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

Subject: Bay Delta Conservation Plan Draft BDCP and BDCP Draft EIR/EIS

Dear Mr. Wulff,

Ducks Unlimited (DU) submits the following comments on the Bay Delta Conservation Plan (BDCP) Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) and the Draft Bay Delta Conservation Plan (BDCP). DU is considered a worldwide leader in conserving, restoring and managing wetlands and associated habitats for North American waterfowl. As part of the BDCP document, DU provided significant documentation and expert scientific evaluation as to the direct effects of the BDCP proposed project on wetlands and waterfowl, which were ultimately adopted as part of the DEIR/EIS, as well as the plan itself.

However, the indirect effects of the proposed project and resulting potential impacts were outside our scope of work. As a result we have a number of comments and concerns related to those indirect effects, which are listed as follows:

Comment 1:

Ducks Unlimited agrees with the Delta Stewardship Council that each chapter should have a comparative summary. In addition, all significant and significant unavoidable impacts of the proposed alternative, Alternative 4, should be documented in one location so the reviewer does not have to extract them out of a several-thousand page document. Chapter 30 appendix C provides a fair comparison of the summary of impacts and mitigation measures. We recommend this type of comparison table or similar to be utilized in the other chapters as well.

Comment 2:

Conservation Measure (CM) 1 has been developed to a higher level of specificity in the DEIR/EIS, whereas the other Conservation Measures are developed to a lesser extent within the plan at a program level. Many of the subsequent Conservation Measures are outlined as needing further details at a later time through additional research, development of implementation plans and development of adaptive management teams, which are to be developed at an unknown future date.

These additional details should be provided prior to implementation and be made available for public review consistent with the EIR/EIS process. This is essential as a component of the DEIR/EIS to determine the physical impacts on the environment and species. Due to the multitude of Conservation Measures, it would be impossible to determine the cumulative impact of the plan to species and the environment without more refined project level details in all Conservation Measures. The complexity of the hydraulics, interspatial connectivity, species reliance on affected habitats, and the significant proposed change to the plan area all warrant such additional details. Project level detail for all Conservation Measures is a minimum requirement under the ESA since 50 year take authority is being issued based on the DEIR/EIS.

Comment 3:

It is uncommon to allow a project to be built without its mitigation measures in place. Conservation Measures 2-22 should be implemented in concert or prior to the installation and operation of CM 1, or at a minimum, a surety bond and/or clear funding sources should be in place (not just identified) prior to construction of CM 1. In all cases, a higher level of detail for programmatic elements should be provided, and should include feasibility analyses, contingency plans, monitoring and adaptive management plans, all of which should be complete prior to the start of construction on Conservation Measure 1.

Comment 4:

It is unclear how feasible it will be to implement a number of the conservation strategies and mitigation measures. As example, CM 2 involves flooding the Yolo Bypass for an extended period of time; however, the feasibility of getting fish to naturally move onto the bypass is unclear in its current description. This is concerning because the level of detail provided for CM 2 is greater than that provided for many of the other Conservation Measures, and yet is inadequate.

Mitigation measures such as “further studies” are not mitigation measures. A study does not lessen the impact to the environment and should therefore not be considered a mitigation measure. The studies should be conducted prior to DEIR/EIS approval and the Mitigation Measures should then be clearly identified prior to any implementation of the Plan in any form. Experience tells us mitigation measures themselves may have significant impacts that require additional mitigation, which would also need to be identified prior to implementation.

Comment 5:

The DEIR/EIS evaluates the Suisun Marsh, Delta and to some lesser degree areas north and south of the Plan area. However, the geographic scope of the DEIR/EIS does not extend to include San Pablo Bay and San Francisco Bay. The Delta outflow has been shown to have an increase of salinity (noted as an increase of Bay) and result in salinity changes in the Delta and Suisun Marsh, which are to be adaptively managed by the Projects in order to meet the D-1641 standards. However, the consequences of BDCP actions undertaken within the Plan Area will extend downstream to affect San Pablo Bay particularly, and to a lesser extent, San Francisco Bay. Likewise, ongoing restoration changes in the Bays (e.g., tidal wetland restorations) will

affect tidal fluxes and salinity intrusion into the Delta. Ducks Unlimited recommends looking at the future cumulative impacts of the BDCP if the “*Baylands Ecosystem Species and Community Profiles*” goals are met, as this is the standard in which restoration in the Bay is being conducted.

Comment 6:

Significant capital investment in relationship to the Conservation Measures requires levee stability throughout the Delta. However, the DEIR/EIS does not evaluate the long term levee maintenance requirements and funding entities to maintain the status quo or to improve levee stability. The consequence of levee failure would put many of the Conservation Measures at risk of failure themselves. The DEIR/EIS should include a chapter on levee risk analysis, emergency measures and evaluation of levee breaks and their effects on the proposed conservation measures. Chapter 6, SW-8 identifies wind fetch as a significant impact. Levee failure for non BDCP related levees have potentially significant impacts to Conservation Measures. Further evaluation and analysis is needed to identify long term levee stability funding mechanisms to ensure long term protection of Conservation Measures.

Comment 7:

In the absence of the BDCP, water deliveries from the State Water and Central Valley Projects are expected to decline because of the combined effects of climate change and sea level rise. Several of the CALSIM model scenarios that relate to Conservation Measure 1 (Operation of Project Facilities) predict that water deliveries can be maintained or increased compared to existing conditions. In essence, CM 1 will increase the operational flexibility of the SWP and CVP and allow more water to be delivered despite the increasingly negative impacts that climate change and sea level rise are expected to have on California water supplies. The model results associated with CM 1 are at least partially based on assumptions about climate change and sea level rise, and their presumed effects on California water supplies. By their very nature, predictions about climate change and sea level rise are associated with a high degree of uncertainty. This is compounded by uncertainty about the actual effects of climate change and sea level rise on water supplies.

Uncertainty is inherent to any modeling exercise. However, there is no discussion of the uncertainty associated with CALSIM results as they relate to CM 1 alternatives. To quote from the DEIR/EIS, “Time will tell whether current predictions of conditions in 2060 (as they relate to climate change and sea level rise) will prove to be too optimistic or pessimistic.” This is hardly reassuring. Much of the justification for the BDCP is predicated on the results of these CALSIM scenarios. Yet the reader is left with no idea about the uncertainty that may accompany these results.

What if the increased operational flexibility and water deliveries promised by the BDCP do not materialize because we were too “optimistic” in our CALSIM model assumptions? While some of the consequences are obvious (e.g. reduced water deliveries compared to existing conditions despite massive taxpayer investment), some may be less obvious.

Considering the issue of water transfers; the project most certainly will increase the physical capacity for water transfers and may also facilitate transfer and allow project operators to more easily sidestep biological opinions that partially keep transfers in check. Further, CALSIM predictions could prove too “optimistic” and climate change and sea level rise could largely negate any gains in operational flexibility and water deliveries. Given BDCP promises under the current set of model assumptions, is there a benefit resulting from an increased ability to transfer water, but less water available for delivery? What might this mean for agriculture in the Sacramento Valley that supplies much of the habitat for waterfowl and other wetlands dependent birds? The demand for water transfers will be very high under such a scenario if the facilities exist to do so, regardless of the policy or biological implications and current decision points adopted at the time of project investment and development.

The DEIR/EIS must do a better job of informing the reader about the uncertainty associated with the CALSIM results, and explore the possible consequences associated with this uncertainty.

Comment 8:

Further evaluation must be conducted to determine the potential increase of private water transfers that would be made available as a result of the proposed project, including pre-1914 rights. As example, water rights that are transferable but currently do not have mechanisms to export south of the Delta that would then be made available as a result of the Alternatives and/or Conservation Measures must be evaluated. Specifically, impacts to Sacramento Valley habitats and agriculture as a result need to be identified and addressed.

Comment 9:

Implementation of the BDCP will result in a loss of 4,956 acres of protected managed wetlands in the Plan Area. Although conservation easements are beneficial, they do not provide the functions and values (services) of wetlands, and therefore do not provide adequate mitigation for loss of habitat. Adequate mitigation measures (such as restoration and enhancement) and monitoring protocols must be provided for loss and increased mitigation ratios for temporal loss. Many species protected under the Migratory Bird Treaty Act (MBTA) rely heavily on managed wetlands within the Suisun Marsh and Sacramento-San Joaquin Delta. Therefore, any reduction of functions and as a result of habitat reductions could be a violation of the MBTA. We recommend a no net loss of habitat acreage and a no net loss of functions and services.

Comment 10:

Several chapters speak to the potential effects of changes of salinity within the DEIR/EIS project area. The close correlation between aquatic species, terrestrial species and agriculture relies heavily on a fundamental understanding of freshwater and salt water mixing. The analysis on salinity changes in the plan area, as well as the lack of discussion of salinity outside the plan area, fall short of providing any confidence that adequate analysis has been completed.

Comment 11:

Section 3.4.1.2.1 - If there is uncertainty in the “biological consequences” of out flow variability, how can this be monitored and measured, then adaptively managed? Monitoring protocols need to be identified.

Comment 12:

The BDCP envisions impacts to Delta water quantity and quality, but water supply to the Delta was not analyzed. The BDCP analysis shows a change in Delta water elevations, but does not analyze the impacts of this change on Delta agricultural water diversions, or recreational fishing and boating. Agricultural water quantity is mentioned as a significant and unavoidable impact. The DEIR/EIS acknowledges that water losses related to construction dewatering may not be replaced with supplies sufficient to meet the preexisting demands or planned demands of the affected parties. In addition, the feasibility and effectiveness of phased actions to reduce salinity levels is uncertain.

Water quality impacts to Delta water supplies include both an increase in dissolved organic carbon (affecting municipal supplies pumped from the Delta) and salinity (affecting both agriculture and municipal supplies). These impacts are listed as significant and unavoidable, and the only mitigation suggested is a vague description of assistance that, “may take the form of financial contributions, technical contributions or partnerships.” This suggested mitigation is inadequate. Further analysis must be performed to either revise the alternative or provide a full range of detailed mitigation measures. Additionally, the significant unavoidable impacts should be further evaluated to provide additional quantifying elements.

Comment 13:

Changes in salinity in the Bay, Suisun, Delta, North of Delta and South of Delta are discussed in various locations within several chapters in the DEIR/EIS. Changing salinity appears to be most prevalently covered in Chapter 5, Chapter 8 and Chapter 29 of the DEIR/EIS, while also noted in Chapters 6 (Surface Water), Chapter 11 (Fish and Aquatic Resources), Chapter 12 (Terrestrial Biological Resources), Chapter 14 (Agriculture), and Chapter 15 (Recreation) to a minimal extent. Salinity should be discussed as a component of Chapter 7 (Groundwater) as well.

Given the multi-parameter affects of salinity as described in the above chapters, Ducks Unlimited has serious concerns for the persistence of agricultural and freshwater managed seasonal wetlands within the Suisun Marsh and Delta. These freshwater habitats are critical to support listed species in addition to non-listed terrestrial species such as waterfowl that rely upon them. Impacts and related mitigation measures should be identified in the final document.

Comment 14:

Modeling and analysis should clearly identify salinity levels, location, and duration for all scenarios in one cohesive manner. The analysis should include baseline levels in both flow and salinity and critical thresholds for agriculture and species thresholds. If elements are to be

adaptively managed to reduce either flow or salinity below a threshold, specific details as to how it will be accomplished should be included.

Comment 15:

Ducks Unlimited recommends the Appendices of Chapter 8 directly correlate to the content of the chapter and should utilize consistent units. As an example, from Chapter 8.4.3.9 ... Effects of the Alternative on Delta Hydrodynamics:

“Long-term average annual Delta outflow is anticipated to decrease under Alternative 4 by between 864 (scenario H1) and 5 TAF (scenario H4) relative to the No Action Alternative, due only to changes in operations. The result of this is increased sea water intrusion in the west Delta. The increase in sea water intrusion (represented by an increase in San Francisco Bay (BAY) percentage) can be seen, for example, in Appendix 8D, ALT 4, H3–Sacramento River at Mallard Island for ALL years (1976–1991).”

This statement documents the changes in reduction of Delta outflow in TAF and then asks the reviewer to understand that as a percentage of existing conditions as it relates to an increase of “Bay” as the source water of reduced Delta outflow in Appendix 8D. It is inappropriate to use TAF as an output of data, when the data provided to the reviewer is a percentage of existing conditions without giving the Existing Conditions actual flow data in TAF.

Comment 16:

As a reviewer, DU has not seen the modeling data assumptions and does not understand, in detail, the limitations. As an example, “Therefore, DSM2 results may show an exceedance of D-1641 standards when, in these cases, this is a modeling anomaly and not reflective of an actual violation.” This statement is unsubstantiated as to why the results are a modeling anomaly and not a real affect. Please explain why this is an anomaly and not a real affect and site the model assumptions/data that support such a statement.

Comment 17:

Salinity Units vary in the document between psu, TDS, ppt, EC, g/L, mg/L, $\mu\text{S}/\text{cm}$ and a % of Bay. Salinity measurements should be standardized throughout the document and the document should provide a conversion table for the reader.

Comment 18:

Relatively small changes in salinity could result in large scale changes across the San Pablo Bay and Delta as species communities shift from peat forming freshwater cattails and tules to more saline species with less above and belowground biomass. In both Suisun and San Pablo Bays, the reduction in below ground organic matter inputs related to increased salinities resulting from the project, coupled with accelerating rates of sea level rise could seriously impede the ability of wetlands to develop and/or keep pace with sea level rise. This should be addressed in the cumulative effects section. Chapter 29, Climate Change, should also include areas beyond the identified plan area that may be affected by plan implementation, such as San Pablo Bay, and that resiliency with and without the project should be assessed for San Pablo Bay.

Comment 19:

Salinity should be addressed in Chapter 14. Slight variations in salinity can have a dramatic affect on crop types. Although it is difficult to determine what the future cropping will be within the timeline of the 50 year plan, it is possible to determine whether there are salinity thresholds that would impact existing crop uses in the Delta. An economic analysis as well as terrestrial species impact analysis should be conducted for existing agricultural land uses and the likely change in agricultural production.

In addition, many species covered under the Migratory Bird Treaty Act (MBTA) rely heavily on crops within the Delta. Therefore, any significant changes to cropping patterns as a result of salinity or water diversion reductions or as a production of water transfers could be a violation of the MBTA. We recommend further evaluation to determine what these thresholds could be and to determine if the project as proposed would exceed them.

Comment 20:

Ducks Unlimited agrees with the following comment from the Delta Protection Commission and adopts this comment as our comment 20.

The primary mitigation measure for agricultural impacts is the proposed Agricultural Lands Stewardship Plan (ALSP – Mitigation Measure AG-1). While the recent draft version of the ALSP includes a variety of useful and well-thought mitigation strategies that would benefit agriculture, it also includes measures that appear designed more to facilitate restoration of agricultural land for the benefit of listed species. The Commission recommends that the Delta agricultural community be invited to select a preferred administrator for the agricultural mitigation funding, and allow this administrator to work with the full range of ALSP strategies to determine the best measures to mitigate for the loss of Delta farmland.

Thank you for taking the time to review and respond to our comments. We look forward to further dialogue with regard to the comments above, and are available at your convenience for any follow-up or clarification as necessary. However, due to the highly complex nature and multitude of recommendations, we request that a revised Draft EIR/EIS, and Draft BDCP document be prepared and re-circulated for additional public comments, taking into consideration many of the elements that we address above.

Respectfully,



Mark E. Biddlecomb
Director of Operations
Western Region