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Mr. Phil Isenberg, Chair

Delta Stewardship Council

980 Ninth Street, Suite 1500

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September 19, 2011

Dear Mr. Isenberg and Members of the Delta Stewardship Council,

We appreciate the opportunity to provide comments on the Fifth Staff Draft Delta Plan (Delta Plan). The plan is well-written and contains a good history of the policies, programs, and conditions that have affected ecosystem and water management dynamics in the Delta watershed.

We believe this version continues to improve on earlier versions and with a robust governance structure and performance indicators, can provide substantial progress towards achieving the Coequal Goals. Unfortunately we do not believe the current governance recommendations are sufficient to track progress and we provide specific recommendations in our comments under that chapter heading.

We have provided comments organized around the document's chapters as indicated below.

Chapter 1 – The Delta Plan

We believe the coequal goals are achievable and must be attained for maintenance and sustenance of California's economy and environment. We also believe that "water supply reliability" will not be achieved without habitat restoration actions, including flow objectives that place native species on a path towards recovery. In our opinion the Delta Plan lays out the correct actions necessary to achieve the coequal goals. However, we believe the Delta Plan is deficient in providing for and ensuring that the actions will be carried out within the time frames provided. Without any proactive measures to compel implementation and achievement of actions, the Plan could well end up as another report of lofty ideas

that sits on a shelf. We will provide specific recommendations on this point under the Governance section.

We are told that the Delta Plan lays out 12 regulatory policies and 61 recommendations. We suggest that these policies and recommendations be included as a table or as a discrete section of the Delta Plan. As written currently, the policies and recommendations are nested within the chapters and it is difficult to get an overview of how the policies and recommendations interrelate and create an overall vision for the Delta.

Specific comment for this chapter:

Page 21, lines 17-18 - The CALFED Ecosystem Restoration Program still exists, and is managed under DFG.

Chapter 2 – Science and Adaptive Management for a Changing Delta

Chapter 2, as well as the other chapters of the Delta Plan, largely omits the essential subject of integration between science and policy. The integration of science and policy for optimal decision-making is a complex and challenging subject. The section in Chapter 2 entitled "Effective Governance of Adaptive Management" hints at the issue, but provides only two brief and unsubstantial paragraphs on the subject.

Chapter 8 of "The State of Bay-Delta Science" (CALFED Science Program 2008) provides an introduction to the topic of integrating science into the policy making process in the Delta, and the authors speak forcefully about the difficulty and challenge of this task in the Delta thus far.

The following are examples from the scientific literature of work covering the science/policy interface:

Dietz, T., E. Ostrom, P.C. Stern. 2003. The struggle to govern the commons. Science 302:1907-1912.

National Research Council. 1996. *Understanding Risk: Informing Decisions in the Democratic Society.* Washington (DC): National Academy of Sciences.

Stern, P.C. 2005. Deliberative methods for understanding environmental systems. BioScience 555(11):976-982.

Recommendation: The Delta Plan should evaluate lessons learned from CALFED, and consider the voluminous literature addressing the science/policy interface in relation to other complex and contentious environmental settings such as radioactive waste, pollutant and toxin regulation, fisheries management, clean air regulations, and clean water regulations.

Recommendation: We recommend a policy that ecosystem and water management covered actions should include an adaptive management plan that considers all nine steps within the Council's Adaptive Management framework. This consideration should be inherent in the planning and design of covered

restoration and water management actions. The intent would be to ensure the development of transparent information that continuously adds to our collective science knowledge in the Delta and that can be used to guide actions of the current project, and for implementation of future projects. The Council must develop a process that ensures adaptive management is incorporated into projects and must also develop a tracking process through its science and governance responsibilities that ensures it is implemented and functioning.

Specific edit for this chapter:

Page 47, lines 6 & 7 – The second and third elements appear to be out of place on this list. Recommend placing them at the bottom of the list.

Chapter 3 – Governance – Implementation of the Delta Plan

As the staff draft points out in this chapter, the central function of the Delta Council is to implement the Delta Plan to achieve the coequal goals. Yet, no provisions are made in this draft to actively track covered and other actions critical to achieving the coequal goals and to ensure that actions stay on track.

The description of the Council's roles beginning in Line 20, page 54 and including the circle in Figure 3-1 describe several roles the Council is responsible for in implementing the Delta Plan. Noticeably absent from these roles is the role of Tracking and Keeping Projects on Track. No federal, state or local agency with any responsibility for Delta actions currently has or conducts this role. The actions in the Delta Plan are meant to achieve the coequal goals. Therefore it becomes critically important to know who is responsible for specific actions, if the actions are being implemented, their status towards completion and what we are learning through implementation via the adaptive management program.

Recommendation: We recommend the critically important dual roles of Project Tracker and Keeping Projects on Track for the Delta Council to achieve the coequal goals. Simply knowing the status of actions is not sufficient. The Council should also effectively persuade the implementing agencies to keep actions on track. Examples of persuasion that the Council could undertake include an annual report card to the public and legislature that identifies:

- Covered and other important actions necessary to achieve the coequal goals; the responsible implementing agency; the status of the action(s) including its schedule for implementation; a short narrative describing current conditions relative to the action, including steps to bring an action back on track if its schedule has slipped.
- Recommendations to the legislature for actions necessary to assist or prod an agency to complete a covered and other important action.
- An annual public workshop where implementing agencies describe to the public the actions being undertaken, schedule and other information relevant to the action.

The Delta Reform Act requires that the Council establish and oversee a committee of agencies responsible for implementing the Delta Plan. Establishment of this Committee, which may be called the Implementing Agency Committee, is a great first step towards coordinating projects.

Recommendation: We recommend that the Implementing Agency Committee meet internally on a monthly basis to coordinate activities and provide for progress reports and quarterly on a public basis to provide information on status of projects.

It is our belief that absent the Council's ability to effectively persuade and compel implementing agencies to achieve their stated objectives, the Delta Plan will end up on a shelf to be used primarily as a reference for other planning documents.

Other comments for your consideration:

Page 57, lines 30-35: How will the council measure whether a proposed covered action will "significantly affect the achievement of one or both of the coequal goals?"

Page 60, Certifications of Consistency: After any person appeals a certification of consistency, is there a time limit for the agency that originally certified consistency to prove consistency or revise its plan or project to achieve consistency?

Page 60, lines 26-28 - Certifications of Consistency: The reader is referred to a section on "short-form certifications of consistency" "in the section that follows G P1." The section referred to does not appear after G P1.

Chapter 4 – A More Reliable Water Supply for California

This chapter focuses on implementation of existing law. We believe that this focus with particular regard to implementation on a timely basis will contribute significantly to a more reliable water supply for California. In that regard we support the policies and recommendations in this chapter and urge the Council to adopt additional policies that help ensure implementation.

Our specific comments are:

Page 75, line 36 – "More water is exported by the SWP and CVP in average and dry years than in wet years. " While this may be true for particular years it is not true when comparing long term average export data. A more factual statement is "As a percentage of Delta inflow, more water is exported by the SWP and CVP in average and dry years than in wet years." (See Delta Vision, page 41 Table 9). The latter statement also reflects the need to provide for a more natural flow regime in the Delta/Estuary. Currently, the impacts on aquatic organisms associated with the consequences of drier years are exacerbated by export pumping. A more natural flow system would have the SWP and CVP increasing exports in wetter years (when it is less damaging to aquatic resources) and reducing impacts in drier years (when it is more damaging to aquatic resources).

Total project water diversion numbers - Pages 76 and 78: There appears to be an inconsistency on the accounting for total SWP and CVP water use as a percent of total Delta yield. On page 78 export water diversions indicate 15 %, but on page 76 the indications are 27% (12% CVP and 15% SWP).

Policy WR P1. Page 82, lines 4-8: As written, this policy is very confusing does not appear to make sense.

Updated Flow Requirements – Pages 84, lines 9-15: We commend Council staff for including this important provision in the Delta Plan. We agree that to achieve the coequal goals it is essential that the State Water Resources Control Board complete the work to develop, implement and enforce updated flow requirements for the Delta and major tributary streams in the Delta watershed.

Policy ER P1 – Development, implementation and enforcement of new and updated flow requirements; Page 86, lines 6-29: This policy correctly calls for adoption, implementation and enforcement of updated flow and water quality requirements for the Delta by June 2, 2014. It also calls for development of flow criteria for high priority tributaries in the Delta watershed by 2018. However, development of flow criteria does not mean implementation of flow criteria.

Recommendation: We recommend that ER P1 be modified to include a date for implementation of developed flow criteria for priority tributaries. We recommend that this date be 2020 and we further recommend that the Council request a schedule from the Board indicating the process for development and implementation of flow criteria and through 2020.

Driver and Outcome Performance Measures – Pages 97-98, lines 1-41: We note that there are no performance measures for flow criteria development and implementation under these categories.

Recommendation: We recommend Driver Measures that gauge progress for Delta and tributary flow and water quality measures and Outcome Measures tied to the adaptive management program.

Groundwater Discussion - Pages 90 – 93.

Recommendation: In its discussion of Sustainable Groundwater Management, we recommend that the Council highlight that, in addition to directly providing 20 to 40 % of water supplies, groundwater also contributes indirectly to even more of the water supply by providing inflows to streams and rivers from which surface water supplies is subsequently diverted. Also, pumping of groundwater (which, as the Council appropriately points out, is likely to increase as surface water supplies are stressed further by climate change) will further reduce surface water flows, since surface water and groundwater are closely connected.

Throughout the discussions on groundwater, we recommend that the connection of groundwater to surface water flows and surface supplies should be made more prominent. The impacts of groundwater pumping on surface water supplies, along with the importance of managing the surface water and groundwater supplies as an interconnected resource, must be stressed more firmly. In addition, more emphasis is needed on the fact that groundwater impacts to surface water supplies, and to ecosystems, occur well before critical overdraft occurs.

Specific edits for this chapter:

Page 72, Figure 4-1: This figure has not been referenced in the text. Also the caption talks about total rainfall in CA while the figure shows data only for some unidentified location. Where in CA were the data collected that were plotted in this figure?

Page 75, lines 36-39: The explanation for why more water is exported by the SWP and CVP in average or dry years than in wet years could be more clearly stated.

Page 91. The line graph seems to indicate that the San Joaquin Basin has not seen a lowering of groundwater elevation. Is this accurate?

Chapter 5 – Restore the Delta Ecosystem

We commend Council staff for the comprehensive policies and recommendations developed in this chapter. As we are aware, there are no guarantees that we will be able to fully restore the Delta ecosystem to the values we desire. However, we believe that the set of actions identified in this chapter (and that are substantiated by our current state of science) offer us the best opportunity for restoration of the ecological processes that we expect will restore and maintain the public resource values we cherish.

Having said that, we point out that the performance indicators section in this chapter remains poorly developed; without specific and measurable performance measures it will be difficult to gauge the success of restoration actions.

Recommendation: We recommend that the Plan discuss the extent to which Performance Indicators are being developed in related efforts (e.g., BDCP, DFG ERP Conservation Strategy). Unless there is something more current, we recommend that CALFED ERP performance measures that were developed for the Delta as part of the Multi-Species Conservation Strategy (CALFED Final Programmatic EIS/EIR Technical Appendix, July, 2000) be adopted as a starting place for the Delta Plan. We further recommend that outcome performance measures go beyond characterization of distribution and abundance to include characterizations of vital rates (survival and fecundity) as well as growth rate and condition metrics.

Flow Policy ER P1 – Pages 113-114: Our comments on this policy are the same as those made in the Water Management chapter: This policy correctly calls for adoption, implementation and enforcement of updated flow and water quality requirements for the Delta by June 2, 2014. It also calls for development of flow criteria for high priority tributaries in the Delta watershed by 2018. However, development of flow criteria does not mean implementation of flow criteria.

Recommendation: We recommend that ER P1 be modified to include a date for implementation of developed flow criteria for priority tributaries. We recommend that this date be 2020 and we further

recommend that the Council request a schedule from the Board indicating the process for development and implementation of flow criteria and through 2020.

Problem Statement - Page 117, lines 10-19: This problem statement does not recognize the effects of contemporary land use conversions on wildlife habitat. Although water demand is the main concern from shifting crops, there is another habitat quality concern from the vast expansion of orchards and vineyard acreage from annual crops, including around the Cosumnes Preserve, and a prudent desire to slow and mitigate for this conversion.

Very little is said about upland dependent species, including migratory birds that feed in fields, and changing management for their benefit. Increasing urbanization and shifting agricultural production from annual row crops to permanent cropping patterns significantly affect these resources.

Recommendation: We recommend that the Problem Statement in this section recognize these important habitat issues.

Policies – Pages 117 – 119:

Recommendation: We recommend that Council staff develop an associated policy to consider the impacts agricultural shifts from annual row crops to permanent crops have on habitat, either as an "anticipated stressor" or "current stressor." The policy would require the Department of Fish and Game to work with the Farm Bureau, the Delta Conservancy and the Delta Protection Commission to assess the trend of agricultural conversions and associated impacts of this trend on migratory birds and dependent species. This assessment would also recommend measures to conserve habitat for dependent species. This action should also be recognized in the Performance Measure section.

Specific edits for this chapter:

Page 108, lines 1-3: It is not clear how the second listed "category of understanding" can help achieve restoration goals, in particular how it will ensure natives have a competitive advantage over non-natives. Also, what is meant by ecosystem-based management?

Page 116, line 28: This section would benefit greatly from including a discussion of the harmful ecological effects of riprap and the need to minimize it.

Page 116, lines 43-44: A stronger statement could be made about the benefits on having vegetation on levees. A citation of the recent study by the USACE should be included here once it becomes final.

Page 127, lines 31-32: Suggest omitting "will remain stable or" from sentence. Remaining stable is not adequate to promote recovery. Also, the preceding and following bullets call for upward trends.

Chapter 6 – Improve Water Quality to Protect Human Health and the Environment

This draft Delta Plan places much emphasis on policy ER P1, the development, implementation and enforcement of new and updated flow requirements for the Delta and high priority tributaries. This policy is found in the water management, ecosystem restoration and water quality chapters. If done effectively, the State Water Resources Control Board's action could result in many positive environmental impacts in the Delta leading to a more reliable water supply for human use. If delayed or not done effectively, we should expect worsening conditions or at best the status quo.

Recommendation: We recommend that the Delta Council closely monitor the State Water Resources Control Board's activities to complete this action in a timely manner and to use the science program and performance measures to gauge the effectiveness of the Board's actions.

Figure 6-1, page 137. It appears that the panels on this Figure are reversed.

Chapter 7 – Reduce Risks to People, Property and State Interests in the Delta

We agree that existing standards and law are not sufficient to reduce flood risks to lives, property and other interests in the Delta. We agree with Policy RR P3 whereby covered actions need to be consistent with appropriate levee classifications for the interests being protected. In this section we also describe why RR R11 is misguided as a Council Recommendation, provide language to correct it and provide for a new Council Recommendation (RR R12) that would help establish a carbon market, reduce subsidence and provide an economic incentive to Delta landowners.

Page 162, line 8: Revise text to read as follows: Continued development and therefore increasing consequences within the floodplains.

Page 162, line 9: Revise text to read as follows: Inadequate and deteriorating levees.

Page 162, Explanatory text in Fig.7-1: Readers may misinterpret or not relate the 1% and 2% explanation. Revise the text to read: The community on the left is in an agricultural area that has a 2% chance of flooding in any year (50-year level of flood protection). In this case, the area might sustain about $10M of damage due to flooding, and the annual flood risk would be $200,000/year.

The community on the right is partly urbanized and has a 1% chance of flooding in any year (100-year level of flood protection). Due to the increased consequences of flooding caused by the increase in properties that would be flooded, the area might sustain $100M of damage, and the annual flood risk would be $1,000,000 despite the improvement in level of flood protection.

Page 163, lines 32 and 39: Text should read: FloodSAFE California Initiative

Page 171, Figure 7-5: Double check the Delta-specific PL 84-99 criteria.

Page 183 – Subsidence Reversal and Reduction: As described in the draft Plan (lines 27-30) there are opportunities to significantly decrease or gradually reverse subsidence in the Delta. Recommendation RR R11 (page 184) is a misguided step towards directly addressing this problem.

Actions to reverse subsidence can be costly, often requiring the construction of berms or even new levees. Infrastructure such as discharge pumps and drainage ditches to facilitate water management on the treated land, control of mosquitoes, and other controls will be necessary depending on the treatment choice. This could end up costing the lessee farmer hundreds of thousands of dollars which may result in abandonment of the lease and non-productive use of the land.

Recommendation: We recommend the following replacement language for RR R11: That state agencies work with the lessee, and provide economic incentives through the lease agreement if necessary to participate in a subsidence reversal or reduction program for specified parcels of the land mutually agreed upon by the state and lessee. If agreement cannot be reached, the state reserves the right to not renew or enter into an agriculture lease agreement.

Establishment of a carbon market would enable Delta farmers to grow native marsh plants, reverse ongoing subsidence, create wetlands, and receive economic benefit as a result of sequestering carbon through the growth of native marsh plants. Several NGO's such as the Environmental Defense Fund and The Nature Conservancy are poised to engage in this work but need economic and technical support to develop the necessary protocols for establishment of a carbon market.

Recommendation: That an additional Council Recommendation, RR R12 be added to this chapter directing state agencies including the Department of Water Resources and the Air Resources Board to work with interested parties (non-governmental agencies, local agencies, etc.) to develop a carbon market specific to marshes and wetlands that can be applied to Delta subsided lands.

Page 185, lines 27-31, Recommendation RR R12: It would be useful to indicate start and finish dates for this recommendation.

Chapter 8 – The California Delta as an Evolving Place

Page 192, lines 9 – 26 identifies some of the most visited wildlife areas in the Delta. Missing from this list is Staten Island which generates about 5,000 visitors annually, primarily in the fall and winter period during the Sandhill crane season. While the Cosumnes River Preserve is mentioned, the number of visitors is not listed. The Cosumnes Preserve receives about 60,000 – 70,000 visitors annually.

Recommendation: Page 198, lines 27-32 identifies "gateways" as transition points that provide information to visitors entering the Delta. The Cosumnes River Preserve would also be an appropriate "gateway" for the Delta and the waterways.

Chapter 9 – Finance Plan Framework to Support the Coequal Goals

We support the draft Delta Plan's recommendations to provide for an immediate and long term financing strategy for the Delta Plan. Specifically we support the key concepts that beneficiaries should

pay for the benefits they receive and stressors should pay for the harm they cause the ecosystem. It will be necessary to assess the relative benefits and impacts and associated costs for this framework to be successful.

We offer the comments on this chapter:

Page 205, line 12: Delete the word "constantly."

Page 207, Table 9-1: Are all the dollar amounts shown for a given year, e.g., 2008? The table would be less confusing if the "Source" column was deleted, especially since the references are provided at the end of the chapter.

Page 210, lines 39-41: Add "as soon as possible" or "immediately" or specify a date to implement FP R3.

Appendix I, Other Stressor Fees, lines 28-29: What would the time frame for determining whether the existing or proposed land alterations contribute to habitat stressors? Some habitat restoration projects may initially alter stress levels.

Thank you for the opportunity to provide our comments and recommendations on this Fifth Staff Draft Delta Plan. We look forward to continue working with you to develop a final Delta Plan sufficient to achieve the coequal objectives.

Sincerely,

Leo Winternitz