-central-valley-project>; California Department of Fish and Wildlife and the Department of Water Resources; *Fish Restoration Program Agreement (FRPA)* (October 2010). Available at <http://www.water.ca.gov/environmentalservices/frpa.cfm>.

⁷⁸ Mitigation actions contained in the EIR/EIS’s Mitigation Measures and Plan Appendix 3.C, *Avoidance and Minimization Measures*

- The governance and oversight entity in the BDCP to be responsible for ensuring mitigation implementation and for reporting to the permitting agencies and the public on the progress and effectiveness of all mitigation measures applied to activities in CMs 1-22;
- The state or federal agency designated with the regulatory responsibility for implementation of each mitigation action and for reporting on whether the conditions in the permits are being met;
- The entity responsible for ensuring adequate funding is available for all mitigation measures associated with CMs 1-22 and for annually reporting the fiscal costs of mitigation;
- What the Project and permit ramifications will be if the thousands of mitigation actions are not being properly implemented in a timely manner to alleviate adverse impacts identified in the EIR/EIS and as mitigation requirements in the numerous other additional permits required beyond those in the HCP/NCCP for BDCP construction and operations; and
- The entity responsible for tracking and enforcing implementation of hundreds more mitigation requirements that will be imposed by agencies such as SWRCB, USACE, CVFPB, county building permits, etc. that will additionally be required for each Conservation Measure.

RECOMMENDATION: Require through the Implementation Agreement and through revisions of Plan Chapter 7 that the Permit Oversight Group, Section 7.1.5, be mandated to include a quarterly assessment of compliance with the timing and effectiveness of mitigation measures required as HCP/NCCP permit terms and conditions, with particular attention to any mitigation measures and actions that are behind in implementation or not performing as intended to reduce adverse impacts, and provide recommendations for alternative mitigation measures/actions to replace those that are not working. This will ensure that mitigation occurs and that adaptive management is properly applied to mitigation.

RECOMMENDATION: To ensure that mitigation and adaptive management are truly occurring, require the BDCP Annual Progress Report, Section 6.3.3, to assess the following:

- Progress made regarding the implementation of all mitigation measures contained in the EIR/EIS;
- Progress of new mitigation requirements added in separate permits that must be issued (i.e., change of diversion, SPFC encroachment, air quality, water discharge, etc.)
- Progress in implementing individual actions contained in the Plan Chapter 3 Table 3.2-1, Plan Appendix 3.C, *Avoidance and Minimization Measures*;
- Status of lands purchased for CM 1 construction mitigation in order to pay in-lieu local property taxes and assessments pursuant to Water Code § 85089(b);
- Compliance actions implemented by DWR/BDCP to avoid and remedy violations of the NDWA 1981 Contract;
- Any mitigation actions that are behind in implementation schedule;

- Any mitigation measures that are not performing as expected; and
- New mitigations recommended by the Permit Oversight Group (see comment above) that may be necessary to replace mitigation measures that are not working as advertised in the EIR/EIS.

D. The Plan Fails to Include NDWA’s Contractual Remedies as Covered Actions Associated with SWP Operations

The NDWA appreciates the Plan Chapter 4, Section 4.2 *Covered Activities* recognizing in a footnote that DWR has separate water quality obligations pursuant to the 1981 Contract; however, the nexus between the requirements of the 1981 Contract and actions DWR will have to undertake under the BDCP incidental take permits as existing SWP obligations is not made anywhere in this chapter, the Plan, the Implementing Agreement, or the EIR/EIS.

In regards to any future physical and operational modifications DWR may have to implement in order to avoid violations of the 1981 Contract, the BDCP should include such remedies as Covered Activities in Chapter 4 and the HCP Implementing Agreement as part of DWR/SWP’s existing operational requirements.

RECOMMENDATION: Request Plan Chapter 4, Section 4.2 *Covered Activities*, p. 5, lines 24-29, that lists six categories of covered activities be amended to include the following as another category:

- *Actions to maintain compliance with contractual obligations to in-Delta water users.*

RECOMMENDATION: Include a new subsection to Plan Chapter 4, Section 4.2 *Covered Activities* (could be added as new Subsection 4.2.8 under *Transfers and Other Transactions*) as follows:

4.2.1.5 Compliance Actions Pursuant to NDWA 1981 Contract

Under the NDWA 1981 Contract DWR is responsible for maintaining year-round water quality criteria and for several physical obligations such as diversion facility modifications or seepage and erosion damage repairs required due to detrimental altered water elevations. BDCP’s proposed modification of the Delta’s hydrodynamics during the 50-year implementation may require DWR to occasionally undertake actions to avoid or remedy Contract violations as part of binding assurances given to North Delta water users in 1981 Contract. The BDCP will therefore include complying with DWR’s obligations to implement physical and operational actions and activities necessary to avoid or remedy violations of the NDWA 1981 Contract as covered activities.

VII. MAJOR PLAN AND IMPLEMENTATION DEFICIENCIES

A. Significant Environmental Uncertainty Warrants a Phased Approach

The NDWA agrees with BDCP Project proponents that uncertainty is not a good reason to do nothing. However, in the case of the BDCP, the high degree of uncertainty for achieving any meaningful benefits for covered species as expressed by independent science reviews and ESA

permitting agencies,⁷⁹ results in a fundamental failure of BDCP to comply with NEPA, CEQA, ESA, NCCPA and other applicable law.⁸⁰ According the independent review of the Plan and Effects Analysis by fisheries biologist Dave Vogel, every aspect of the impacts of BDCP on salmonids is either “uncertain” or “highly uncertain.”⁸¹

What are the uncertainties associated with implementing the BDCP? According to the BDCP documents, uncertainty exists in nearly every aspect of the project: fishery benefits, availability of private land for habitat, to the success of proposed mitigation. Listing the uncertainties would take too long because the word “uncertain” appears 1,008 times in the Plan and appendices, and 2,303 times in the EIR/EIS and appendices.

Despite the criticism of these uncertainties by independent scientists and others, BDCP proponents continue to blindly pursue a “damn the torpedoes, full steam ahead” attitude like they did when promoting the original Peripheral Canal in the 1980s. However this time, the BDCP proponents are not including the same precautionary measures such as phased construction and important assurances to the Delta and environmental resources that they did in the original Peripheral Canal proposal. Nor are they seeking voter approval for the BDCP. Instead, BDCP proponents appear to be betting everything on one horse to win and ignoring the extreme amount of risk for species and water supply reliability if they have chosen a horse hobbled by severe environmental and fiscal uncertainty.

It is noteworthy that the original Peripheral Canal legislation (SB 200 and ACA 90) contained specific protections that were designed to reduce environmental uncertainty and protect Delta communities, including:

- DWR was to assure protections for fish restoration and protection in the Delta to pre 1967 levels;⁸²
- DWR executing water supply and quality settlement contracts with 8 in-Delta entities, including NDWA;
- Prohibition against DWR transporting water for the CVP until Congress enacted legislation or the Secretary of the Interior entered into a permanent contract with the department that specified certain terms and conditions;
- Phasing the construction of the project so that a new intake in Hood would be operated for two years to establish adequate fish screen and operational criteria before the next phases could proceed.

The administration of Governor Edmund G. Brown, Jr. obviously agreed to this precautionary approach the first time around and should do no less now. Currently, CM1 as proposed will require the three new North Delta intakes to undergo some operational fish screen testing prior to full pumping but only *after* all three North Delta diversions have been built. If these never before-used screens do not function as planned in terms of fish protection, then this gamble will end up a losing proposition for at least one out of the following three: the Delta ecosystem,

⁷⁹ Vogel Report, NAS Comments, ISB Comments , Latour, R., Ph.D., Technical Review of the Bay-Delta Conservation Plan (BDCP) and Related Environmental Impact Review (EIR) (May 16, 2014) (“Latour Report”)

⁸⁰ Vogel Report, Latour Report, NAS Comments, ISB Comments

⁸¹ Vogel report

⁸² SB 200, (chap 632) 1979-1980 Regular Session, §11256

Delta-as-Place, or the CVP/SWP Delta export water contractors (who will be stuck with long-term payments on a very expensive stranded asset).

Finally, it is important to point out a fact that is rarely discussed in BDCP – size matters. Other than the CVP/SWP existing diversion intakes in the South Delta, the average size of the Delta’s agricultural water diversion intakes is about 12 inches with a 10-15 cfs capacity (mostly siphons, not pumps) while the urban intakes are less than 300 cfs. By comparison, each of the BDCP individual intakes will be 3,000 cfs with a combined fish screen length of a little over a mile to be placed on a four-mile stretch of the Sacramento River’s east bank. The BDCP used the size of the Glenn-Colusa Irrigation District’s (GCID) 3,000 cfs intake as the precedent for the size selected for CM1. However, GCID’s facilities are not located in a tidal estuary, do not have to screen for smelt, and were not without their own problems that ultimately resulted in a very expensive redesign of fish screens and forebay.⁸³

RECOMMENDATION: To mitigate environmental and human resource impacts, require the CM1 construction to be phased so that one intake is built and fish screen effectiveness and compliance with permits is tested and the water quality, elevation, and reverse flows monitored to assure the 1981 Contract and California’s “No Injury” rule are not being violated.

B. Masquerading as “Conservation Measure” Does Not Meet ESA/CESA Standards

Under the ESA, conservation measures are “actions to benefit or promote the recovery of listed species that are included by the Federal agency as an integral part of the proposed action. These actions will be taken by the Federal agency or applicant, and serve to minimize or compensate for, project effects on the species under review.”⁸⁴

The Plan improperly characterizes as “conservation measures” various actions that do not fall within the foregoing definition because the activities will not benefit or promote the recovery of listed species. The most egregious example of this systemic flaw is the characterization of Conservation Measure 1 (“CM1). The Plan’s Executive Summary describes CM1 as follows: CM1 Water Facilities and Operation is intended to meet or contribute to a variety of biological goals and objectives that are related to flow management and reduced entrainment of covered fish species. Many of the conservation actions proposed under CM1 constitute a continuation of existing operational criteria being implemented under the biological opinions⁸⁵ that currently constrain State Water Project and Central Valley Project operations. (Plan, p. 10) This description of CM1 is disingenuous, to say the least, because it does not disclose that the thrust of CM1 is the construction and operation of three new North Delta intakes and associated pumping and water conveyance (i.e., tunnel) facilities.

As detailed in the report of fisheries biologist Dave Vogel filed herewith, the North Delta intakes and accompanying fish screens will lead to “ideal conditions” for predation of juvenile salmon by creating flow conditions that disorient juvenile salmon and pull them to one side of the Sacramento River directly into a target-rich environment for predators waiting to feed. Furthermore, when the North Delta intakes are operating the pumping facilities will cause reduced Sacramento River stream flow which will adversely affect migration of juvenile winter-

⁸⁴ *ESA Handbook* at xii (emphasis added)

⁸⁵ See, e.g., Chapter 1, Introduction, Section 1.3.2.2, Relationship of the BDCP to Existing Biological Opinions

run Chinook salmon who will be pulled into the Central Delta by increased reverse flows created at the Delta Cross Channel and Georgiana Slough.

Similar issues arise from the Plan's characterization of the "minimization and avoidance" measures described in CM22 as "conservation measures" when the sole purpose of such measures is to mitigate the adverse impacts that will be caused by the construction of CM 1-21. Such chicanery brings to mind the infamous quote from a Shakespeare play, "a rose by any other name would smell as sweet," in which Juliet argues that the names of things do not matter, only what they "are."⁸⁶ In the case of BDCP the opposite could be said about CM1— it only matters what it "is," not what it is named.

In a similar vein, the Plan characterizes actions that are required to be taken pursuant to the current Biological Opinions as "conservation measures," however these are existing regulatory mandates for jeopardy findings under ESA necessary to maintain incidental take authority at the SWP/CVP South Delta pumps. (See Plan Table 3.2-1, *Consistency of the BDCP with Requirements of Recent Biological Opinions*, p. 3.2-11 of Plan).

The Plan's characterization of CM1, the "minimization and avoidance" measures of CM22 and the requirements of current Biological Opinions as "conservation measures" violates the letter and spirit of the ESA. Contrary to the Plan's assertions, these are not new "actions to benefit or promote the recovery of listed species." In the case of the Biological Opinion requirements, they are regulatory requirements with which the CVP and SWP will have to comply regardless of whether the BDCP is ever constructed.

RECOMMENDATION: Revise the Plan's Conservation Strategy (Chapter 3) to remove the new SWP North Delta conveyance facilities (CM1) and the minimization and avoidance measures (CM22) as Conservation Measures. The conveyance facilities and operations should be identified as Covered Action Projects seeking ESA ITP authorization. The avoidance measures should be identified in the EIR/EIS and the Mitigation Monitoring and Implementation Plan as new Mitigation Measures necessary to offset significant adverse effects of the Project, actions, and operations.

RECOMMENDATION: Revise the Plan's Conservation Strategy (Chapter 3) to separate all the BiOps and FRPA habitat actions from the Conservation Measures and identify them in the EIR/EIS and the Mitigation Monitoring and Implementation Plan as existing ESA Mitigation Measures (i.e., baseline conditions) for the ongoing CVP/SWP water operations proposed in the BDCP.

C. The BDCP Shifts Future ESA Obligations to Northern California Water Users

One of the most valuable and enduring benefits BDCP proponents would receive under the Plan is 50-year protection from providing any more land, water (includes quantity and timing of delivery), money, or restrictions on the use of those resources beyond what is specified in the Plan.⁸⁷

⁸⁶ *Romeo and Juliet*, Act II, Scene ii.

⁸⁷ 63 FR 8868

Practically speaking, this means if the covered species in the HCP decline even further during the 50-year permit term, the primary obligation for undertaking additional conservation measures rests with the federal government, other government agencies, or other nonfederal landowners who have not yet developed HCPs. In other words, water users in the Plan Area (Delta) and upstream throughout Northern California will be like the great Titan Atlas shouldering the entire regulatory responsibility if the BDCP fails to improve species or causes further fishery declines as predicted in the federal Red Flag comments. In contrast, the CVP and SWP Delta export facilities and contractors will be absolved – held harmless.

Conferring this level of regulatory protection is surprising since the BDCP Plan, Effects Analysis, and EIR/EIS bounces back and forth between claiming to benefit covered species and admitting that actions in the Plan will result in additional take of covered species. Moreover, statements in the Plan and EIR/EIS claiming species benefits often do not have any supporting evidence to validate such assertions, while the intensity of the adverse impacts are typically glossed over or the science is presented in a way that makes the adverse impacts appear less severe.

An example is Plan Table 9-7 *Summary of Change in Take Relative to the BDCP Proposed Action*, p. 9-20 of Chapter 9. The number of covered species that would experience increased take is staggering. For instance, “Take Alternative H” (*More Spring Outflow*) would result in an increase take of 26 terrestrial species and “Take Alternative C” (*Tunnels 15,000 cfs*) would increase the take of 10 covered fish species “due to increased number of intakes and heavier reliance on south Delta diversions.”

The level of take for species in Table 9-7 is presented in a confusing fashion because it is not comparing the different Take Alternatives to Existing Conditions, but is instead comparing the Alternatives to the Preferred Project (Alt. 4) with 9,000 cfs tunnels and 158,000 acres of habitat. Therefore, the amount of covered species take in Alternatives “A” through “I” in Table 9-7 would actually be much greater if compared against Existing Conditions.

Table 9-7’s failure to disclose/quantify any “take” impacts of Alt. 4 violates NEPA’s regulations requiring an agency to “rigorously explore and objectively evaluate all reasonable alternatives,”⁸⁸ requiring the agency to devote substantial treatment to each alternative,⁸⁹ and to identify the preferred alternative where one or more exists.⁹⁰ Even more relevant in this case, NEPA requires the environmental impacts of the proposed action and the alternatives to be presented in a comparative form to sharply define the issues and provide a clear basis for a choice among alternatives by the decision makers and public. The failure of Table 9-7 to compare Alt. 4 or any of the Alternatives against a “no action” is a violation of NEPA.⁹¹ Examples like these which are found throughout the BDCP documents prevents the public and permitting agencies from discerning which of the Alternatives is the best option for achieving HCP recovery goals and the least environmentally damaging.⁹²

Finally, failure to provide full disclosure of or quantify Alt. 4’s take impacts on covered species violates NEPA’s requirement to describe severe impacts in more detail than less consequential

⁸⁸ 40 CFR § 1502.14(a)

⁸⁹ 40 CFR § 1502.14(b)

⁹⁰ 40 CFR § 1502(e)

⁹¹ 40 CFR § 1502.14(d)

⁹² 40 CFR § 1505.2(b)

impacts.⁹³ What is obvious from the comparison provided in Chapter 9 is that all alternatives selected for analysis in BDCP will result in irreversible and irretrievable commitment of resources (40 CFR § 1502.16) on a scale that could result in jeopardy for more than one covered species. Table 9-7 would be more helpful in evaluating impacts to covered species populations if it were accompanied by a Table that names the species that would experience the increased or decreased level of take under BDCP. Because the Plan Area is so large, the various species may be more relevant in some areas and specific land and water uses than others.

Any underestimation of covered species adverse impacts that may be caused by implementation of BDCP as currently proposed should be carefully evaluated and avoided in light of the “No Surprise” protections BDCP Proponents will receive automatically shifting future ESA regulatory burdens to people with no say in the development or implementation of BDCP once the HCP/NCCP permits are signed by permitting agencies.

RECOMMENDATION: To be more consistent with NEPA Guidelines for disclosure and alternative comparison, Table 9-7 must be replaced with a new one that: a) adds the Preferred Alt. 4 (9,000 cfs Tunnels); and b) compares all of the BDCP Alternatives against a “no action” Alternative. That way, the difference in take of covered species between Alt. 4 and the other Alternatives will become apparent.

RECOMMENDATION: Request the addition of a new Table or Figure in Section 9.2 Descriptions of Take Alternatives that lists/names the covered species that will experience and increase or decrease in take when comparing all Alternatives to a “no action” alternative.

D. The EIR/EIS Fails To Provide an Adequate Summary Section (NEPA § 1502.12)

NEPA requires that an EIS contain a section summarizing the statement. The summary is specifically supposed to stress:

- Major conclusions;
- Areas of controversy (including issues raised by agencies and the public);
- Issues still pending resolution (including the choice among alternatives).

After a lot of searching, we finally found Section ES.7 *Areas of Known Controversy and Issues to be Resolved*, which listed controversial issues, but provided no discussion of the unresolved issues. This is particularly concerning in light of the long list of unresolved issues in the Federal Red Flag comments and those submitted by Cooperating Agencies. Chapter 1 *Executive Summary* Section ES.1 *Introduction* describes the purported benefits of the proposal, but we could not find a description of the EIS’ major conclusions.

Based on the Plan’s Effects Analysis and the 750 impacts with fifty-two of them considered “Significant and Unavoidable” in the EIR/EIS, there are certainly some very serious environmental impacts imposed on the natural and human resources in the Plan Area that warrant a comprehensive and coherent discussion for the public to understand the full extent of the scope and nature of the proposal.

⁹³ 40 CFR § 1502.2(b)

Failure to provide an overall description of how the natural resource and human impacts in the Plan Area will be affected as a result of implementing BDCP prevents the public from understanding the comprehensive scope, complexity, severity, and cumulative nature of how the Delta's biological and socioeconomic environment will be changed during the 10-year water conveyance construction or 50-year implementation and oversight.

RECOMMENDATION: Add a separate *EIR/EIS Summary of Conclusions, Unresolved Issues, and Known Controversies* Section that includes all three of the elements listed in NEPA⁹⁴ be drafted and included in the EIS.

RECOMMENDATION: Add a comprehensive summary section to the EIS that describes the major environmental impact conclusions made, including a comprehensive and coherent discussion of whether the 750 impacts, including the fifty-two "Significant and Unavoidable" adverse impacts outweigh the purported benefits. This can only be done if consistent with NEPA⁹⁵ with the summary providing an objective comparison of the benefits versus adverse impacts to see if one side is weighted heavier than the other. The description should include a disclosure of how the Plan Area's water supply and quality, farming production, flood protection, and recreational values will be altered as a result of implementing the BDCP Preferred Alternative.

RECOMMENDATION: Prepare the summary in accordance with §1502.12 to specifically describe the outstanding issues that have been raised in comments by NDWA as a SWP water contractor and Cooperating Agency with the USBR.

VIII. EFFECTS ANALYSIS AND MODELING FLAWS

A. Flawed Modeling Underlying the Plan and EIR/EIS Prevents Evaluation of Impacts

The models used for evaluating water project operations, hydrodynamics, and water quality have been extensively modified for BDCP studies to calibrate for salinity, reflect current Biological Opinion operational constraints, and incorporate the proposed actions and water operations proposed in Alt. 4.

These modified models have been found to be unreliable due to problems highlighted by an independent review, incorporated herein by reference as Attachment 2 to this letter, in a report by MBK Engineers and Dan Steiner entitled *Report on Review of Bay-Delta Conservation Program Modeling* ("Modeling Report").

As explained in the Modeling Report, the BDCP model is an outdated version of the CalSim II model, which contains known errors.⁹⁶ By definition, utilization of an outdated version of the CalSim II model does not constitute utilization of best available science.⁹⁷ The BDCP must conduct new model runs and Effects Analysis results using the current version of CalSim II. The Modeling Report describes other significant problems with the BDCP modeling:

⁹⁴ 40 CFR Section 1502.12

⁹⁵ 40 CFR Section 1502.14

⁹⁶ These errors are discussed at greater length in the Modeling Report.

⁹⁷ Note that NEPA requires application of information of "high quality" and professional integrity. 40 CFR 1500.1, 1502.24. Finally, the *Delta Plan* requires application of best available science for all covered actions.

- Methodology used to incorporate climate change contains errors and does not incorporate reasonably foreseeable adaptation measures;
- Climate change assumptions were incorrectly applied, yielding non-sensible results;
- Climate change hydrology in the Upper San Joaquin River basin was incorporated incorrectly into the BDCP Model;
- Incorporation of climate change ignores reasonably foreseeable adaptation measures that would lessen the dramatic effects predicted by the model;
- Includes predicted changes in precipitation and temperature without other changes, resulting in insufficient water needed to meet all regulatory objectives and user demands.

Each one of the above problems contained in the BDCP’s models and methodology alter the outcomes in ways that could mask a greater severity in impacts to Delta water quality, temperature, elevations, and unnatural flows. The cumulative nature of these miscalculations essentially renders the BDCP modeling and Effects Analysis useless. In particular, the modeling and Effects Analysis does not adequately evaluate water quality and supply data critical to enforcement of NDWA’s 1981 Contract.

An example of methodology miscalculations found in the model used by BDCP is the failure to adjust project operations, as required by the Coordinated Operations Agreement (“the COA”), to “pay back” the water “debt” to the SWP due to additional Delta outflow requirements of proposed BDCP water operations in order to keep the SWP whole. The ability of BDCP to make adjustments in accordance with COA is not clear according to the Modeling Report, because there is no apparent source of CVP or SWP water to satisfy both 1) the increased Delta outflow requirements *and* 2) the COA “debt” to the SWP, without substantially depleting upstream water storage.

From a practical operations standpoint, forcing the SWP to release stored water to meet the increased Delta outflow requirements could result in 1981 NDWA Contract violations. If BDCP operations allow depletion of upstream water storage, this would also cause adverse temperature impacts on salmonids in the Sacramento and American River systems (less available cold water pool) and would violate both California’s “No Injury Rule” and the long-standing prioritization of water rights governed by several state statutes.⁹⁸

Another concerning anomaly s described in the Modeling Report reductions in Delta outflows that could cause significant water quality and water supply impacts for in-Delta beneficial uses, including violations of the NDWA 1981 Contract and could lead to additional, unanalyzed adverse impacts on water supplies in the Plan Area (Delta).

When the errors in the BDCP Model are corrected, modeling results reveal that the North Delta Diversions (NDD) could divert approximately 680 TAF/yr more water than what is disclosed in the BDCP Draft EIR/S. Conversely, the quantity of water diverted through the existing South Delta Diversions (SDD) would be approximately 460 TAF/yr less than what is projected in the BDCP Draft EIR/S. This difference in the location of diversions has the potential to reduce water quality in the Delta in ways that were not analyzed in the BDCP Draft EIR/S.

⁹⁸ See Wilson, Craig M., *California’s Area Of Origin Laws: A Report to the State Water Resources Control Board and the Delta Stewardship Council* (2013). Available at http://www.waterboards.ca.gov/board_info/agendas/2013/oct/100813_7origin.pdf

Once these modeling anomalies are corrected, the NDWA will be able to evaluate whether BDCP's proposed reconfiguration of SWP and CVP water facilities and alteration of Delta hydrology will be in compliance with DWR's assurances provided to North Delta water users in the 1981 Contract.

RECOMMENDATION: To determine the potential effects of the reduced amount of Delta outflow on water quality and water surface elevations, the BDCP must conduct additional modeling, applying tools such as DSM2 and incorporating the new version of CalSim II currently being used by DWR in other projects/programs.

RECOMMENDATION: Once the new modeling is completed, the EIR/EIS Water Supply Chapter must include a new section disclosing whether the changes in water quality and elevations created by Alt. 4 operations will be significant and require mitigation to reduce the level of impacts. If the impacts to water supply availability and quality (agriculture and municipal) is determined to be adversely affected by BDCP water operations then the revised BDCP Plan and EIR/EIS will need to be released for public review and comment.

B. The Modeling Fails to Include the 1981 Contract Requirements

Under CEQA and NEPA, an EIR/EIS must include a description of the physical environmental conditions in the vicinity of the project from both a local and regional perspective.⁹⁹ An accurate description of the environmental setting of the Project is critical because it establishes the baseline physical conditions against which a lead agency can determine whether an impact is significant.¹⁰⁰ Most importantly, the baseline helps the public discern its impact on the local natural resources and human environments.¹⁰¹

Therefore, to comply with CEQA guidelines and case law, all hydrologic modeling undertaken in connection with the BDCP process must assume as part of the "baseline" condition that the terms and conditions of the 1981 Contract will remain in full force and effect. This includes DWR's obligations to operate the SWP to maintain water quality and supply in accordance with Articles 2, 6 and 8.

To date, the hydrologic modeling underlying both the Plan and EIR/EIS fails to do so – even though the NDWA **at its own expense** has provided a modeling tool to incorporate into BDCP's Effects Analysis modeling to ensure the Contract's criteria is analyzed as a baseline condition of SWP operations. This inclusion is important because the Contract's salinity objectives differ in certain key respects from the water quality requirements in the SWRCB's current Water Quality Control Plan for the Delta (D-1641), particularly in the late summer months where the 1981 Contract requirements are more stringent from a water quality standpoint.

The Agency's evaluation of BDCP's water operation impacts on North Delta water supply availability and quality is further complicated by arbitrary and not well-documented alteration of existing water quality objectives currently contained in D-1641 as the baseline condition. Using

⁹⁹ CEQA Guidelines §15125(a)

¹⁰⁰ Id.

¹⁰¹ See, e.g., *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310 (The ultimate goal in fixing a baseline is to "give the public and decision makers the most accurate picture practically possible of the project's likely impacts.")

hypothetical, future SWRCB changes to D-1641 as the baseline for BDCP modeling of Alt. 4 water operations requires that certain findings be made – and those findings are absent from the EIR/EIS.¹⁰² Applying the baseline without making the necessary findings represents an arbitrary and capricious manipulation of the existing conditions, and improperly skews the analysis of environmental impacts associated with the proposed Project in violation of CEQA and NEPA. Following are references in the Plan describing some of the changes made to existing conditions and used as existing conditions assumptions in the BDCP Effects Analysis modeling:

- Section 3.4.1.2 *Operational Components* – “The BDCP alternatives comprise a range of operational rules for the SWP/CVP in the Delta that would require additions to, **modifications of, or elimination of some of the existing operational rules**, as described in detail below.” [Emphasis added.]
- Section 3.4.1.2 *Operational Requirements Influencing Maximum Allowable Exports* – “The E/I ratio, introduced in the 1995 WQCP, limits the CVP and SWP combined pumping to between 35% and 65% of the Delta inflow, varying by month and runoff conditions. This ratio was **assumed to apply only to** south Delta exports; BDCP north Delta intake diversions were **assumed to be exempt** from this rule.”¹⁰³ [Emphasis added.]
- Section 3.4.1.2 *Operational Requirements Influencing Minimum Required Delta Outflow* – “The D-1641 salinity objectives are assumed to apply to the Existing Conditions, the No Action Alternative, and the BDCP action alternatives.” However, this declaration of using current D-1641 salinity objectives is footnoted with tiny print at the bottom disclosing that, “**An exception to D-1641 objectives is the proposal to change the compliance point from Emmaton to Threemile Slough. For the purposes of modeling, this assumption has been incorporated into the No Action Alternative, as well as each action alternative.**” [Emphasis added.]¹⁰⁴
- Section 3.4.1.2 *Summary Comparison of BDCP Operational Scenarios for Alternatives* – “Each BDCP operational scenario includes many of the No Action rules as well as **several modified or new rules.**”¹⁰⁵ [Emphasis added.]
- Section 3.4.1.4.3 *Flow Criteria* – “As part of the BDCP criteria, the location where **D-1641 Emmaton salinity control requirement** is proposed to be complied with is **changed to Threemile Slough** juncture.”¹⁰⁶ [Emphasis added.]

As evidenced above, the BDCP modeling methodology assumed so many changes in the so-called existing conditions (most of which were usually disclosed in tiny print of footnotes), that the BDCP has created a jumbled and confusing mess, creating an “existing condition” that can

¹⁰² See, e.g., *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* (2013) 57 Cal.4th 439 (EIR may substitute a baseline consisting of environmental conditions projected to exist in the future and omit analysis of a project’s impacts on the existing environment only where the lead agency has made adequate findings on the record that an existing conditions analysis would be misleading or without informational value).

¹⁰³ North Delta diversions are, at minimum, held to the NDWA Contract requirements for salinity.

¹⁰⁴ See above. The current compliance point is at Emmaton, but BDCP fails to justify the change per *Neighbors*.

¹⁰⁵ See above. Again, BDCP fails to justify the change per *Neighbors*.

¹⁰⁶ Again, BDCP fails to justify rationale for the change of existing salinity compliance point in baseline as required under *Neighbors*.

only be described as a theoretically contrived construct of real conditions. This complicated manipulation of existing conditions has made it impossible for NDWA to assess whether BDCP operations will be able to comply with the 1981 Contract including the provisions on water quality criteria and alteration of surface water levels.

The Agency further questions the assumptions made in the BDCP models regarding the delivery of supplemental Article 21 water to SWP contractors, particularly in terms of how the BDCP assumptions calculate “when excess water is available in the Delta” as it relates to the SWP Article 21 water deliveries assumed in Impact WS-2 for Alt. 4 in the EIR/EIS, p. 5-106.

RECOMMENDATION: To properly compare Alt. 4 CM1 water operations impacts against existing conditions and regulatory criteria currently contained in D-1641 in order to identify impacts that may need to be mitigated in the EIR/EIS, BDCP must conduct new Effects Analysis modeling that:

- 1) Incorporates the modeling tool provided by NDWA that inserts the 1981 Contract salinity criteria in as a baseline condition;
- 2) Applies correct existing baseline conditions;
- 3) Uses ALL of the D-1641 Delta water quality objectives as currently applied by SWRCB, including maintaining salinity compliance at Emmaton; and
- 4) Shows hydrodynamic and water quality changes without inclusion of BDCP’s proposed habitat restoration actions (CM2-22) so that the effects created solely by CM1 Alt. 4 water operations of dual pumping at South and North Delta pumps can be compared to current South Delta pumping effects.

These new modeling results need to be released for public review and comment, along with a revised and recirculated BDCP Plan and EIR/EIS.

RECOMMENDATION: At least one of the BDCP’s new model runs must incorporate existing D-1641 baseline conditions as requested above and an assumption that the south Delta diversion E/I ratio (CVP and SWP combined pumping between 35% and 65% of the Delta inflow) would be applied to new north Delta intakes as foreseeable requirements imposed by SWRCB can be evaluated in terms of how will change Alt. 4’s impacts to water quality and surface water elevations in the Plan Area.

RECOMMENDATION: To provide more context and comparison of the multi-layered changes to existing conditions that CM1 Alt. 4 water operations assume, the Plan should include a Table that displays the modeling results of existing regulatory requirements (D-1641 w/Emmaton salinity compliance, E/I, X-2, etc) and current BO modeling results, side-by-side next to the Alt. 4 proposed water operations with the modified D-1641 assumptions BDCP proposes.

C. Averaging in Modeling Methodology Can Obscure Significant Fluctuation of Salinity Increases

The Plan’s Effects Analysis makes extensive use of averaging. Unfortunately, by its nature, averaging obscures the extreme values that – for some variables and biological and hydrological systems – masks true water quality, water supply, flood risk, and species impacts. For example,

the Effects Analysis analyzes X2 values averaged from December to May, even though that period encompasses a huge seasonal range in natural Delta outflow patterns.

Averaging across these periods tends to conceal larger changes in Delta outflow within and across years that may occur over the BDCP's 50-year implementation. For instance, from a HCP perspective, averaging things like fish entrainment across years obscures the long-term effect of years with high entrainment rates, which could result in further species decline.

The BDCP's use of a 5-month average in the modeling of compliance with X2 requirements could have problematic results, such as a decrease in the temporal variability in salinity that historical conditions and existing Delta standards provide. Improperly treating water quality as a long-term average rather than a daily issue could result in hiding the significant fluctuation of salinity increases that could occur under Alt. 4 water operations as proposed. The water user's ability to divert water of usable quality is decided on a daily basis, sometimes only during certain tidal cycles. Thus, improvements made during periods when water quality is high cannot offset degradation of water quality during periods when the quality is low.

RECOMMENDATION: When conducting new Effects Analysis modeling that incorporates the updated CalSim model and eliminates alterations of existing regulatory Delta requirements, the BDCP modeling team must consult with NDWA and other in-Delta water contractors such as Contra Costa Water District and North Bay Aqueduct regarding the proper averaging to be used as model assumptions.

RECOMMENDATION: The California Water and Environmental Modeling Forum should perform an independent verification of the modeling tools prior to conducting new model runs, to ensure that the best science available is deployed in the best manner possible.

D. Modeling Flaws Mask Nature, Extent, And Severity of Salinity Impacts

While the NDWA understands the need to restore aquatic habitat in the Delta in order to mitigate the jeopardy findings and to provide for the issuance of long-term ESA take permits associated with the water exported from the Delta by the SWP and CVP, BDCP proponents must avoid unintended environmental consequences of habitat restoration actions.

Changes in Delta hydrology can influence water quality across a broad range of constituents. Currently, all of the waterways of the Bay Delta are water-quality impaired for one or more contaminants¹⁰⁷; therefore, any changes that worsen the existing conditions also exponentially increases the level of significance of each impact under each alternative.

The following salinity impacts identified by the EIR/EIS¹⁰⁸ are of particular concern to NDWA:

- Sea water intrusion as a result of sea level rise or decreased Delta outflow can increase the concentration of salts (i.e. bromides, chlorides, etc.).¹⁰⁹

¹⁰⁷ United States Environmental Protection Agency, Staff Report: Analysis of Water Quality Issues in EPA's February 2011 ANPR (2011). Available at <http://www2.epa.gov/sites/production/files/documents/actionplan-appx1.pdf>

¹⁰⁸ EIR/EIS Water Quality Chapter 8

¹⁰⁹ EIR/EIS p. 8-408

- Long-term average annual Delta outflow is anticipated to decrease under Alt. 4 by between 864 (scenario H1) and 5 TAF (scenario H4) relative to the No Action Alternative, attributable only to changes in operations. The result of this will be increased sea water intrusion in the west Delta.¹¹⁰
- Overall effects would be greatest at Barker Slough, where substantial increase in long-term average bromide concentrations under all operational scenarios would be predicted, but would be greatest for Scenario H2.¹¹¹
- Impact WQ-11: Salinity level increases in South and Western Delta are labeled as “unavoidable” adverse impacts due to uncertainties surrounding the effectiveness of the mitigation measures to reduce adverse water quality effects.¹¹²
- Increased inundation frequency in restoration areas would increase exposure to saline and brackish surface water, which could result in increased groundwater salinity beneath.¹¹³

The EIR/EIS inexplicably uses the year 2060 as the impact assessment date, leaving decision makers, the NDWA, and the public wondering how the Delta’s fragile ecosystem and sustainable water supply would fare in the preceding 46 years of BDCP implementation. This arbitrary and capricious selection of 2060 for the EIR/EIS means the environmental analysis of CM1’s impacts is based on the inclusion of future, projected climate change effects as well as the assumption that all BDCP habitat restoration will in fact occur – without evidence to support such a conclusion. The lead agency’s decision to not use ELT in EIR/EIS conveniently allows BDCP to avoid disclosing the immediate impacts, let alone the scope or intensity that will occur to water users and the ecosystem in the Plan Area when CM1 water deliveries go into full operation.

RECOMMENDATION: Revise the EIR/EIS Impacts Analysis so the conclusions regarding significance of effects is based on near-term modeling results from the Effects Analysis so the impacts associated with the potential operation of CM1 facilities without any habitat restoration can be disclosed and mitigated. Once this new analysis is made available NDWA will be able to offer specific mitigation measures to avoid violations of the 1981 Contract.

IX. WATER SUPPLY AND QUALITY CONCERNS

A. Alteration of Natural Tides Create Elevation and Water Quality Concerns

When export levels are low,¹¹⁴ the Sacramento River’s flow is dominantly tidal with both positive (flow to the north) and negative (flow to the south) oscillations of similar magnitudes with the tides, averaging to a net flow of approximately zero. As exports increase in mid- to late-June, the oscillations shift such that the net flow becomes negative and the number of hours each day when the flow moves to the north is reduced. From mid-July through August, when total exports at South Delta continuously exceed 10,000 cfs, the flow becomes primarily to the south,

¹¹⁰ EIR/EIS p. 8-408

¹¹¹ EIR/EIS p. 8-420

¹¹² EIR/ EIS p. 8-238 (Bromide impacts unavoidable); 8-246 (chloride impacts unavoidable); 8-255 (electrical conductivity impacts unavoidable)

¹¹³ EIR/EIS, Groundwater, page 7-51

¹¹⁴ As one example, refer to the data for June 2007.

effectively eliminating the natural ebb tidal flow that would occur otherwise. This creates an unnatural flow pattern in which water no longer oscillates between north and south, but simply flows constantly south in a reverse flow.

The Plan Effects Analysis and EIR/EIS Fish and Aquatic Resources Chapter 11 indicate the combined operation of CM1 and CM2 will also create increased reverse flows at the Delta Cross Channel and Georgiana Slough. These unnatural flows results in diversion of covered fish species into the Central Delta where they would be entrained at the South Delta pumps which will be used 51% of the time under Alt. 4's dual operations.

In addition, the increased tidal marsh area to be created under Alt. 4 will likely produce significant effects on tidal stage (surface elevations) which would impact local water diversions' water availability and quality in the Plan Area. BDCP's own modeling indicates this proposal will cause more than 2,000 acres of existing intertidal habitat within Suisun Marsh to become subtidal and an additional 500 acres will no longer be inundated with the tides.¹¹⁵ Combined with the additional proposed tidal marsh areas, the subsequent impact on water quality within the Delta is likely to be substantial according to BDCP's modeling results, and will become even worse once the models are properly calibrated to correct current flaws.¹¹⁶

RECOMMENDATION: BDCP must conduct new modeling using the recalibrations requested in previous comments to provide a robust analysis of the changes in tidal excursions in the Plan Area and identification of impacts in the EIR/EIS to provide more detail on water quality, surface water elevations (water supply), and covered fish. This analysis should include specific details on the timing, locations, duration, and intensity of the alteration of natural tides in the Plan Area and appropriate mitigations to reduce any adverse impacts on beneficial uses. These new modeling results and impacts to in-Delta water supplies need to be released for public review and comment with a revised and recirculated BDCP Plan and EIR/EIS.

B. Altered Water Elevations Not Analyzed for Impacts to Delta Water Supply or Potential for Specific Damages Under NDWA 1981 Contract

Chapter 5 of the Plan and Appendices (Effects Analysis) and the EIR/EIS Surface Water (Impacts SW-2, SW-4, SW-5, SW-6), Groundwater (Impacts GW-1, GW-2, GW-3, GW-4, GW-5, GW-6, GW-7, GW-8, GW-9) and Agricultural Resources (Impacts AG-2, AG 4) Chapters indicate that the Preferred Alt. 4 will alter both surface and groundwater elevations within NDWA, including reduced surface flows in September within NDWA in about half of all years.¹¹⁷

The NDWA is concerned about the water supply availability impacts that alterations in water elevations as described in the Plan and EIR/EIS pose to water users and other beneficial uses in the North Delta:

- More than 2,500 water diversions, including diversions for agricultural uses, in the Plan area.¹¹⁸

¹¹⁵ BDCP EIR/EIS

¹¹⁶ See Exhibits C and E.

¹¹⁷ BDCP Chap 5, page 5.3-4.

¹¹⁸ Plan Chapter 5 Effects Analysis

- Groundwater is used throughout the Delta for agricultural, municipal, and industrial beneficial uses, particularly in the North Delta for irrigation of orchards. In the upland peripheral Delta areas, average annual groundwater pumping is estimated to range between 100,000 and 150,000 acre-feet, both for domestic and agricultural uses.

The NDWA is particularly concerned with potential reductions in water surface water elevations within the North Delta that could constitute a breach of DWR's obligations under Article 6 of the 1981 Contract.¹¹⁹ Such violations of the 1981 Contract would give rise to damage claims against the State by water diverters within NDWA.¹²⁰

A reduction in surface water elevations would adversely affect water supply availability within NDWA in ways that were neither acknowledged nor analyzed. For example, the impact to agricultural water diverters that utilize gravity siphons and other irrigation systems designed to optimize water diversion and conveyance based on the *current* flow and water level regime have not been analyzed. The gravity siphons and pumps that are used to divert surface water in NDWA simply will not work effectively if water surface elevations are significantly reduced, as contemplated in the Plan. If siphons are rendered inoperable it would become necessary for Delta diverters to install mechanical pumps powered either by electricity (which is often infeasible) or internal combustion engines. If the latter are used, this would cause air quality and other impacts that also are not analyzed in the EIR/EIS.

In addition, the irrigation systems designed based on the use of siphons and gravity diversions would need to be reconfigured. The increased capital and operation and maintenance costs associated with reconfiguring conveyance systems and the conversion to mechanical pumps would be substantial. NEPA requires that the "human" (including economic) impacts associated with increased costs of Delta water diversions be fully analyzed.¹²¹ The EIR/EIS fails to analyze these impacts, because it does not weigh the substantial increased capital and operation and maintenance costs associated with conversion to mechanical pumps.

Due to the Delta's high reliance on groundwater for agricultural and domestic water supplies, the lowering of groundwater elevations would also create significant adverse impacts on those beneficial uses. Loss of groundwater that occurs naturally in the North Delta as a result of lower water pressure would lead to a corresponding loss of sub-irrigation. A reduction in sub-irrigation would, in turn, require increased surface water diversions by agricultural water users. These additional water resource impacts are not analyzed or quantified in the Plan or the EIR/EIS *Water Supply Chapter*, but will certainly mean a reduction in the amount of "water surplus to the Delta" that is assumed to be available for allocation as Article 21 water to SWP water contractors.¹²²

¹¹⁹ NDWA 1981 Contract, Art. 6 ("The state shall not... cause the water surface elevations in Delta channels to be altered to the detriment of Delta channels or water users within the Agency...").

¹²⁰ *Id.* ("...the State shall repair or alleviate the damage... and shall be responsible for all diversion facility modifications required.")

¹²¹ Council On Environmental Quality, Executive Office Of The President, *A Citizen's Guide to the NEPA* ("NEPA requires Federal agencies to consider environmental effects that include, among others, impacts on social, cultural, and economic resources, as well as natural resources.")

¹²² Section 3.4 of the BDCP Plan.

Examples of Plan and EIR/EIS descriptions of lowered water elevations and impacts in the Plan Area include:

- A decrease of 6,000 cfs in the Sacramento River could result in as much as a 3-foot reduction in river stage.¹²³
- Dewatering activities in vicinity of North Delta intake pump stations and Byron Tract Forebay would lower groundwater levels by up to 10-feet and 20-feet, respectively.¹²⁴
- The sustainable yield of some nearby domestic and municipal wells might temporarily be affected by the lowering of water levels such that existing wells are unable to support current land uses.¹²⁵
- Impacts to well water users may remain significant because sufficient replacement water supplies may not be available meet the existing demands. (*EIR/EIS, Groundwater Chapter 7.*)¹²⁶
- Lowered water levels at pumped diversion locations will increase the cost of pumping to accommodate increased pump lifts.
- Lowered water surfaces at intakes can alter hydraulic conditions such as approach velocities, volume, and pump efficiency.
- Changes to water elevations also may alter fish habitat, including conversion of farmland to fish habitat – and the resulting need to purchase fish screens or other expensive devices by farmers or irrigation districts.
- Sutter and Steamboat Sloughs flows are lower under the evaluated starting ops because of the Fremont Weir notch which increases the diversions to the Yolo Bypass and because North Delta intakes reduce the Sacramento River flow at these two sloughs. In addition, tidal restoration in the Cache Slough Complex was simulated to shift the tidal elevations and reduce the Sutter/Steamboat diversion fractions.¹²⁷

In addition to water supply availability impacts such as stranded diversion intakes, lowered surface water elevations will also result in adverse impacts to marinas if docks are also left high and dry when Delta channels are lowered. Narrower channels will lead to navigation problems for boats. The Surface Water and Recreation Chapters of the EIR/EIS both fail to disclose the lower water elevations as a problem for boating, marinas, or yachting and hunting clubs. The Plan Effects Analysis in Chapter 5 of the Plan and EIR/EIS chapters on *Surface Water*, *Groundwater*, and *Agricultural Resources* also describe the potential for increased water surface and groundwater elevations as a result of the Project.

If groundwater or water surface elevations were to increase above historical levels during the growing season, unwanted and involuntary sub-irrigation would increase due to increased hydrostatic pressure caused by the increase in seepage. Many crops grown within NDWA, including grapes, alfalfa, kiwis, apples, pears and cherries, are extremely sensitive to increased water within plant root zones. During the growing season, reduced oxygen to the root zone would

¹²³ Plan Chapter 5 *Effects Analysis* (modeling results for impacts on covered fish)

¹²⁴ EIR/EIS, *Agricultural Resources* Chapter 14.

¹²⁵ EIR/EIS, *Groundwater* Chapter 7.

¹²⁶ EIR/EIS, *Groundwater* Chapter 7. This is otherwise known as the “Sorry Charlie” mitigation.

¹²⁷ Plan *Effects Analysis* Chapter 5

reduce crop yield and, potentially, result in the loss of trees and vines. This will be damaging to crops and to Delta agriculture in general. To the extent increases in water elevations could be mitigated through increased drainage pumping operations of the reclamation districts, the cost of such operations would be substantial. The Plan and EIR/EIS fails to discuss, analyze, or propose mitigation of these impacts.

Finally, the Agency contends that the EIR/EIS *Water Supply Chapter 5* fails to meet the following environmental analysis requirements of CEQA/NEPA:

- NEPA requires that an EIS be prepared when the proposed Federal action as a whole has the potential to “significantly affect the quality of the human environment.” The NEPA determination of significance is based on context and intensity. The environmental consequences section of an EIS must discuss direct and indirect impacts of the proposed project.¹²⁸ The EIR/EIS does not include substantive discussion of the altered groundwater and surface water elevations, and omits mention of the economic and physical impacts to farmland. Increases or decreases in groundwater would affect “sub-irrigation,” harming crops. Additionally, farmers would be forced to invest in expensive new technologies that may have impacts on air quality and the environment. These and other direct and indirect impacts are not discussed, in violation of NEPA.
- Under NEPA, cumulative impacts resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions that can result from individually minor but collectively significant actions taking place over a period of time.¹²⁹ The EIR/EIS fails to capture many of these cumulative impacts. For example, changes to surface water elevations will affect the gravity siphons and other irrigation systems currently used by farmers. As a direct result, the farmers will have to invest in expensive new technology to sustain agricultural activities, and that may cause air quality impacts. The collective result of these replacements could be poorer air quality throughout the basin – or could even be the loss of farmland, if the expensive technologies force families to abandon their land.

RECOMMENDATION: Using the updated CalSim model, the BDCP *must* conduct new Effects Analysis modeling with a robust emphasis on analyzing *the water supply impacts* on NDWA water users and channels *caused by altered surface* elevations (higher and lower). Further, the EIR/EIS should identify, disclose and mitigate in the EIR/EIS *Water Supply Chapter* contractual issues, including the potential for increased salinity intrusion, erosion and seepage damage, reversed or otherwise unnatural flows, stranding, and other Plan Area diversion intake effects. Impacts analysis and disclosure in the EIR/EIS needs to provide details on specific locations, durations, timing, size, and intensity in order to comply with NEPA requirements. (40 CFR § 1508.27(a))¹³⁰

C. Water Quality Mitigations Provided in the EIR/EIS Are Inadequate, Lacking Detail, Certainty

Public agencies must not approve a project as proposed if there are feasible alternatives **or** mitigation measures available that would substantially lessen the significant environmental

¹²⁸ 40 CFR §1502.16(a)-(b)

¹²⁹ 40 CFR 1508.7

¹³⁰ Specifically, 40 CFR § 1508.27(a), requiring analysis of the context and intensity of the impacts.

effects of the project.¹³¹ Unfortunately, all chapters of the EIR/EIS we reviewed contained mitigation measures that were too vague, deferred until studies are conducted in the future, or lack certainty due to discretionary decisions by “BDCP Proponents” at some point in the future. Mitigations limited by such circumstances do not provide stable enough description of actions to be implemented for us to determine if they are in fact adequate to reduce the environmental and human effects of the project’s numerous adverse effects.

As mentioned, many mitigation measures would be deferred until more studies are done or require third parties to implement – leaving the reviewer wondering whether remedies will ever be implemented at all. Throughout the EIR/EIS, the lead agency fails to provide any explanation to supply the logical step between the ultimate conclusion regarding level of impacts and the facts in the record.¹³²

In many instances, the EIR/EIS also fails to disclose who will be responsible for implementing, monitoring, and enforcing mitigation measures that are adopted. In instances where the EIR/EIS does mention a program for reporting and monitoring the mitigations, details regarding the specific permit conditions, agreements, or other measures that will make it fully enforceable are not provided.

Although these mitigation deficiencies are widespread and found in all EIR/EIS chapter we reviewed, we have limited the following specific examples of the problem to wording found in WQ-5 from the *Water Quality Chapter* in order to illustrate uncertainty regarding mitigation measure to reduce salinity impacts:

- Because the *effectiveness* of Mitigation Measure WQ-5 to result in feasible measures for reducing water quality effects is *uncertain*, this impact is considered to remain significant and unavoidable.
- The EIR/EIS states that changes in bromides would be offset. However, it *remains to be determined whether*, how, and *to what degree* available and existing salinity response and *countermeasure actions* of SWP and CVP facilities or municipal water purveyors would be *capable of offsetting the actual level of changes* in bromides that may occur from implementation of Alt. 4.
- In order to determine the feasibility of reducing the effects of increased bromide levels, and potential adverse effects on beneficial uses associated with CM1 operations (and hydrodynamic effects of tidal restoration under CM4), the proposed mitigation requires a series of phased actions to identify and *evaluate existing and possible feasible actions*, followed by development and implementation of the actions, *if determined to be necessary*.
- *Following commencement of initial operations of CM1*, the BDCP proponents will *conduct additional evaluations* described herein, and *develop additional modeling* (as necessary), *to define the extent* to which modified operations could reduce or eliminate the increased bromide concentrations currently modeled to occur under Alt. 4.

¹³¹ PRC § 21002

¹³² CEQA Guidelines Sec. 15384 (“Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence.”)

- *If sufficient operational flexibility* to offset bromide increases is **not practicable/feasible** under Alt. 4 operations, achieving bromide reduction pursuant to this mitigation measure **would not be feasible under this alternative**.

RECOMMENDATION: To mitigate the significant water quality impacts of CM1, construction of the three new North Delta intakes must be phased, one at a time, to permit meaningful monitoring¹³³ of the impacts to water quality in the Plan Area and the pumping effects on local water supplies and other beneficial uses. To ensure that actual “adaptive management” takes place, require HCP/NCCP permitting agencies to evaluate the final monitoring report and determine whether additional intakes and Alt. 4 water operations would create jeopardy for covered species before allowing construction of the next intake.

D. Water Supply Chapter Silent on Impacts to Delta Water Users

Inexplicably, the EIR/EIS *Chapter 5 Water Supply* contains no discussion, disclosure, or mitigation of adverse impacts to water supplies in the Plan Area (Delta) caused under any of the BDCP alternatives. The chapter’s section on regional water use (Section 5.1.2.6) mentions the role of entities such as NDWA which does not even divert or supply water as is implied, but then fails to actually describe how, where, by what method, or for what purpose water is used in the Plan Area. The absence of describing the context in which local water supplies are accessed and used, results in the EIR/EIS *Water Supply Chapter 5* failing to properly disclose the level of significant impacts imposed on agricultural and municipal water users in the Plan Area.

The EIR/EIS *Water Supply Chapter* should describe the impacts to groundwater used by homes and businesses, surface water diversion and groundwater sub-irrigation used by agriculture, and surface water diversions and treatment plants used by municipal/drinking water. Impacts to all three of these categories are described in the EIR/EIS *Groundwater, Agricultural Resources, and Water Quality Chapters*, but those adverse impacts are not then transferred over to disclose those natural and human resource impacts on the Plan Area’s water supply.

The absence of any adverse impacts from the *Water Supply Chapter* of the EIR/EIS for in-Delta water users is a glaring omission, in light of the significant effects identified in the following Chapters of the EIR/EIS – all of which identify water elevation and water quality effects that will result in adverse impacts on agricultural and domestic water supply uses:

<u>Groundwater</u>	<u>Agricultural Resources</u>	<u>Water Quality</u>	<u>Surface Water</u>
GW-1	AG-2	WQ-5	SW-2
GW-2	AG-4	WQ-7	SW-4
GW-3		WQ-11	SW-5
GW-4		WQ-14	SW-6
GW-5		WQ-18	
GW-6		WQ-22	
GW-7			
GW-8			
GW-9			

¹³³ Monitoring of less than two years would not be meaningful, as it would not adequately capture the effects on water quality, water supply, land, and fish.

Impacts from separate chapters can result in adverse impacts that may need to be disclosed and mitigated in another resource chapter of the EIR/EIS is. As one example, the multiple "Significant and Unavoidable" adverse water quality impacts listed in the *Water Quality Chapter* were cumulatively combined to create an unavoidable adverse impact in the *Public Health Chapter 25*, (Impact PH: 2). Unfortunately, the same is not done for cumulative impacts to water supply in the Plan Area.

If the water quality in the Delta is so degraded by seven different constituents to constitute a public health risk, then how is it possible for there to be **no impact** to in-Delta domestic and agricultural water supply from degraded water quality? Or **no impact** to in-Delta domestic and agricultural water supply from the altered surface and groundwater elevations?¹³⁴

For instance, lowering groundwater from CM1 dewatering will impact domestic and agricultural wells and lowering surface water elevations from combined CM1 and CM2 operations may strand or reduce function of existing river diversions. In addition, multiple descriptions contained in the Plan and EIR/EIS reveal that agricultural, municipal, and industrial water uses will be degraded to such an extent to be unusable (or require installation of expensive treatment facilities) in certain locations and times of the year. There are no cost-effective salinity treatment facilities, so those adverse impacts will likely require BDCP operational changes to increase flows to repel salinity intrusion.

Following are a few examples of adverse impacts described in other chapters of the EIR/EIS that were not disclosed as impacts in the *Water Supply Chapter*:

- **WQ-5:** Barker Slough, North Bay Aqueduct facility (provides drinking water to Napa and Solano Counties) will experience substantial degradation due to bromide concentrations increasing by as much as 40 to 98 percent during modeled drought period; the frequency would increase between 20 to 47 percent under Alt. 4. Water treatment plant upgrades would be necessary to meet drinking water health standards.¹³⁵
- **WQ-7:** The EIR/EIS identifies¹³⁶ a reduced opportunity for diversion of water for municipal and industrial uses due to increased chloride concentrations would lead to water quality degradation and frequency of exceedance of objectives at Contra Costa Pumping Plant #1 and Antioch as well as increases in chloride concentrations in other areas including North Bay Aqueduct, SF Mokelumne River at Staten Island, Sacramento River at Emmaton, with additional, possibly measurable, increases at San Joaquin River at Buckley Cove and Sacramento River at Mallard Island.
- **WQ-11:** Alt 4, all scenarios, would increase the number of days the SWRCB's salinity objectives would be exceeded in the SJR and OMR, and increases in average EC (salinity) at two interior Delta locations.¹³⁷ Salinity levels increased in South and Western Delta represent an "unavoidable" adverse impact due to uncertainty of the effectiveness of the mitigation measures to reduce adverse water quality effects.

¹³⁴ Refer to the Effects Analysis and Groundwater and Surface Water Chapters.

¹³⁵ EIR/EIS *Water Quality Chapter 8 - SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACT*

¹³⁶ *Id.*

¹³⁷ *Id.*

- Increased tidal mixing associated with the new tidal marsh restoration may allow more salt to intrude into the western Delta.¹³⁸
- Habitat restoration activities associated with CM4, CM5, CM6, and CM7 may contribute to reduced water quality.¹³⁹
- Exposure to saline and brackish surface water, potentially resulting in increased groundwater salinity beneath such areas.¹⁴⁰

The reduced water quality conditions created by BDCP operations is a “taking” of water rights due to the water supplies in the Plan Area essentially being degraded to the point of significant impairment of existing beneficial uses, requiring compensation under the law and under the 1981 Contract. The EIR/EIS must acknowledge and mitigate these adverse impacts in the Water Supply Chapter and consider whether the damage to water users is a violation of California’s “No Injury Rule,” statutes governing “Priority of Water Rights,” or standards in CEQA and NEPA governing disclosure, weighting of impacts, and cumulative effects on environmental and human resources.

Disclosure and mitigation of the numerous significant impacts to local water users and beneficial uses in the EIR/EIS *Water Supply Chapter* would likely trigger recirculation of the Plan and EIR/EIS for public review and comment.¹⁴¹ As the CEQA guidelines state, “A decision not to recirculate an EIR must be supported by substantial evidence in the administrative record.”¹⁴²

Reliable water supply should be assured for ALL regions, including in the Plan Area (Delta), not just for CVP and SWP Service Areas. To do otherwise is not coequal. These omissions may inadvertently cause water users within the Agency to question the sincerity of DWR to honor its water quality and supply obligations in the NDWA 1981 Contract.

RECOMMENDATION: The EIR/EIS must be revised to add a more robust description of water supply access and use in the Plan Area and insert new impacts disclosures and mitigation measures into the *Water Supply Chapter*. The new NEPA/CEQA Impact Conclusions should be based on a rigorous analysis of the adverse impacts to water elevations (surface and groundwater) and water quality described in the Plan Effects Analysis and consider the cumulative impacts to water supplies in the Plan Area described in the EIR/EIS chapters on *Groundwater, Surface Water, Agricultural Resources, and Water Quality*. Impacts analysis and disclosure in the EIR/EIS needs to provide details on the specific locations, durations, timing, size, and intensity in order to comply with NEPA. Revised EIR/EIS may require recirculation for public review and comment.

¹³⁸ Plan Chapter 5 *Effects Analysis* and EIR/EIS Chapter 6

¹³⁹ Plan *Effects Analysis* Chapter 5

¹⁴⁰ EIR/EIS *Groundwater* Chapter 7

¹⁴¹ Guidelines Section 15088.5(a), providing that recirculation must occur where the “EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement.”

¹⁴² *Id.* at (e).

E. The Project Description Fails to Acknowledge Habitat Impacts on Water Supply, Water Quality and Access to Water Particularly the Change of Diversion Permit Requirements for CM2

Water Codes § 1707 requires all water users to petition the SWRCB for a change of use for purposes of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, or on, the water, specifying the time, location, and scope of the requested change. In response, the SWRCB may approve the petition subject to terms and conditions once the Board has determined that the proposed action:

1. Will not increase the amount of water the person is entitled to use;
2. Will not unreasonably affect any legal user of water; and
3. Otherwise meets water code requirements.

The restoration of floodplain, tidal wetlands, and other habitat restoration action proposed in BDCP (CM2-10) will require extensive amounts of water, particularly implementation of CM2 to inundate the Yolo Bypass more frequently and for longer duration. However, the Plan fails to identify the volume of water to be utilized by these new habitat areas or whose water rights will be used to provide that diversion. In addition, the EIR/EIS Water Supply Chapter fails to disclose the impacts to the water supplies of the entities such as SWP/CVP that would presumably be supplying the water from storage.

According to the Plan Effects Analysis, CM2 will result in the diversion of approximately 650,000af of Sacramento River water into the Yolo Bypass between November and mid-May through an operable gate with a total capacity of 6,000 cfs in order to benefit fish. Due to the new diversion point on the Sacramento River and the considerable aggregate amount of water to be diverted from the river, the CM2 Project Description must be amended to clarify the operable gate to be installed and managed in accordance with the BDCP's *Annual Delta Water Operations Plan*, Sec. 6.3.2, will require DWR and USBR to petition the SWRCB to change points of diversion, places of use, and purposes of use of water for the SWP/CVP projects. Other habitat restoration projects in CMs3-22 may also require a petition for change of use be filed.

The Petition for Long-Term Change in Place of Use and Change in Purpose of Use process will allow the SWRCB to determine whether such changes should be conditioned to protect the environment or other legal users of water in order to avoid interference with prior water rights, such as those memorialized in NDWA's 1981 Contract with DWR. The SWRCB's process will also weigh public trust issues, such as how navigable waters would be changed and impacted by this new diversion to be evaluated.

Because CM2 is only analyzed at Programmatic level, the Plan permits and Implementing Agreement should include clear conditions: 1) the intent to pursue a full Project-level EIR/EIS evaluation of CM2 with explicit prohibition to tiering off the BDCP EIR/EIS with a Negative Declaration; and 2) DWR and USBR will file change of use permits with the SWRCB for the Fremont Weir modifications proposed in CM2 so the Board can evaluate the cumulative impacts of the 6,000 cfs Fremont Weir diversion, new North Delta intakes 9,000 cfs diversions, with the continued south Delta intake diversions to assure the proposed changes will not result in injury to other legal water users in the system.

RECOMMENDATION: The cumulative effects in the CMs and EIR/EIS *Water Supply* Chapters should identify how much water (and whose water) will be used for construction, operation, and ongoing management of habitat restoration projects and actions in CMs2-11.

X. Conclusion

Under the 1981 Contract, the North Delta Water Agency expressly consented to the export of water, so long as the State remains in compliance with the Contract. As currently configured, the BDCP would appear based on our analysis to adversely affect water quality, water supply, salinity control, water elevation, and seepage in the North Delta. However, because the project description is not well defined, there are enormous gaps in the environmental analysis that prevent the NDWA from assessing the full nature, scope, or severity of these impacts.

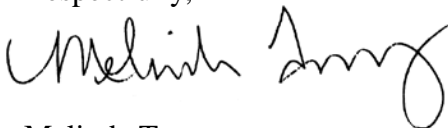
What is obvious are the several aspects of the BDCP's design, construction, operation, maintenance, funding, and governance does not meet the requirements of the state and federal Endangered Species Acts governing conservation plans or environmental review standards and the Plan as currently proposed would violate numerous other Delta protection statutes and contracts that protect water quality and water rights in the Plan Area.

The Agency has attempted in these comments to identify these potential sources of breach of its 1981 Contract, provided financial impact information and governance suggestions, and pointed out potential mitigation opportunities wherever possible. But errors and gaps in the modeling and technical analysis of water quality and supply in the EIR/EIS – including manipulation of baseline conditions and inexplicably using 2060 as the impact assessment date – prevent the Agency from providing project-level comments and mitigation measures.

NDWA has actively participated in the development of the BDCP, including serving on the Steering Committee, as a Cooperating Agency, and participation on the Governance and Finance Committees. At its own expense, the Agency has also provided a modeling tool and independent review and Modeling Report that both should be applied to improve the Plan's hydrological modeling.

The attached documents, including the many consultants' reports and the Reference Library, show NDWA's ongoing commitment to meaningful participation in the BDCP EIR/EIS process. But because of the substantial level of legal defects with the Plan and EIR/EIS as currently presented, DWR must revise and recirculate these documents for public review and comment.

Respectfully,



Melinda Terry,
Manager
North Delta Water Agency