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# DELTA STEWARDSHIP COUNCIL

*A California State Agency*

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## **RE: Comments on the Draft Fish Restoration Program Cache Slough Complex Conservation Assessment Volume 1 Characterization Report (November 2015)**

Dear Mr. Messer:

Thank you for the opportunity to comment on the Draft Fish Restoration Program (FRP) Cache Slough Complex Conservation Assessment Volume 1 Characterization Report (Conservation Assessment). Volume 1 of the Conservation Assessment is detailed, well written, and presents an overview of historic and current conditions in the Cache Slough Complex (CSC). The CSC Study Area, as defined by FRP, has been identified as a key area that could help meet some of the tidal habitat restoration requirements set forth by the 2008 U.S. Fish and Wildlife Service's Biological Opinion for delta smelt.

As you know, the Delta Stewardship Council (Council) has a management framework for the Delta and Suisun Marsh called the Delta Plan. The Delta Plan applies a common sense approach based on the best available science to achieve the coequal goals of protecting and enhancing the Delta ecosystem and providing for a more reliable water supply for California, while protecting and enhancing the unique cultural, recreational, and agricultural values of the Delta as an evolving place.

The study area analyzed in the Conservation Assessment is almost entirely within two of the six priority habitat restoration areas (PHRAs) identified in the Delta Plan: Yolo Bypass and Cache Slough Complex. As such, the findings of the Conservation Assessment will be of particular interest to the Council. Council staff reviewed Volume 1 of the Conservation Assessment to identify potential synergies and areas that could potentially be strengthened. We hope to work closely with you during development of Volume 2 of the Conservation Assessment, as well as with other agencies and stakeholders, as future habitat restoration projects for the CSC are planned and developed.

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*"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."*

– CA Water Code §85054

## I. Coordination to Implement the Delta Plan

The Delta Plan helps coordinate certain state and local activities to achieve the coequal goals, which are referred to as “covered actions”. Although the Conservation Assessment may not meet the definition of a “covered action” under the Delta Plan (see <http://deltacouncil.ca.gov/covered-actions>), it is intended to provide baseline information for and support planning of future habitat restoration projects in the CSC and the lower Yolo Bypass that may be covered actions. In addition, the Council, in its coordination role, encourages consistency with the Delta Plan for all relevant programs and projects, whether or not they are covered actions.

### Best Available Science and Adaptive Management

The Delta Plan requires use of best available science (refer to Delta Plan Policy **G P1** [23 CCR Section 5002]). Appendix 1A (<http://bit.ly/DeltaPlanAppendix1A>) of the Delta Plan regulations provides a list of criteria for what constitutes “best available science”, which includes relevance, inclusiveness, objectivity, transparency, timeliness and peer review. The Conservation Assessment appears to thoroughly address most of these criteria, and we commend DWR, California Department of Fish and Wildlife (CDFW), and Stillwater Sciences for their detailed analysis.

Additionally, the Delta Plan (also under **Policy G P1**) calls for habitat restoration projects to include an adaptive management plan, consistent with the framework outlined in Delta Plan Appendix 1B (<http://bit.ly/DeltaPlanAppendix1B>). It is not expected that Volume 1 of the Conservation Assessment addresses adaptive management in detail as it is primarily focused on historical and current conditions. However, Volume 2 of the Conservation Assessment, currently under development, will present an overall regional restoration approach and develop restoration strategies. In Volume 2, we encourage you to propose an adaptive management framework that builds upon the best available science compiled in Volume 1, and include examples of how adaptive management plans would be developed and implemented for specific projects. Adaptive Management Liaisons in the Delta Science Program can provide support to FRP in developing an adaptive management approach for inclusion in Volume 2 of the Conservation Assessment.

### Coordination with Local Agencies

The Delta Plan calls for improved coordination between project proponents and local and regional agencies with jurisdiction in the Delta (refer to Delta Plan Policy **DP P2** [23 CCR section 5011]), such as Solano County, Yolo County, and the Delta Protection Commission (DPC). The majority of land in the CSC is privately owned and primarily zoned for agriculture, although some areas within and adjacent to the Yolo Bypass are under a mix of state, federal, non-profit ownership. We encourage you to work directly with Yolo and Solano Counties and

the DPC as you finalize the assessment of baseline conditions for Volume 1, and especially during the development of Volume 2, to ensure proposed restoration frameworks are compatible with county general plan policies and DPC's Land Use and Resource Management Plan.

## **Invasive Species**

The Delta Plan calls for preventing or limiting introduction of nonnative species (see Delta Plan Policy **ER P5** [23 CCR Section 5009]). We appreciate how the Conservation Assessment identifies and lists known nonnative invasive species in the CSC, and describes their potential impacts. However, the short description under Section 8.3 could be further elaborated to detail specific priority threats and species that warrant special concern, and potential methods to limit their spread. In addition, nonnative invasive aquatic plant and fish species are described in various locations throughout Section 9. An alternative approach would be to combine these into a single section on nonnative invasive species of all types.

We recognize that a full-fledged invasive species management plan is not within the scope of Volume 1 of the Conservation Assessment, and so suggest Volume 2 include programmatic invasive species management guidelines that are tailored for those invasive species that warrant special concern within CSC. The Delta Conservancy's Arundo Control and Restoration Program along Cache Slough provides an excellent example for incorporating elements of adaptive management into an invasive species control program. This program will implement various treatment options for Arundo (*Arundo donax*) and the results of those field studies will inform the Program's evolving Arundo control strategy. Tracking the effectiveness of different invasive species management methods can identify the most effective options for various conditions within the CSC, while improving scientific understanding and meeting requirements for adaptive management.

## **Outdoor Recreation**

The Delta Plan calls for improved recreation opportunities (**DR R11: Provide New and Protect Existing Recreation Opportunities**). The Conservation Assessment briefly refers to recreation opportunities under section 7.3: "...recreation land uses shall be supported in appropriate locations and where the recreation uses do not conflict with agricultural land uses or other beneficial uses, such as waterside habitat." However, these do not necessarily conflict, as conservation areas could also provide increased access to outdoor recreation. The CSC is already used by a range of stakeholders including boaters, anglers, hunters, birders, and to a limited degree for outdoor education. The clear opportunity to increase recreation opportunities could be highlighted in a dedicated section in the Conservation Assessment and by including a map of boat ramps, hunting clubs, resorts, and hiking trails and other points of interest.

## **Performance Measures**

The Delta Reform Act of 2009 called for the Delta Plan to include performance measures that allow for tracking progress towards the goals and objectives of the Delta Plan (Water Code Section 85211). The Delta Stewardship Council recently posted draft performance measures for review, and will be refining these in early 2016. As currently written, some of these measures are very relevant to activities in the CSC. One draft performance measure focuses on the number of acres of habitat constructed in the Delta and includes a metric of progress towards the biological opinion target of restoring 8,000 acres of tidal wetlands. The Council would be interested in coordinating with restoration activities in the CSC that could help meet this and similar targets and we encourage the Conservation Assessment to consider the use of performance measures to determine progress towards restoration goals in the CSC.

## **Delta Plan Policies and Recommendations**

The Conservation Assessment acknowledges the relevance of the Delta Plan, but only identifies two Delta Plan recommendations (**ER R2**: Prioritize and Implement Projects that Restore Delta Habitat and **DP R10**: Encourage Wildlife-Friendly Farming) and none of the regulatory policies when summarizing the Delta Plan. We suggest the Conservation Assessment consider referencing several other Delta Plan recommendations and regulatory policies, including:

- **Detailed findings to establish consistency with the Delta Plan (Delta Plan Policy G P1)**: use and documentation of best available science and development of adaptive management plans.
- **Restore habitats at appropriate elevations (Delta Plan Policy ER P2)**: determine appropriate habitat restoration actions based on elevation and to be consistent with the 2011 Draft Conservation Strategy for the Ecosystem Restoration Program.
- **Expand floodplains and riparian habitats in levee projects (Delta Plan Policy ER P4)**: increase habitat along levees and considering setback levees in certain locations in the Delta.
- **Avoid Introductions of and Habitat Improvements for Invasive Nonnative Species (Delta Plan Policy ER P5)**: avoid or mitigate the potential for new introductions or improved habitat for invasive species.
- **Respect local land use when siting water or flood facilities or restoring habitats (Delta Plan Policy DP P2)**: consider existing land uses and comments from local agencies, including DPC.
- **Protect Floodways (Delta Plan Policy RR P3)**: no encroachment in non-designated

floodways or regulated streams unless there is sufficient analysis to indicate there would be no adverse effect.

- **Floodplain Protection (Delta Plan Policy RR P4):** no encroachment in certain floodplains of the Delta, including the Yolo Bypass, unless there is sufficient analysis to indicate there would be no adverse effect.
- **Provide New and Protect Existing Recreation Opportunities (Delta Plan Recommendation DP R11):** provide and protect recreational opportunities in the Delta and Delta waterways.
- **Enhance Nature-based Recreation (Delta Plan Recommendation DP R14):** improve nature-based recreational opportunities.
- **Develop Setback Levee Criteria (Delta Plan Recommendation policy RR R8):** DWR, in cooperation with the Central Valley Flood Protection Board, CDFW, and the Delta Conservancy, should develop criteria to define locations of future setback levees in in the Delta and Delta watershed.

## II. Other Comments

We have a few suggestions to further improve the already thorough and well-written Conservation Assessment. Although the following comments are related to issues not specifically addressed in the Delta Plan, we provide them to hopefully improve coordination between resources agencies and encourage the use of best available information in landscape and project planning.

### Groundwater

Groundwater is an area of special interest in California and will be increasingly important under the Sustainable Groundwater Management Act ([groundwater.ca.gov](http://groundwater.ca.gov)). The Conservation Assessment notes the risk of liquefaction posed by low groundwater depths and potential impacts to surrounding agricultural land from groundwater seepage, but does not cover groundwater supply or potential impacts from reduced groundwater availability or saline intrusion. Site specific groundwater data appears to be based on a 2013 DWR study on restoration on Prospect Island in Solano County. While the study is detailed, it represents a relatively small area of the CSC. The Conservation Assessment could add to this by citing best available scientific data for groundwater in other areas of the CSC, including upland areas and private agricultural land.

### Climate Change

Other areas that could be explored further include the potential impacts from climate change and associated sea level rise. They are briefly mentioned under other sections (e.g., impacts

on invasive species), however, a more thorough scientific documentation of their impacts in the CSC would help improve the document. For example, citing regional downscaled climate predictions could help inform more specific potential impacts and give the Conservation Assessment a stronger scientific foundation. Potential impacts to specific sites could be identified by incorporating recent site studies. For example, in early 2016 the USGS released bathymetric and topographic models for Little Holland Tract: <http://dx.doi.org/10.5066/F7RX9954>.

### **Crop Data**

We appreciate how the Conservation Assessment recognizes existing land uses, as described in the most recent General Plans for Yolo County (2008) and Solano County (2009), and describes their relevance to restoration activities. The Conservation Assessment currently cites studies from 2011 (Yolo County) and 2009 (Solano County) for agricultural crop cover. We suggest these numbers could be updated with 2014 crop data, available online at <http://www.yolocounty.org/home/showdocument?id=30912> and <http://solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=20554>. Furthermore, crop type could be spatially illustrated to identify opportunities for conservation. The Delta Protection Commission (DPC) released an Economic Sustainability Plan in 2012, which provides relatively recent data on crop types on private land: [http://www.delta.ca.gov/Final\\_ESP\\_Jan\\_2012.htm](http://www.delta.ca.gov/Final_ESP_Jan_2012.htm). This data may be available directly from the DPC. Overlaying crop type, infrastructure, land ownership, and other variables could help identify parcels to prioritize for future conservation.

### **Characterization of Levee Status**

We reviewed the Conservation Assessment's summary of the extent and type of levees and berms within the CSC, and it appears that some of this data may now be out of date. To ensure that the Conservation Assessment better describes the levee condition for the CSC, the project team should not only use the levee assessment information from the 2012 DWR report to the Council but also coordinate with various existing federal, state, and local efforts to obtain the best available levee condition evaluation data and the estimated cost of levee improvements. The possible data sources include, but are not limited to, the DWR FloodSAFE Environmental Stewardship and Statewide Resources Office (e.g., Delta Levees Maintenance Subventions Program), DWR Division of Flood Management (e.g., Levee Evaluation Program-the Urban Levee Evaluation Project and the Non-Urban Levee Evaluation Project), US Army Corps of Engineers Levee Safety Program, and records and/or recommendations from Local Maintaining Agencies. Information developed for the Delta Levee Investment Strategy may also be helpful, and will be augmented in the future: <http://deltacouncil.ca.gov/delta-levees-investment-strategy>.

### III. Final Remarks

Overall, Volume 1 of the Conservation Assessment provides a detailed characterization of the CSC. We appreciate that the document consolidates information from multiple sources and covers a range of relevant issues, including the landscape setting within the Delta, natural resources and ecology, and local land use considerations. It is expected that Volume 2 will build on this excellent document and present an integrated approach for habitat restoration, as well as further explore the challenges and opportunities for restoration in this complex environment. If you require clarification regarding our comments, I encourage you to contact me at [Jessica.Davenport@deltacouncil.ca.gov](mailto:Jessica.Davenport@deltacouncil.ca.gov) or (916) 445-2168.

Sincerely,



Jessica Davenport  
Acting Deputy Executive Officer  
Delta Stewardship Council

cc Carl Wilcox, California Department of Fish and Wildlife  
Campbell Ingram, Delta Conservancy