DELTA WETLANDS PROJECT PLACE OF USE

Final Environmental Impact Report

Prepared for
Semitropic Water Storage District

August 2011

ESA

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2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500
www.esassoc.com

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TABLE OF CONTENTS

Delta Wetlands Project Place of Use
Final Environmental Impact Report

TABLE OF CONTENTS

Delta Wetlands Project Place of Use
Final Environmental Impact Report

CHAPTER 1
Introduction

1.1 Introduction

The Semitropic Water Storage District (Semitropic) circulated the Delta Wetlands Place of Use Project (Project) Draft Environmental Impact Report (DEIR) for public and agency review and comment between May 11, 2010 and June 28, 2010. At the end of the comment period, a total of 27 written letters were received addressing the content and analysis in the DEIR.

This document is the Final EIR (FEIR) for the Project and it contains written responses to all comments received by Semitropic on the DEIR. The responses to comments clarify and amplify text in the DEIR and do not change the findings or conclusions of the DEIR. In addition, this FEIR includes a list of commenters, comment letters received, and the Mitigation Monitoring and Reporting Program (MMRP) which identifies the adopted mitigation measures, timing of action and responsibilities for implementation and monitoring.

This FEIR has been prepared in accordance with the California Environmental Quality Act (CEQA) and together with the DEIR (and appendices) constitutes the EIR for the Project.

1.2 Summary of Proposed Project

1.2.1 Summary of Project

The Project would provide water to the places of use and the supplemental storage of that water in the Semitropic and Antelope Valley groundwater banks as specified in the petitions to change water right Application Nos. 29062, 29066, 30268, and 30270. Specifically, the Project would increase the availability of high-quality water in the Sacramento-San Joaquin Delta (Delta) for export or outflow through the following components:

- Diversion of water in the Delta;
- Water storage on two Reservoir Islands (Bacon Island and Webb Tract);
- Compensation for wetland and wildlife effects of the water storage operations on the Reservoir Islands by implementing a Habitat Management Plan on two Habitat Islands (Bouldin Island and Holland Tract);
- Supplemental water storage in the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank south of the Delta;
- Provision of water supply for designated south-of-Delta users; and

- Release of water for water quality enhancement in the Bay-Delta Estuary in the fall as an additional beneficial water use in a designated place of use.

In compliance with Central Delta Water Agency v. State Water Resources Control Board, 124 Cal.App.4th 245 (2004), the Delta Wetlands Place of Use EIR updates the water supply portion of the Project to identify specific places of use of Project water. Petitions to change the Project's water rights applications (see above) to add places of use and places of underground storage have been filed with the State Water Resources Control Board (State Water Board). Accordingly, the scope of the CEQA analysis in the DEIR addresses the changes to the Project description proposed in the petitions for change regarding specific places of use for Project water, estimated diversion amounts, beneficial uses, means of transfer, and storage of water in groundwater banks. Changes to the Project description and additional information on the places of use are discussed in detail in Chapter 2 of the DEIR. Changes to the Project description that have been proposed since the 2001 FEIR include:

- Specific places of use have been designated for Project water to improve the reliability of the existing supplies of water for irrigation and municipal purposes. The designated places of use include Semitropic, Golden State, and Metropolitan and its member agencies' service areas, including Western.
- An operational element has been added for banking Project water in the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank for later use by the places of use. This allows Project water to be stored until there is a water delivery deficit (i.e., unmet existing demand) in the designated places of use.
- The levee design has been revised to improve Reservoir Island structural integrity.
- Environmental commitments have been incorporated into the Project design to avoid, minimize, and mitigate environmental impacts and are to be considered as part of the analysis.

Chapter 2 of the DEIR also summarizes new information and changed circumstances that may affect the existing or future conditions in the Delta or the Project description. The operations of the Project in the Delta and the operations of the groundwater banks and the monthly deliveries to designated places of use are described in more detail in the DEIR Chapter 3, Project Operations. New specific information or changed circumstances that affect Project operations are also described in Chapter 3 and new specific information that may change the impact assessments are described in the respective appropriate resource sections of the DEIR.

1.2.2 Project Purpose and Objectives

The overall purpose of the Project is to increase the availability of high-quality water in the Delta for export or outflow by storing water on two Reservoir Islands (Webb Tract and Bacon Island) and by doing so, increase the reliability of water supplies for Semitropic and the other places of use. The storage of surplus Project water in the Semitropic Groundwater Storage Bank and Antelope Valley Water Bank for later beneficial use will reduce groundwater overdraft and reduce pumping lift for water users within those basins as well as provide additional dry year water supply reliability for the places of use. Further, the Project would compensate for wetland and wildlife effects of

the water storage operations on the Reservoir Islands by implementing a Habitat Management Plan on two dedicated Habitat Islands (Bouldin Island and Holland Tract).

1.2.3 Changes to the Project Description since Publication of the DEIR

San Bernardino Valley Municipal Water District (Valley District), one of the proposed places of use identified in the DEIR, has indicated that it does not intend to participate in the Project. The potential that Valley District would not participate in the Project was discussed on page 2-2 of Chapter 2 of the DEIR "Valley District has not determined whether it will participate in the Project, but it is included in this EIR as a Place of Use for assessment of potential impacts. If Valley District does not elect to participate in the Project, the Final EIR will be amended accordingly." The removal of Valley District from the DEIR does not alter any conclusions regarding Project impacts or mitigation. Accordingly, all references to Valley District shall be removed from the DEIR as discussed in Chapter 2 of this FEIR.

1.3 Public Participation and Environmental Review Process

The following lists the actions that took place during the preparation, distribution and review of the DEIR.

- The Notice of Preparation (NOP) for preparation of the DEIR was filed with the State Clearinghouse (SCH #1988020824) on November 25, 2008. The 30-day comment period for the NOP ended January 9, 2009.
- The availability of the NOP and information on the scoping meetings was noticed in the Sacramento Bee on December 1 and December 2, 2008.
- The NOP was distributed to all responsible and trustee agencies, and interested groups, organizations and individuals and was made available for review on the project web site: http://deltawetlandsproject.com.
- Public scoping meetings were held in Wasco on December 17, 2008, Sacramento on December 19, 2008, and Antioch on December 19, 2008.
- A Supplemental NOP for preparing the DEIR was filed with the State Clearinghouse (SCH #1988020824) on July 2, 2009. The 30-day comment period for the NOP ended July 31, 2009.
- The Supplemental NOP was distributed to all responsible and trustee agencies, and interested groups, organizations and individuals and was made available for review on the project web site: http://deltawetlandsproject.com.
- A public scoping meeting was held in Sacramento on Friday July 17th, 2009.
- The DEIR was filed with the State Clearinghouse on May 11, 2010. The public comment period ended June 28, 2010.

- The availability of the DEIR was noticed in the Sacramento Bee, Contra Costa Times, Bakersfield Californian, and Los Angeles Times.
- The DEIR was distributed to all responsible and trustee agencies, and interested groups, organizations and individuals and was made available for review on the project web site: http://deltawetlandsproject.com and at the Semitropic office and 27 libraries (complete list of locations the DEIR was made available for review was included in the website).
- A public meeting was held on May 25, 2010, in Wasco to receive comments on the content and analysis of the DEIR.

1.4 CEQA Certification and Project Approval

Section 15090(a) of the CEQA Guidelines states that "prior to approving a project, the lead agency shall certify (1) that the final EIR has been completed in compliance with CEQA; (2) that the final EIR was presented to the decision-making body of the lead agency and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and (3) the final EIR reflects the lead agency's independent judgment and analysis".

If Semitropic determines that the EIR (DEIR and FEIR) is adequate for the decision making purposes, Semitropic as the lead agency for CEQA may certify the EIR by formal vote and take action to approve the Project as proposed or as modified. Semitropic may also deny the proposed project, but decide in favor of an alternative.

Upon EIR certification, Semitropic may proceed with Project approval actions and direct that the Project proponent, Delta Wetlands Properties, take the necessary steps to implement Semitropic's final decision. CEQA requires that the lead agency neither approve nor implement a project unless the project's significant environmental effects have been reduced to less-than-significant levels, essentially "eliminating, avoiding, or substantially lessening" the expected impacts unless specific findings are made. If the lead agency approves the project despite residual significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.5 Organization of FEIR

This FEIR is organized as follows:

Chapter 1 – Introduction: This chapter summarizes the proposed Project, presents a summary of relevant information that has become available since publication of the DEIR, describes the content and format of the FEIR, summarizes the public participation and review process, and describes the CEQA certification and project approval process.

Chapter 2 – Summary of Text Changes to the DEIR: Chapter 2 summarizes revisions to the DEIR. These revisions are in response to comments made on the DEIR and/or Project-initiated text changes. The revisions contain clarification, amplification, and corrections that have been identified since publication of the DEIR.

Chapter 3 – Responses to Comments: Chapter 3 includes a list of the comment letters received followed by the comment letters and responses to the comments contained in each letter. The responses to comments are numbered consistent with the comment number in each letter. For example, the response to the first comment in Comment Letter 1 is Response to Comment 1-1.

Appendices

Appendix A – Water Quality Management Plan

Appendix B - Mitigation Monitoring and Reporting Program: This chapter contains the MMRP for the timing, responsibility and monitoring of adopted mitigation measures.

CHAPTER 2
Summary of Text Changes to the DEIR

2.1 Introduction

This Chapter presents corrections and revisions made to the DEIR initiated by responses to comments or by the Project. New text is shown in a double underline and text to be deleted is shown in ~~strike out~~.

The changes identified below are clarifications or amplification of the information and analysis contained in the DEIR. None of the changes identified below results in a significant impact that was not already identified in the DEIR. Furthermore, none of the impacts identified in the DEIR were found to be substantially more severe as a result of the following changes.

References to Valley District

As stated in Chapter 1 of this FEIR, Valley District will not participate in the Project. Accordingly, all references to Valley District as a Place of Use in the DEIR shall be deleted including but not limited to:

- Page 1-3, the bullet discussing San Bernardino Valley Municipal Water District as a Place of Use;
- Page 1-7, the reference to Valley District in the first sentence of the first paragraph,
- Page 1-10, Table 1-1, the row listing Valley District as a responsible agency;
- Page 2-2, second paragraph under "Designated Places of Use", the second and third sentences;
- Page 2-3, Table 2-1, the row listing Valley District;
- Page 2-5, the section entitled, "San Bernardino Valley Municipal Water District";
- Page 3-28, third sentence of the last paragraph;
- Page 6-2, first paragraph, first sentence, and last paragraph, first sentence; and
- Page 6-5, Table 6-3, row listing Valley District.

Executive Summary

Page ES-6, the second sentence of the last paragraph is revised to read:

> Through appropriate arrangements with ~~its sister agency in Kern County,~~ the Kern County Water Agency~~,~~ Semitropic will facilitate the conveyance of Project water to the groundwater banks and the places of use.

Chapter 1 Introduction

Page 1-9, the second sentence of the last paragraph is revised to read:

> Through appropriate arrangements with ~~its sister agency in Kern County,~~ the Kern County Water Agency~~,~~ Semitropic will facilitate the conveyance of Project water to the groundwater banks and the places of use.

Chapter 2 Project Description and Alternatives

The following description of the Delta Flow Criteria is added at the end of the **New Information and Circumstances** subsection on page 2-26.

> ## Sacramento-San Joaquin Delta Flow Criteria
>
> On August 3, 2010, the State Water Resources Control Board (SWRCB) issued a report entitled "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem" (Flow Criteria Report) as required by the Sacramento-San Joaquin Delta Reform Act of 2009. The Flow Criteria Report contains both numeric flow criteria and non-numeric flow criteria. The Flow Criteria Report also contains numeric criteria goals as well as narrative biological and management goals.
>
> The Flow Criteria Report clearly states that none of the determinations in the Flow Criteria Report have regulatory or adjudicatory effect and that the Report is for informational purposes only. (Flow Criteria Report, page 3.) Further, the Flow Criteria Report states that it is not the intent of the SWRCB "that these criteria be interpreted as precise flow requirements for fish under current conditions." (Flow Criteria Report, page 5.) If and when the SWRCB develops Delta flow objectives with regulatory effect it may consider the Flow Criteria Report; however, the SWRCB must also "ensure the reasonable protection of beneficial uses, which may entail balancing of competing beneficial uses of water, including municipal and industrial uses, agricultural uses, and other environmental uses… [and] an analysis of the economic impacts that result from changed flow objectives." (Flow Criteria Report, page 3.) Importantly, the SWRCB has continuing jurisdiction over water right permits and licenses and may impose further limitations to protect public trust uses or meet future flow objectives. (*Id*.) Therefore, the Flow Criteria Report does not have any present regulatory effect, and water rights issued now for the Project could be adjusted by the SWRCB in the future to meet any Delta flow objectives which do have regulatory effect.
>
> A recent SWRCB Decision on the water rights application by the Woodland-Davis Clean Water Agency discussed the effect of the Flow Criteria Report on an individual water right proceeding and concluded that it is informational only. The Flow Criteria Report "does

not account for different water year types, future regulatory actions the Board may take, nor make recommendations as to how the Board should balance various public interest factors in managing flow in the Delta watershed." (SWRCB Decision 1650, page 25.) The SWRCB explained that although new Delta regulatory standards may be adopted by the Board in the future which could reduce the water available for diversion that is no reason to deny the applications. (SWRCB Decision 1650, page 26.) Moreover, "some water would be available for appropriation even if the flow criteria outlined in the Report were incorporated as new regulatory requirements." (SWRCB Decision 1650, on page 27.)

Chapter 3 Project Operations

Page 3-7, the discussion of Measure 4 is revised to read:

Measure 4 eliminates Project diversions in April ~~or~~ and May for fish protection, …

Page 3-9, the second full paragraph is deleted.

Page 3-10, the first sentence of the first full paragraph is revised to read:

The primary source of new information to describe the likely Project operations was a monthly water supply model prepared by MBK (Appendix ~~B~~ A).

Page 3-19, the first sentence of the fourth paragraph is revised to read:

The San Joaquin Valley agricultural contractors have a combined contract amount of about 1.2 maf (the Kern County Water ~~Authority~~ Agency has a maximum Table A contract of 1 maf).

Page 3-25, the first sentence in the first paragraph is revised to read:

Project diversions ~~generally~~ would not occur in April and May under the existing conditions~~ because of the assumed VAMP protection for San Joaquin River fish~~.

Page 3-28, the second, third and fourth sentences of the last paragraph are revised to read:

All designated places of use can be supplied with Project water directly using SWP conveyance facilities~~, except that CVWD would get water through an exchange with Metropolitan~~. ~~Three places of use,~~ Metropolitan~~, Valley District, and CVWD, are~~ is a SWP contractor~~s~~. ~~Three places of use,~~ Semitropic~~,~~ and Western~~, and Rosedale–Rio Bravo,~~ are member agencies of SWP contractors.

Section 4.2 Water Quality

Page 4.2-11, the second paragraph is revised to read:

…Because THM concentrations vary seasonally, the THM standard is applied ~~to a moving annual average based on quarterly or monthly samples at the treatment plants~~ based on a running annual average of quarterly samples in a utilities distribution system.

Page 4.2-38, the first sentence is revised as follows:

> . . .whereas in the WQMP, an increase of more than 1.0 mg/L TOC at the urban intakes could trigger potential restrictive action by the water users.

Page 4.2-43, the third sentence of the second paragraph is revised as follows:

> Operational criteria of more than 1 mg/l ~~D~~TOC net increase or exceeding the 4 mg/l ~~D~~TOC threshold were established in the WQMP.

Section 4.5 Fishery Resources

Page 4.5-4, first sentence in the first full paragraph is revised to read:

> ~~Increased~~Export of discharged Project water [July to November] could increase entrainment of fish at the SWP and CVP pumping facilities. ~~during export of discharged Project water would occur from July to November and would therefore avoid most sensitive species, although losses of Sacramento splittail and green sturgeon would be likely to occur.~~ During this time period, special-status fish including delta smelt, longfin smelt, and salmonids are not typically present in the central and south Delta due to high water temperatures and other factors; and therefore, are not at risk to entrainment. Sacramento splittail and green sturgeon, however, are in the central and south Delta during the summer and early fall months, so risk of entrainment for these two species is still present.

Page 4.5-14, the last paragraph is revised to read:

> … The BO prescribed a Reasonable and Prudent Alternative (RPA) intended to protect all life stages of delta smelt and avoid adverse modification to critical habitat. ~~Components of the RPA included:~~ As discussed in Appendix B, a December 14, 2010 ruling remanded the USFWS 2008 BO to USFWS for further consideration without vacatur, meaning that its provisions are technically still in place until USFWS issues a revised BO. Recognizing that some details of the RPA may change after USFWS issues a revised BO, the components of the RPA included:

Page 4.5-15, the first full paragraph is revised to read:

> … The RPA from the USFWS (2008a) OCAP BO is summarized below in the section entitled Environmental Setting and is detailed in Appendix B. As discussed in Appendix B, a December 14, 2010 ruling remanded the USFWS 2008 BO to USFWS for further consideration without vacatur, meaning that its provisions are technically still in place until USFWS issues a revised BO.

Page 4.5-15, the last paragraph is revised to read as follows:

> At the time of this EIR, the Bureau of Reclamation and DWR have started implementing various components of the RPA from the USFWS (2008a) and NMFS (2009) BOs. The USFWS 2008 BO was remanded to USFWS for further consideration without vacatur, meaning that its provisions are technically still in place until USFWS issues a revised BO.

Page 4.5-20, the first full paragraph is revised to read:

> … The BO restrictions are discussed first, and a description of how the Project could affect south Delta flows controlled by the BO follows. As described in further detail in Appendix B, the BO and the RPA Actions have recently been remanded to USFWS for further consideration. Although certain details of the RPA Actions may change, any revised restrictions on the continued SWP and CVP operations in a future revised BO will likely affect the Project in similar ways.

Section 4.8 Land Use and Agriculture

Page 4.8-43 and 4.8-46, the following mitigation measures is added to Impact LU-2 under Alternative 2, and Alternative 3 under the Mitigation Measure header and before the existing text:

> **LU-MM-1: Provide Funding to Semitropic to Further District Goals of Sustaining Agriculture**.
>
> During the each of the first 10 years of the Project operations, Delta Wetlands will provide to the Semitropic Water Storage District $500,000, for a total of $5,000,000. The funding is intended to further the Semitropic's goals of sustaining agriculture through the provision of agricultural surface water to farmers within its boundaries at least cost and provide long term reliability. It would be used for the following purposes:
>
> - Purchase of voluntary conservation easements over prime farmland in Semitropic.
> - Purchase of imported water by the Semitropic.
> - Development and operation of infrastructure needed to deliver water to and within Semitropic.
> - Other purposes consistent with the Semitropic's mission.
>
> This mitigation measure is consistent with Semitropic's authority and does not obligate it to undertake extraterritorial condemnation measures. Even with implementation of the above mitigation measure, agricultural impacts will remain significant and unavoidable.

Section 4.10 Traffic and Navigation

Page 4.10-11, the last sentence of the second paragraph is deleted.

Chapter 5 Cumulative Impacts

Page 5-6, the third full paragraph is revised to read:

> …. Conveyance ~~A~~alternatives currently being evaluated include: ~~comprise the following conveyance options; through-Delta; east alignment (tunnel and channel); west alignment (tunnel and channel); all-tunnel; or dual conveyance (combines portions of east, west, or all-tunnel alignments with some elements of through-Delta alignment)~~dual conveyance (pipeline/tunnel, eastern and western alignment unlined canal, and eastern or western

alignment lined canal: and an isolated facility (pipeline/tunnel, eastern and western alignment unlined canal, and eastern or western alignment lined canal),. …

Page 5-7, the following was added after the first sentence:

Additional information about the Bay Delta Conservation Plan (BDCP) can be obtained through the BDCP website: http://baydeltaconservationplan.com/default.aspx

Page 5-54, the following mitigation measures is to Impact Cum-16 under the Mitigation Measure header and before the existing text:

LU-MM-1: Provide Funding to Semitropic to Further District Goals of Sustaining Agriculture.

This mitigation measure is described in Section 4.8.

Chapter 6 Growth Inducing-Impacts

Page 6-2, the first sentence is revised to read:

The Project ~~applicant now plans to~~will provide water to Semitropic, Golden State, and ~~Valley District. An additional likely place of use is~~ Metropolitan and its member agencies' service areas, including Western ~~Municipal~~.

Page 6-5, Table 6-3, the Metropolitan row is revised as follows:

TABLE 6-3
PROJECT PLACES OF USE

Entity	Maximum Volume (TAF Annually)	Estimated Maximum Annual Delivery from Project (taf) [1]	Purpose of Use[2]	Geography Served	Relevant Planning Document	Anticipated Growth based on Planning Document
Metropolitan Water District of Southern California	4,700[5] ~~4,100[5]~~	223 ~~215~~	Increase reliability of existing agricultural, industrial, and municipal water supplies.	5,200 square miles of residential, municipal, industrial, and agricultural land in southern California, including 152 cities and 89 unincorporated communities (see Table 6-2).	Metropolitan Water District of Southern California Regional Urban Water Management Plan, 2010 ~~2005~~	Population growth in Metropolitan's service area is expected to average just over 150,000 people per year, increasing from an estimated 18.2 million in 2005 to 22.5 million ~~22 million~~ in 2035 ~~2030~~.

1. Denotes estimates of the maximum annual deliveries of Project water to each place of use, and not average deliveries. The sum of the estimated maximum annual deliveries exceeds anticipated Project yield. Maximum annual deliveries are used to conservatively assess the growth-inducing impacts to the Project.
2. No new facilities would be needed to convey to or store water at the places of use as a result of the Project beyond those already built or those already analyzed and approved.
5. Anticipated total water demand by 2035 ~~2030~~.

Chapter 7 Regulatory Compliance

Page 7-18, the first paragraph is revised to read:

> The Central Valley Flood Protection Board (formerly the Reclamation Board) ~~Encroachment Permit~~ (CVFPB) requires an encroachment permit for any non-federal activity along or near federal flood damage reduction project levees and floodways or in CVFPB-designated floodways to ensure that proposed local actions or projects do not impair the integrity of existing flood damage reduction systems to withstand flood conditions. The CVFPB can also assert jurisdiction on non-Corps and non-State levees. Therefore, the Project will consult with the CVFPB and will submit an application for ~~The Project will not require~~ a CVFPB Encroachment Permit as necessary~~, as the Project levees are not federal flood damage reduction project levees~~.

Appendix B Detailed Description of Recent OCAP Biological Opinions and Delta Wetlands Fishery Resources Impact Assessment Methods and Results

Page B-1, the last paragraph is revised to read:

> The USFWS (2008, 276) OCAP BO concluded that "coordinated operations of the CVP and SWP, as proposed, are likely to jeopardize the continued existence of the delta smelt" and prescribed a RPA to allow continued SWP and CVP operations under the jeopardy opinion. On December 14, 2010, Judge Wanger issued a Memorandum Decision on cross motions for summary judgment in litigation concerning the USFWS 2008 OCAP BO which found several aspects of the RPA flawed and directed that they be addressed on remand. A Final Judgment issued March 28, 2011 remanded the BO to USFWS for further consideration and directed USFWS to issue a revised BO in accordance with the Memorandum Decision. The following details the actions associated with the RPA, which remain in force during reconsideration by USFWS on remand, while recognizing that some specific details may change in a future revised BO consistent with the court's holdings described above.

Page B-140, the last sentence in the second paragraph is deleted:

> This contrasts with the entrainment analyses based on salvage, which generally only examine the relative change in entrainment and do not indicate the population as a whole ~~(unless an independent measure of population size can be obtained by other means; see section on "Population-Level Entrainment Estimates" below~~

CHAPTER 3
Responses to Comments

At the end of the public circulation period, a total of 27 letters were received, and they are listed below. Each letter has been assigned a number. Individual comments within each letter have been bracketed based on the issue presented and assigned a number. For example, the first comment in Letter 1 is comment number 1-1. Following each comment letter are the responses to the individual bracketed comments. Where it is appropriate to fully respond to a comment, references are provided to other responses in this FEIR. Text changes in response to comments are included in the individual responses in this chapter, and they are summarized in Chapter, 2 Summary of Text Changes to the DEIR.

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY REFER TO:
MP-152
ENV-6.00

JUN 28 2010

Ms. Megan Smith
Delta Wetlands Comments
ICF International
630 K Street, Suite 400
Sacramento, CA 95814

Subject: Comments on the Draft Environmental Impact Report (Draft EIR) for the Delta Wetlands Project (Project)

Dear Ms. Smith:

The Bureau of Reclamation is submitting the following comments on the Draft EIR for the Project for your consideration. Our comments pertain to potential shortcomings with the analysis of impacts on the Central Valley Project (CVP) operations, delta smelt and other Delta-dependent species, Delta water quality, and compliance with the National Environmental Protection Act (NEPA). Reclamation has reviewed the comments provided by the California Department of Water Resources (DWR) on the Project and, rather than reiterate those comments, attached them hereto and incorporate them as part of our comments. We strongly concur with DWR that an operations agreement outlining day-to-day operations and a structure for making decisions about Project operations prior to constructing or operating the Project would be necessary to avoid impacts to both the CVP and the State Water Project (SWP). 1-1

As stated in the Draft EIR executive summary, "[t]his EIR attempts to efficiently and appropriately apply the environmental analyses of the prior CEQA and NEPA documents." While the Army Corps of Engineers (Corps) prepared an Environmental Impact Statement (EIS) and adopted a Record of Decision to comply with NEPA regarding its discretionary action to issue a 404 permit, that EIS and the current EIR do not satisfy future requirements to complete NEPA documentation for discretionary actions that Reclamation may take in the future. As stated on page 1-1 of the 2001 FEIS; 1-2

> *"In this document, as in the 1995 DEIR/EIS and 2000 REIR/EIS, the Delta Wetlands Project is analyzed as a stand-alone water storage facility, operated independently of the State Water Project (SWP) and the Central Valley Project (CVP), and without regard to the specific entities to which the water could be sold. Environmental effects that may be associated with the delivery of purchased Delta Wetlands water or the storage of water under a third party's water rights are not analyzed because the identity of the end user of the Delta Wetlands water remains speculative."*

This is particularly relevant because the places of use and agencies identified in the current Draft EIR do not have a water service contract with Reclamation for CVP water. Therefore, there is no analysis of the place of use for CVP lands, nor relevant analysis for use of CVP facilities. The Draft EIR alludes to use of CVP facilities to transport water from the Delta to the identified places of use on numerous occasions, however, use of these facilities would not be allowed by Reclamation until NEPA, National Historic Preservation Act (NHPA) section 106, and the Endangered Species Act compliance was satisfied. To this end, a Warren Act contract and associated environmental documentation would be necessary to use CVP facilities to move water stored pursuant to the water rights permits for Delta wetlands. Please revise the current description in the Draft EIR pertaining to the use of CVP facilities to be consistent with this requirement. This also may affect the Project's stated yield if capacity at CVP facilities was assumed in Project modeling. We recommend you revisit this assumption and correct as necessary. 1-2 Cont

The Draft EIR, at numerous sections (Pages 3-6, 3-8, 3-10, 3-26, 3-28, 3-29, 3-32 and Appendix B) states the Project will make discharges for increased exports and water transfers to groundwater banks in the September to November time period. The current Operations Criteria and Plan (OCAP) Biological Opinions (BOs) do not currently provide coverage for these conditions and the analysis is therefore inconsistent with the current OCAP BOs. This may cause the Project yield to be overstated because exports may not occur over this entire period. Please revise the analysis to be consistent with the OCAP BOs or indicate that the analysis is not consistent with the BOs. 1-3

Reclamation operations are limited by the position of X2, and Reclamation is concerned that CVP operations may be further limited by the impact of the Project on the position of X2. While the Draft EIR states (page 3-7 and 3-25) that the Project would limit diversions if X2 is downstream of Chipps Island, Reclamation is concerned that the analysis did not fully consider the impact Project operations would have by shifting X2 position. Because the analysis relied on post processing of CALSIM output (page 3-12, "Because the Project would be operated independently of the CVP and SWP, there were assumed to be no changes in…Delta inflows or CVP and SWP exports caused by the Project operations."), there was no dynamic representation of the X2 position, and therefore there is no representation of day-to-day operational changes necessary for Reclamation to ensure compliance with the OCAP BOs, including upstream releases or pumping curtailments. Please reanalyze the movement of X2 and quantify the impacts to CVP export and storage as a result of the project influencing the position of X2. 1-4

As described in the document, Reclamation must operate its facilities in compliance with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service OCAP BOs. Methodology to assess impacts to delta smelt, salmonids, green sturgeon, and other species relies on information contained in the OCAP BOs. The baseline period chosen for analyzing impacts of the Project is from 1980 to 2003. This baseline is not consistent with the information used in the OCAP BOs, or restrictions placed on the CVP and SWP conveyance facilities in the OCAP BOs. The document states that this baseline is chosen because CALSIM baseline ends in 2003, and because salvage data is more reliable beginning in 1980. While this may be accurate, there is hydrologic data concerning project operations and Delta conditions available through at least 2009. Additionally, this baseline appears to be chosen because of the desire to use an existing model prepared in 2005 to simulate Project operations, rather than the actual environmental conditions at the time the notice of preparation was published. CEQA normally requires the baseline period to coincide with the actual 1-5

environmental condition at the time the notice of preparation is published (CEQA Guidelines 15125), with exceptions for extraordinary circumstances. Please provide an explanation for why limiting baseline conditions to this period leads to a more accurate analysis of the impacts or adjust the baseline to use more current information.

1-5 Cont

Reclamation is concerned that the analysis on impacts to salmonids was limited to those species and populations occurring in the Sacramento River basin. The document acknowledges on page 4.5-60 "...that Project effects on juvenile salmonids originating from populations in the San Joaquin watershed (i.e., Mokelumne River southwards) would probably be greater as a proportion of each of the whole population ...", and then goes forward discounting the effects because the numbers would be smaller. There are a number of populations in the San Joaquin basin including the Mokelumne River with extremely low populations that may be disproportionately affected by the project, yet these populations have been dismissed from analysis. Please analyze the effects to these populations in a meaningful way so that impacts from the Project are fully disclosed.

1-6

Reclamation is concerned that the actual impacts of the project on delta smelt, salmonids, green sturgeon, and other species is understated by continually displaying the results as a percentage of salvage at the SWP and CVP export facilities. While this approach has some merit when comparing the increased numbers of fish that would be salvaged during export of Project water, there is an underlying assumption that impacts are less than significant when compared to the salvage data used in the baseline period. This project is continually described as a stand-alone project and the impacts to fish species should be displayed against the populations as a whole without arbitrarily converting the impacts to proportions of the SWP and CVP salvage data.

Thank you in advance for your consideration of our comments. Reclamation looks forward to your incorporation of these comments and additional analysis into the Final EIR. Though we would have liked to attend the public meeting to learn more about the project, and perhaps adjust our comments, we were notified on June 21, 2010, of your intent to hold a public meeting in Wasco (several hours from the Project location) on June 25, 2010, and were unable to adjust our schedules to attend. If you have any questions, please contact Mr. Russ Grimes at 916-978-5051.

Sincerely,

Michael A. Chotkowski
Regional Environmental Officer

Enclosure

Continued on next page.

4

Continued from previous page.

cc: Mr. Stephen A. Cimperman, PE, MBA
Supervising Engineer
Dept of Water Resources
Division of Statewide Integrated Water Management
Statewide Infrastructure Investigations Branch
PO Box 942836
Sacramento, CA 94236-0001

Mr. Paul Fujitani
Central Valley Operations Office
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

JUN 25 2010

Ms. Megan Smith
Project Manager
ICF International
630 K Street, Suite 400
Sacramento, California 95814

Dear Ms Smith:

The Department of Water Resources (DWR) submits the attached comments on the "Delta Wetlands Place of Use Draft Environmental Impact Report" (Draft EIR) dated April 2010 (SCH #1988020824). The enclosed document repeats some of the comments the DWR had provided on 1) January 9, 2009 for the Notice of Preparation for the Draft EIR and 2) August 2, 2000 for the May 2000 REIR/EIS.

DWR's comments address concerns about the potential impacts to the State Water Project (SWP) and other DWR activities where additional information and analysis is needed to more fully understand the proposed project. The Draft EIR does not fully disclose the impacts nor adequately evaluate and address the mitigation measures that may affect the SWP. Specifically, we have concerns about 1) the potential water quality and operational impacts to the SWP and 2) the levee stability and climate change analyses.

I hope these comments are helpful in responding to DWR's concerns. If you have any questions about our comments, please contact me at (916) 654-7180 or your staff may contact Stephen A. Cimperman, Supervising Engineer, Division of Statewide Integrated Water Management, at (916) 651-9285 or stephenc@water.ca.gov.

Sincerely,

Dale K. Hoffman-Floerke

Dale K. Hoffman-Floerke
Deputy Director

Enclosure

cc: (See attached list.)

Mr. Wilmar L. Boschman
Semitropic Water Storage District
1101 Central Avenue
Wasco, California 93260-0877

State Clearinghouse
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Mr. Michael Chotkowski
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Mr. Terry Erlewine
General Manager
State Water Contractors
1121 L Street, Suite 1050
Sacramento, California 95814-3944

The Department of Water Resources Comments on the Draft Delta Wetlands Place of Use Environmental Impact Report, April 2010

Prepared by ICF International, Sacramento, CA

Project Description and Alternatives – Chapter 2

Water Conveyance Contracts

A sentence should be added to Chapter 2 of the Delta Wetlands Place of Use Final EIR (Final POU EIR) stating: Water conveyance agreements must be executed among the Department of Water Resources (DWR), Delta Wetlands (DW), and the water agencies involved in the particular water purchase, which include provisions for monitoring to make conveyance quantity decisions related to the transfer.

Dam Safety Design and Review

The Draft EIR does not contain detailed design drawings suitable for DWR's Division of Safety of Dams (DSOD) review and final determination. Your Draft EIR should be revised to disclose that design documents will be submitted to DSOD for regulatory compliance.

The Delta Wetlands Project proposes water storage facilities in the Central Delta. Based on the limited information provided, the maximum water surface elevation of these facilities may be below elevation four feet. If so, these facilities will not come under our jurisdiction for dam safety. However, more information is needed to determine the jurisdictional status.

As defined in Section 6004 (c), Division 3, of the California Water Code, the levee of an island adjacent to tidal waters in the Sacramento-San Joaquin Delta, as defined in Section 12220, even when used to impound water shall not be considered a dam, and the impoundment shall not be considered a reservoir if the maximum possible water storage elevation of the impounded water does not exceed four feet above mean sea level, as established by the United States Geological Survey 1929 datum."

If the above criteria are not met, we will evaluate these facilities in accordance with Sections 6002 and 6003, Division 3, of the California Water Code. Per these criteria, dams 25 feet or higher with a storage capacity of more than 15 acre-feet, and dams higher than 6 feet with a storage capacity of 50 acre-feet or more are subject to State jurisdiction. The dam height is the vertical distance measured from the maximum possible water storage level to the downstream toe of the barrier.

If the proposed impoundment structures are subject to State jurisdiction, a construction application, together with plans and specifications, must be filed with the Division of Safety of Dams. All dam safety related issues must be resolved prior to approval of the application, and the work must be performed under the direction of a civil engineer registered in California. Sharon Tapia, our Design Engineering Branch Chief, is responsible for the application process and can be reached at (916) 227-4660. If you have any questions or need additional information, you may contact Office Engineer Randy Fessler at (916) 227-4601.

Project Operations - Chapter 3

Operations Impacts to the State Water Project

As a water right holder junior to DWR's water rights, your project is prohibited from impacting our operations.

The modeling completed to simulate DW's operations is not consistent with the current Operations Criteria and Plan biological opinions and therefore cannot adequately assess and disclose potential impacts to the Delta and State and Federal export operations.

An operations agreement to formalize real time coordination is needed to enforce existing water rights and prevent impacts to the State Water Project (SWP). This operations agreement should be included as part of the DW Project in the Final POU EIR.

Flow and Water Quality Impacts

The State Water Resources Control Board's (SWRCB) Water Rights Decision 1641 (D-1641) requires the SWP and CVP to meet flow and water quality requirements in the Delta. These requirements apply throughout the year at various locations within the Delta. Diversions from the DW Project may affect DWR's ability to help meet these requirements.

One of the requirements is the Habitat Protection Outflow (X2). This requirement begins in February and continues through June having inter-monthly connections. The X2 requirement can be satisfied by meeting either an equivalent flow or salinity concentration at Chipps Island or Port Chicago. If the standard is met for greater than the required number of days per month, then the additional days (or credit) can then be applied to the following month's requirement.

In the Water Quality chapter, under the Operations Criteria section, page 30, the first bulleted item describes In-Delta Storage operations that could potentially affect the X2 position.

The following is an excerpt from this item,

> "The Proposed Project would restrict diversions to storage to times when X2 is located at or downstream of Chipps Island. This restriction would have two benefits. It would ensure that the water diverted to storage is of low salinity and it would ensure that diversions to storage are unlikely to have deleterious fish effects associated with potential upstream movement of the X2 location."

The operation may not have deleterious fish effects, but it can cause the X2 position to shift eastward or upstream, which may affect the SWP and CVP's ability to meet the X2 requirements as stipulated in the D-1641 and the US Fish and Wildlife Service Biological Opinion. In addition, credit days are reduced when the DW Project diverts excess water, thereby impacting the two projects. DWR would have to change operations to make up for this deficiency in the following month by either increasing releases of stored water or reducing exports in the Delta to compensate for this eastward shift in X2. The impacts due to the shift in X2 position in any given time period may not be apparent until subsequent time periods. The modeling should be re-evaluated, results disclosed, and mitigation measures for negative impacts included in the Final POU EIR.

Another requirement is the agricultural water quality standards in the western/interior Delta. These standards apply between April 1 and August 15. Again, diversions from the DW Project may have an impact to the SWP; such that, DWR and/or the US Bureau of Reclamation (Reclamation) would have to either increase releases from upstream storage or decrease the exports. The hydrologic modeling should be re-evaluated, results disclosed, and mitigation measures for negative impacts included in the Final POU EIR.

Indirect Impacts to the SWP Due to Fish Presence

The SWP operations are greatly affected by the fish distribution in the Delta. The fishery agencies determine Old and Middle River flows that in turn directly regulate the SWP's ability to export. They evaluate the estimated fish distributions from observational data, as well as the potential influence of export operations on the fish distribution using a particle tracking model. They make a real-time determination after reviewing the combined Delta exports and its potential to influence the fish distribution. They also incorporate an entrainment risk assessment.

The DW Project's combined diversion rate is on the same order of magnitude as the Banks and Jones pumping plants. It appears that the additional diversions from the DW Project could increase the

presence of fish within the central and southern Delta. This would encourage the fishery agencies to impose a more positive Old and Middle River flow, thus causing the combined exports to be reduced and negatively impacting the SWP operations.

The diversion measures described on page 7 of Chapter 3, Project Operations, do not adequately cover this issue. In addition, the Protest Dismissal Agreements between DW, DWR, and Reclamation do not adequately cover this issue. The Final POU EIR should contain an assessment of the increased presence of fish within the central and southern Delta due to DW operations and resultant impact on the SWP and CVP exports.

The DW Project's combined diversions are also not required to have a positive flow past their screens during ebb tides to prevent inadvertent movement of smelt from the Cache Slough area. Increased fish presence may cause the fishery agencies to impose higher minimum Old and Middle River flow restrictions thus causing a reduction in SWP pumping rates and impacting SWP operations. The Final POU EIR should contain an assessment of the increased presence of fish within the central and southern Delta due to DW operations and resultant impact on SWP exports.

Modeling

In Appendix A, the mathematical modeling for In-Delta Storage Model is described as a post-processing of CalSim model results. The approach of post-processing operations of an In-Delta Storage facility inherently ignores some dynamic changes that would occur due to changes in conditions caused by the In-Delta Storage operations. Diversions into or from the DW Project would necessarily change the flows and thus the water quality in the Delta. These changes would then affect the SWP's real-time response to any such changes. Even small changes in Delta flows could lead to large impacts over time. The only way to control and manage these possible impacts is through enhanced real-time coordination between the DW Project and the SWP and CVP. An operations agreement to formalize real-time coordination is needed to enforce existing water rights and prevent impacts to DWR and Reclamation. This operations agreement should be included as part of the DW Project in the Final POU EIR.

Water Supply – Section 4.1

Water Transfers

In the Water Supply Chapter, pages 6 (second to the last paragraph on the page), 9 (last paragraph on page), and other locations throughout the document, includes a discussion of exports between September through November for storage in groundwater banks. This may be considered a transfer and partially outside the transfer window, defined as being between July and September, and is not allowed under the DW Project's current biological opinions. The hydrologic modeling should re-evaluate a shortened transfer window, disclose results, and mitigation measures for negative impacts included in the Final POU EIR.

DWR's Protest Dismissal Agreement (PDA)

A stipulation between DW Properties and the DWR was signed on July 23, 1997 that states operational buffers exist and essentially states that DW would not be able to divert while the Delta is in balanced conditions as defined by the Coordinated Operations Agreement between DWR and Reclamation.

It also states;

"When USBR and DWR have declared the Delta to be in excess water conditions under the COA, no diversion is authorized by permittee greater than the amount of excess water available as reasonably calculated by USBR and DWR."

The words "reasonably calculated by USBR and DWR" may be insufficient to protect the SWP and CVP for salinity and fish concerns and needs to be addressed. DWR believes an agreement is necessary to define and describe the real-time operations and coordination needed to meet Delta regulatory requirements, and a new PDA negotiated.

Water Quality - Section 4.2

Municipal Water Quality Concerns

The Place of Use EIR (POU EIR) (p. 2-15) indicates that the DW Project now incorporates a Water Quality Management Plan (WQMP) that was prepared as part of the water right protest dismissal agreements. Water quality mitigation measures included in the original 2001 FEIR have been eliminated, presumably because project modification (i.e., incorporation of the WQMP) is predicted to reduce impacts to less than significant levels. CEQA Guidelines Section 15147 states, in part, that the information contained in an EIR shall include relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. The POU EIR heavily relies on inclusion of the WQMP as a means to avoid impacts to water quality; however, there are many uncertainties associated with the WQMP and the feasibility of its implementation. The uncertainties in the WQMP preclude a full assessment of the potentially significant impacts to drinking water quality. Therefore, the project description, as defined under CEQA, seems incomplete. Furthermore, the POU EIR, including the WQMP, does not appear to identify the full range of potential municipal water quality impacts of the project (e.g., nutrients, taste & odor concerns, bacteria, and unregulated disinfection by-products). The Final POU EIR should evaluate and disclose these potential impacts and specific measures to avoid or mitigate them, or better describe why such impacts are not expected.

Effectiveness of the Proposed Water Quality Management Plan

The WQMP includes Drinking Water Protection Principles, calls for the establishment of a Water Quality Management Action Board (WQMAB), and the development of Annual Operating Plans subject to approval of the WQMAB. The Annual Operating Plans are to include water quality goals and objectives for diversions and discharges to and from project islands. The Annual Operating Plans will also include a description of the monitoring program, hydrodynamic models, particle tracking models, and the mitigation measures to be implemented by DW to offset any long-term net increase in TOC, TDS, bromide and chloride loading. As written, the WQMP relies on models and monitoring programs that do not currently exist, mitigation measures to be specified at a later time (WQMP, p. 3), and undefined "offsets" (WQMP, p. 7). More detail is needed if the WQMP is to serve as a reliable component of the project that will safeguard against potential impacts to the SWP and Delta water quality. Additional analysis should be completed to define the specific conditions under which DW could discharge water without impacting drinking water supplies. This would include setting limits on DW effluent quality based on ambient hydrologic and water quality conditions in the Delta. Proposed effluent limits should be based on modeling conducted as part of the environmental review process.

The current approach to mitigation seems inconsistent with CEQA Guideline requirements that state that mitigation measures should not be deferred to a future time (14 Cal. Code Regs., § 15126.4(B)). The CEQA Guidelines indicate that mitigation measures may specify a performance standard that can be met in multiple ways. While the WQMP does include screening criteria it does not include definitive standards that must be achieved. The WQMP instead provides a framework for negotiating mitigation. Additionally, it is not clear if the WQMAB will actually have authority to enforce the WQMP or require DW to conduct mitigation if a problem is identified. This concern was contemplated in Water Right Decision 1643 (D1643, p. 36), which indicated that the WQMP "does not establish a set of enforceable criteria for regulating the operation of the DW Project". Pursuant to CEQA, measures used to mitigate or avoid significant effects on the environment must be fully enforceable through permit conditions, agreements, or other measures (Public Resources Code, § 21081.6(b)).

DWR is concerned that processes set forth in the WQMP allow the owner of a water treatment plant to waive their protection under the WQMP (p. 5), allowing DW to initiate discharge or diversion from the islands even if the drinking water protection principles are being threatened. This issue was discussed in D1643 (p. 36) and addressed through inclusion of permit terms prohibiting the DW project from causing exceedances of USEPA drinking water MCLs at water treatment plants. It is not clear, however, if these water right permit terms are feasible, given that they cannot be evaluated until models and monitoring are established at a future time. D1643 (p. 3) indicates that DW plans to use water under its existing water rights to support the wildlife habitat on the habitat islands (i.e., Web Tract and Bacon Island) and that the water right applications (A029061, A029063, A030267, and A030269) and petitions relevant to the habitat islands have been canceled. Therefore, it is not readily apparent how water quality restrictions placed on discharges from the habitat islands would be enforced.

The POU EIR (p.4.2-42) indicates that the WQMP criteria for DOC are more stringent than the thresholds of significance defined in the previous EIR and therefore, project compliance with the WQMP will ensure that DOC impacts are less than significant. However, this statement seems to conflict with language on p. 4-2-37, which indicates that in some cases WQMP criteria are less restrictive than the significance criteria contained in the 2001 FIER. The text refers to the fact that the former significance criteria were expressed as a 0.8 mg/L increase in DOC attributable to the project at Delta export facilities as compared to a 1.0 mg/L increase in TOC allowed pursuant to the WQMP. We note that based on grab sample data collected for Water Years 2005-2007, average TOC/DOC concentrations at Banks were 2.8 and 2.9 mg/L respectively for the months of June through December. Therefore, an allowable increase of 1 mg/L in TOC concentration could amount to up to 34 percent increase in seasonal TOC loading to the SWP. The rationale for relaxing the TOC threshold and the basis for the 1.0 mg/L threshold in WQMP should be explained in the Final POU EIR.

It appears that the WQMP was crafted to provide protection and recourse for the larger urban water users. The SWP, however, is a source of water for more than 50 small drinking water treatment facilities, including water treatment facilities owned and operated by DWR. According to California Department of Health staff, many of these small facilities either exceed or have difficulty meeting current regulations for disinfection by-products (DBPs) (Carlucci 2010 pers comm). It is not clear if the WQMP will protect small SWP water system users. DW should evaluate and disclose the potential economic, regulatory, and public health impacts to these treatment facilities and their customers, given that the WQMP would allow for an incremental increase in TOC loading to the SWP.

Unanalyzed Potential Impacts Associated with Nutrients

The POU EIR (p. 4.2-1) indicates that the analysis of effects on water quality described recent changes to the existing environmental conditions and regulatory setting of the project, and that the water quality constituents selected for reassessment or first time assessment was based on new regulation, new information, or WQMP restrictions (p. 4.2-6). A significant amount of new information has been developed regarding the potential impact of nutrients to both drinking water and ecological systems since 2001 when the previous EIR/EIS was completed. Existing environmental conditions are better understood today than in 2001 when the Final Environmental Impact Statement concluded that project operations were not likely to change the supply or concentration of nitrate and phosphate in Delta channels and therefore these constituents were not selected for impact assessment (2001 FEIS, Vol. 1 page 3c-10,). Additionally, the previous analyses did not evaluate ammonia except to say that it oxidized rapidly to nitrate and so concentrations were usually low in Delta channels. Today, nutrients, and ammonium, in particular, have elevated importance in the drinking water, ecosystem and regulatory environment (e.g., CALFED Ammonia/ammonium Workshop, 2009). The POU EIR (pgs. ES-3, ES-4) indicates that updated resource analyses were conducted if new information showed an increase in the severity of impact, however, nutrient impacts were not sufficiently evaluated in the original analysis or in the 2010 POU EIR. Based on the criteria provided in the POU EIR, the impact of the project on nutrient loading to the Delta and the SWP merits further analysis. Specific information and comments pertaining to potential water quality impacts from the DW nutrient discharges follows.

The POU EIR states that one source of new information used for evaluating water quality was DWR's Report on Jones Tract Flood Water Quality Investigations, 2009 (p. 4.2-7). This document was used by

the DW to assess the impact of the project on dissolved organic carbon (DOC), but the Jones Tract report also contains information on the nutrient dynamics associated with impounded water. For example, concentrations of NH_3, TKN, Total P, and orthophosphate on Jones Tract were much higher than those detected in receiving water (nitrate and nitrate + nitrite were either similar or lower than receiving water). While variable, concentrations of NH_3 and TKN did not appear to decrease over time. The Jones Tract report points out that NH_3 levels reached concentrations similar to those found downstream of the Sacramento Regional Wastewater Treatment Plant (WWTP), which is the largest WWTP discharge in the Delta.

DW should evaluate whether project nutrient loads are likely to be significantly higher than current loads discharged under the island's farming operations. Given the concerns about current nutrient concentrations in the Delta and SWP&CVP, if it is determined that the project will cause increased nutrient loading, then mitigation should be developed. Likewise, provisions for nutrient control should be considered for incorporation into the WQMP.

New information available on nutrient discharges from a farmed peat island (CA Bay-Delta Authority ERP-02-08, Staten Island Wildlife-Friendly Farming Demonstration Projects) shows that the concentration of NH_3 in pooled Jones Tract waters were similar to those found on Staten Island. Since Webb Tract, Bacon Island, Jones Tract and Staten Island are all treated in the Department's Delta Island Consumptive Use Model as having similar soil make-ups (Jung, December, 2000, MWQI –CR#3), it is reasonable to assume that the nutrient dynamics observed on Staten Island and Jones tract could be used as approximations of what would occur on Webb Tract and Bacon Island. Under a worst case scenario, using the average of the highest NH_3 concentrations detected on Upper and Lower Jones tracts (0.49 mg/L) (similar and higher NH_3 levels were detected in pooled water on Staten Island), and assuming the maximum monthly project discharge of 2,000 cfs (POU EIR, p. 4.2-36), the NH_3 load discharged from the project would be approximately 2,300 kg/day. It is unclear whether 2,000 cfs or 4,000 cfs would be the maximum discharge rate for the project (see page 3-5), but if discharge was 4,000 cfs, NH_3 loads would double to about 4,600 kg/day. The highest daily load discharged off of Staten Island was 67 kg/day. Based on these projections, project operations could have the potential to increase NH_3 loads to receiving waters by a factor of 34 to 64 times over current farming operations.

For illustrative purposes, we compared the project's potential maximum NH_3 loading rates to the loading rates of the largest discharger of NH_3 in the Delta, the Sacramento Regional County Sanitation District (SRCSD) Wastewater Treatment Plant. SCRSD's current permitted discharge capacity is 181 mgd (average dry weather flow) and their current effluent flows average 141 mgd, while the plant's median ammonia level is 24 mg/L (Central Valley Regional Water Quality Control Board, NPDES Permit Renewal Issues Paper, 12/14/09). At the current average flow of 141 mgd, ammonium loads would be 12,801 kg/day. At permitted capacity, ammonium loads would be 16,443 kg/day. The potential ammonium loads from project discharges at 2,000 cfs represents approximately 18% of the average ammonium load of the largest discharger to the Delta. At a discharge rate of 4,000 cfs, the ammonium load from the project would be equal to about 36% of SRCSD's daily average ammonium load. If the project is approved, it would potentially be one of the largest dischargers of ammonium to the Delta ecosystem. Additionally, the Central Valley Regional Water Quality Control Board is in the process of revising the SRCSDs NPDES permit. SRCSD is proposing to increase its permitted discharge from 181 to 218 mgd which could result in significant additional nutrient loading to the Delta and SWP. This is important because the SRCSD expansion was not one of the projects considered in the cumulative impact analysis (POU EIR, pgs. 5-2, 5-3). Furthermore, DW discharges are much closer to SWP export facilities than Sacramento County Regional Sanitation District's outfall.

From a drinking water perspective, NH_3 is a required precursor for forming nitrosamine disinfection by products (DBP). Nitrosamine DBPs are more carcinogenic than currently regulated DBPs, and are the most likely DBP to be regulated in drinking water by the EPA within the next 5 years (Bruce Macler, EPA, Region 9, pers comm. April 2010). An increase in NH_3 from DW has the potential to increase Nitrosamine DBP formation at SWP water treatment plants.

Unanalyzed Potential Impacts Associated with Drinking Water Taste and Odor

DW should also evaluate the potential effects associated with the changes in timing of nutrient loading and the potential for project discharges to increase the levels of taste and odor compounds present in drinking water supplies. As documented in the Staten Demonstration project, nitrate, ammonium, and TKN loading from a farmed Delta island were lowest in the summer and fall. Due to farming cycles, it is expected that similar loading patterns would be observed for most farmed Delta islands. Since the project proposes to discharge potentially high loads of nutrients in the summer and fall, when nutrient loading from the predominant land-use in the Delta is low, project discharges would likely increase nutrient concentrations at the Delta export locations, which in turn could lead to more algal production and taste and odor problems.

Algal blooms and aquatic plant growth already require chemical treatment and/or physical removal at certain SWP facilities, including Clifton Court, trash racks along the California Aqueduct, the South Bay Aqueduct, the Coastal Branch, and Southern California reservoirs. Copper sulfate is commonly used to treat algal blooms in the SWP, but this can lead to unintended adverse effects for drinking water treatment. For example, die off of treated algae can cause taste and odor problems and filter clogging. Additionally, the cost of additional treatment is passed on to DWR and the SWP&CVP contractors.

Recent research suggests that phytoplankton community assemblages can shift depending on whether the species preferentially uses ammonium (Glibert, 2010). Blue-green algae use ammonium preferentially. DW should therefore evaluate the potential for increased taste and odor associated with blue-green algal blooms from increased ammonium and other nutrient loading during periods of project discharge. With respect to nutrients and algal production, the Jones Tract Report documents that the State Water Project and Jones Tract received extensive media attention because of taste and odor problems in drinking water.

Geosmin and 2-methylisoborneol (MIB) produce earthy and musty taste and odor in drinking water. Geosmin is detectable by humans at less than 10 ng/L, and MIB is detectable by humans at 3 ng/L, with drinking water customer complaints rising steeply with increasing concentration. For example, in February 2009, a taste and odor event in the source waters of the SWP's North Bay Aqueduct forced multiple water suppliers to switch to alternate sources and produced hundreds of complaints. In the case of Jones Tract, DWR identified the blue-green algae, *Planktothrix perornata* as one of the main producers of taste and odor compounds. *Planktothrix* produces the taste and odor compound MIB at much higher rates than any other species observed in Southern California reservoirs, requiring repeated and costly algal prevention measures for the utility. Based on modeling of DOC, the Jones Tract Report concluded that taste and odor problems, due to algae at Banks, occurred from the high nutrient water transported out of Jones Tract. *Planktothrix* was also transported in the aqueduct to downstream reservoirs. This species of taste and odor algae had never been detected in a Southern California State Water Project Reservoir by Metropolitan Water District prior to the pump off of Jones Tract water (MWD, Member Agency Water Quality and Supply Webinair, 2009). Additionally, samples from within the flooded Jones Tract had geosmin concentrations as high as 30 ng/L, and MIB concentrations greater than 1000 ng/L in July 2004. Concentrations remained elevated through October 2004. During the same period, concentrations of taste and odor compounds increased at routine sampling sites at Clifton Court Forebay, Banks Pumping Plant, and the South Bay Aqueduct. This information strongly suggests that the project could exacerbate taste and odor concerns in the SWP; however, these issues were not evaluated and disclosed in the POU EIR or in previous environmental documents for the project. An evaluation should be conducted, the results disclosed, and mitigation measures for negative impacts to the SWP included in the Final POU EIR.

Bacteria Concerns

DW has never assessed the impacts to drinking water and public health associated with bacteria. Although bacterial levels fell in Jones Tract, once initial septic tank waste and decayed animal material was metabolized, spikes in fecal coliform levels have been found in reservoirs around the country due to large numbers of waterfowl using systems that are predator free. The water quality objective for contact recreation calls for a 30-day average of 200 MPN/100 mL with no more than 10% of the measurement

above 400 MPN/100mL for fecal coliform. The SWRCB is considering adopting *E. coli* freshwater monitoring objectives. If so, the median of 5 samples over a 30 day period cannot exceed 126 MPN/100 mL. At a minimum, fecal coliform and *E. coli* monitoring should be included in the WQMP, and if warranted, a management plan to discourage waterfowl needs to be implemented. Increased bacteria monitoring is also warranted based on the recreational uses near the island.

Flood Control and Levee Stability – Section 4.3

Impacts from Seepage Levels and Seismic Events

The POU EIR addresses potential environmental effects associated with the diversion and storage of water by the DW Project. To better understand the POU EIR, we have also reviewed the report prepared by Hultgren-Tillis Engineers, titled as "Geotechnical Evaluation, Seismically Repairable Levee, Webb Tract", dated December 30, 2009.

The review of the above mentioned reports indicate that the proposed design for the Reservoir Island calls for the following key features:

- Protect the slough side slope (2:1) with rip-rap and in over-steepened areas a waterside notch to create a bench and flatter slope
- Widened the crest to 45 feet
- The landside slope will be 3:1 on upper end and 10:1 on lower end
- Placement of a core trench through the levee prism

We believe that the proposed design will improve the slope stability and reduce the through-seepage for static loading conditions. The project has the burden to prove that proposed Reservoir Islands do not adversely affect the groundwater regime of the neighboring islands. In principle, we believe that the insertion of the core trench will address the through-seepage issue. However, a well planned seepage monitoring program is vital to fully address seepage issues that may adversely impact groundwater levels and should be added to the Final POU EIR.

Although the reports address the seismic impacts on the project through the concept of seismically repairable levees, seismic performance is not adequately addressed to demonstrate that the Reservoir Island levees would not breach under a considered design seismic event. Seismic-induced deformation (both inertial and liquefaction-induced) is a key indicator of the seismic stability of the levee, however, the reports lack information related to the seismic deformation. Specifically, the reports lack information regarding seismic design criteria used for the analyses including seismic design level, acceptable performance during a design event, and an emergency repair plan. If an uncontrolled release of reservoir water is a reasonable possibility due to a seismic event, then impacts on neighboring levees due to increases in hydraulic head and/or scour should be evaluated, disclosed and mitigation measures included in the Final POU EIR.

Vegetation and Wetlands – Section 4.6

The Delta Wetlands Project provides compensation for wetland and wildlife effects of the water storage operations on the reservoir islands by implementing a Habitat Management Plan on two habitat islands (Bouldin Island and Holland Tract). The habitat creation proposed would provide positive benefits for enhancing Delta habitats including AB360 habitat types, riparian, and freshwater wetlands. The environmental review for Delta Wetlands has undergone several iterations, and because the "habitat creation" plans were not thoroughly discussed in the most recent version, it was very difficult to review the habitat elements of the proposal. However, DWR has certain concerns that need to be clearly addressed:

- Habitat creation plans should be thoroughly vetted with an expert panel including scientists recognized for their work in wetland restoration and/or levee stability.
- Though recent versions of the EIR make statements that suggest the habitat island plans have not changed from earlier versions, the current rendition of the plan appears to provide less acreage than earlier versions. The habitat maps provided in the 2010 version of the EIR indicate that some of the earlier habitat areas may have been replaced with agriculture and/or development. This is not clear from the narrative. The reasons for these changes, if they exist, should be made explicit and evaluated using the California Environmental Quality Act (CEQA) checklist.
- Because the wetland delineation has expired, the Project applicant is consulting with the US Army Corps of Engineers regarding necessary updates to the wetland delineation and plans to conduct field studies necessary to re-verify the wetland delineation. This process must be completed before project impacts to wetlands can be evaluated as required under CEQA.
- Proposed habitat designs for created habitats should follow natural landscape contours and incorporate subsidence reversal techniques to minimize inundation due to accidental breaches in the long-term.
- Finally, the proposed project should include a long term management plan for habitat and levee maintenance.

Climate Change - Section 4.14

Outdated Climate Change Projections

To the extent required by CEQA Guidelines Section 15126.2, all significant state projects, including infrastructure projects, must consider the potential impacts of locating such projects in areas susceptible to hazards resulting from climate change. (CA Climate Adaptation Strategy 2009)

Cayan et al. 2006b citation is out of date. The 2009 Scenarios Report predicted 12 – 18 inches by 2050 and 21 - 55 inches by 2100.

Based upon this section, we cannot determine if this project would adversely affect the SWP&CVP due to effects of sea level rise and winter storm surge.

Neither Chapter 4.3 Flood Control and Levee Stability nor 4.14 Climate Change adequately address the potential environmental impact of a catastrophic failure of the Project's levees.

Climate change is expected to increase sea level as mentioned in the document. However several other impacts are also expected as a result of climate change. The additional impacts noted below are not adequately addressed in the document.

- A likely increase in the frequency and severity of storms driven by the atmospheric river or "pineapple express" phenomenon-the meteorological phenomenon responsible for all of the largest floods in Central Valley history (Dettinger, Hidalgo, & Tapash Das, 2009).
- Higher 3-day peak runoff patterns over the past 50 years as compared to conditions prior to 1955 (DWR, Progress on Incorporating Climate Change into Planning and Managing California's Water Resources, 2006).
- Significant increases in the percentage of precipitation that falls as rain instead of snow during winter storms in the Sierra Nevada (DWR, Progress on Incorporating Climate Change into Planning and Managing California's Water Resources, 2006).
- Winter snowpack in the Sierra Nevada is now smaller and is melting earlier than historically.
- Higher sea levels will continue to increase the stress on Delta levees, increasing the chances of failure (Cayan D. M., 2008).

- Higher sea levels will increase the possibilities of flooding at the mouths of rivers as high sea level stands (driven by tides, storm surges, El Niño influences and climate change driven sea level rise) coincide with high fresh water flows (Dettinger, Hidalgo, & Tapash Das, 2009).

Additionally, the planned operation of the project entails raising and lowering of the water levels in water supply storage islands, which are protected by earthen levees. This operation could result in rapidly changing differential head conditions between the river/slough side of levees and island/reservoir side of levees. There is no discussion of the ability of the levees to withstand these conditions.

Individually or synergistically these impacts have the potential to increase the stress on the Proposed Project's levees increasing the potential for a catastrophic failure that could have wide ranging impacts to water quality, water supply, and habitat throughout the Delta. These issues must be adequately investigated, analyzed, disclosed, and mitigated in order to make a determination of environmental significance in the Final POU EIR.

Cumulative Impacts – Chapter 5

Bay Delta Conservation Plan (BDCP)

Page 5-6 - The tunnel / all-tunnel option should be altered to reflect the preferred nomenclature of the "pipeline option." Delta Corridors is now "Separate Corridors Option."

Page 5-6, 5-7 - The BDCP section should also include a link to the BDCP website (http://baydeltaconservationplan.com/default.aspx).

In light of BDCP's restoration and conservation measures, which include the creation of intertidal habitat and potential North Delta diversions, consider analyzing the DW Project's impacts and cumulative impacts to tidal prism (intertidal habitat and wetland habitat).

Page 5-58 Climate change: Depending on the land cover (e.g., wetland, intertidal) created in the habitat management plan there will be GHG emissions (e.g., CO2 and CH3) that should be documented and included in the analysis. The Final POU EIR should address potential increases in GHG emissions.

ES-17; Impact UT-6:
Greater Sandhill Cranes are present on all islands (4.7-23); Mitigation measure for UT-MM-2 and UT-MM-10 will create a power line collision risk for a California fully protected species. Mitigation measure should consider placing power lines below and alongside levee to reduce collision risk.

Letter 1: Michael A. Chotkowski, Regional Environmental Officer, United States Department of the Interior, Bureau of Reclamation, Mid-Pacific Regional Office

1-1 Comment noted. Please refer to the responses to Comment Letter 5.

The project applicant has initiated discussions with the California Department of Water Resources (DWR) to develop a Conveyance Agreement and Operations Agreement. Water conveyance agreements will be executed among DWR, the Project, and the water agencies receiving Project water that will include provisions for monitoring to make conveyance timing and quantity decisions.

1-2 The commenter is correct that none of the Project places of use are located within the Central Valley Project (CVP) place of use or have a Reclamation contract for CVP water. DEIR water supply modeling (see Table 3-16) indicates that no Project water would be delivered to a CVP place of use. However, CVP export facilities are mentioned in the Draft Environmental Impact Report (DEIR) because of the potential opportunity to export Project water through CVP facilities to Project places of use outside the CVP service area in accordance with the State Water Resources Control Board (SWRCB)-approved joint point of diversion (JPOD) (See pages A-3, A-5). Any export of Project water through CVP facilities would require Reclamation approval and completion of any required National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) analyses.

1-3 The DEIR analysis of exports is consistent with the Operations Criteria and Plan (OCAP) Biological Opinions (BO) and does not need to be revised. Project exports would occur from July to November, with most exports (i.e., 80 percent) occurring in the July-September period which is the typical transfer window identified in the OCAP BOs. Exports would occur when State Water Project (SWP) pumping capacity is available under OCAP rules. A small percentage of Project exports are modeled to occur in October and November (i.e., 20 percent), outside of the typical OCAP transfer window. All Project exports are under review in the re-consultation for updated biological opinions and incidental take authorization from the resources agencies.

1-4 Project Final Operating Criteria (FOC) are described on pages 3-7 and 3-8 of the DEIR. Measure 3 prohibits X2 shifts greater than 2.5 kilometers (km). X2 is a well understood and easily modeled parameter. The DEIR used the In-Delta Storage Model (IDSM) to analyze the movement of X2 and quantify the impacts associated with those changes. IDSM utilizes the Kimmerer- Monismith (K-M) equation, a widely accepted industry standard for estimating the position of X2 in the Delta since the 1990s. IDSM tracks X2 shifts and lists X2 end-of-month changes for years 1980-2003 (see Table 3-26 on page 3-66). The average change in monthly X2 position associated with Project diversions to storage [December to April] ranged between 0.1 to 0.3 km and water quality releases [September to November] resulted in improvements in average monthly X2 position in the -0.3 to -0.5 range. The modeled maximum impact was 1.9 km in December 1985

when outflow was 13,090 cubic feet per second (cfs) and close to the Project operating limit. A second modeled incident of 1.5 km "occurred" in January 1988. All other X2 impacts were less than 1.1 km. X2 requirements for the SWP and CVP can occur from February to June, as specified by the SWRCB in the 1995 Water Quality Control Plan (WQCP). The Chipps Island and Port Chicago X2 requirements are triggered by the previous month's Eight River Index (PMI) and the position of X2. Compliance with the X2 standard can be met three ways: maximum daily average electrical conductivity (EC) of 2.64 millimhos (mmhos), maximum 14-day running average EC of 2.64 mmhos, and 3-day running average net Delta outflow of 11,400 cubic feet per second (cfs) or 29,200 cfs respectively. Daily modeling is not necessary at this time; however, real-time coordination with the SWP and CVP through an Operations Agreement will ensure that X2 changes will not impact CVP operations, especially as X2 approaches the Chipps Island or Port Chicago thresholds.

1-5 To further assess the potential risk of larval longfin smelt entrainment into the proposed Project diversions, as well as the effects of potential changes to local Delta channel hydrodynamics, a Particle Tracking Model (PTM) study was performed. The PTM evaluated hydrologic conditions both with and without proposed Project diversion operations to assess potential changes fish movement, including the potential risk for entrainment onto the Reservoir Islands as a result of direct diversion through tracking the fate of simulated particles. The simulated injection of neutrally buoyant particles in each run occurred at seven stations throughout the Delta on January 1, January 15, February 1, and February 15 based on hydrologic conditions in 1992. This particular year (1992) was included as one of the three low outflow years used to analyze effects to longfin smelt as part of the PTM study run by California Department of Fish and Game (CDFG) for the Incidental Take Permit (ITP) SWP Effects Analysis. This particular year was chosen for the Project's PTM analysis because, although 1992 was a low outflow year, it had a modest flow increase in mid-February which would have met the criteria for Project diversions. Project diversions were1,739 cfs onto one of the two Reservoir Islands. The simulation analyses were run for a period of 90 days after each particle injection. Particle fate included diversion onto the Reservoir Islands, entrainment into the SWP or CVP export facilities, entrainment into agricultural diversions, retention in the south Delta, and transport downstream into Suisun Bay.

Results of particle fates were then assessed under conditions with and without the Project diversions. The findings suggested that when compared with the base case of No Project conditions, particles had only incremental increase in probability of being entrained into the SWP or CVP project intakes. For February diversions onto Bacon Island or Webb Tract the percentages of increased entrainment resulting from the Project were all less than 1.0 percent. Given these results, the likelihood of the Project causing substantial increases in fish presence resulting in significant impacts on the SWP and CVP exports is extremely low. Therefore the findings of the PTM are consistent with the analysis in the DEIR and the results do not change the conclusions or findings of the DEIR.

Two of the seven particle releasing stations included in the PTM study are located in the north Delta, immediately south of Cache Slough. The resulting percentages of increased entrainment (when compared with baseline No Project conditions) of these particles released from the Cache Slough station, assuming February diversions, was less than 0.3 percent. As such, the likelihood of the Project to cause increased movement of smelt from the Cache Slough area into the south Delta, thereby adversely impacting SWP operations, is extremely low.

The comment also asserts that the baseline was selected because the CALSIM baseline ends in 2003 and that it is not consistent with the information used in the OCAP BOs or the restrictions placed on the CVP and SWP conveyance facilities in the OCAP BOs. CALSIM II is a monthly simulation of the SWP and CVP for defined facilities, hydrological conditions and a set of regulatory requirements using 82 years of historical hydrology from water year 1922–2003. As a result, the model captures the range of hydrologic conditions including wet, above normal, below normal, dry and critical dry years. Specifically as it relates to the Project, the range of years used a specific time period of 1980 – 2003 which still reflects a broad range of hydrologic conditions in the Delta.

The Memorandum Decision invalidating the 2008 Biological Opinion by U.S. Fish and Wildlife Service for the SWP/CVP OCAP, explained that CALSIM II "is the standard planning tool for evaluating project operations: and that no superior model has been identified" (page 75, ln 2-3; page 98, ln 26). In addition, the CALSIM model was used in the water supply EIR prepared for the Woodland-Davis Clean Water Agency water rights application, and the SWRCB accepted the applicant's conclusion that "[d]espite its limitations…the CALSIM II model is the best available tool for determining when water will be available for appropriation for its project." (D. 1650, on page 5). Based on the CALSIM II results, a PTM (see discussion above) was run to refine impacts to fish species as a result of Project operations. The results of this PTM study were consistent with the findings of the CALSIM II analysis, which provides additional validation of the effectiveness of this assessment tool.

It should also be noted that as described in Response to Comment 1-3, all Project exports would be reviewed during re-consultation for updated biological opinions and incidental take authorization.

1-6 The Project operations are planned in such a way to reduce risk of entrainment of all sensitive fish species including juvenile salmon during Project discharges and diversions. All project diversions would come through positive barrier fish screens. The installed fish screens would be constructed to delta smelt standards, of 0.2 feet per second (ft/sec) approach velocity and a 1.75 millimeter (mm) screen mesh slot opening, which are above those required for salmonids (i.e., approach velocity is lower). Project discharge for export would occur during mid-summer and early fall months when salmon are not present in the central and south Delta due to high water temperatures. Given the commitment of the Project to install and operate positive barrier fish screens that meet the delta smelt

design criteria on all diversions, the seasonal timing of diversions, and the seasonal and geographic distribution of salmonids, the risk of entrainment or impingement of all juvenile salmonids, including the Mokelumne River populations, as a result of project operations is very low.

Since the projected numbers associated with impacts of the proposed Project to fish species are generally quite small, the data were presented in the text of the DEIR as a percentage of salvage at the SWP and CVP facilities, in an effort to put the data into perspective. However, detailed impacts to fish species are also discussed in Appendix B of the DEIR which presents the findings of the IDSM modeling analysis. This section summarizes in detail the simulated losses for each species which are shown as a percentage of the total sample population, as well as a percentage of salvage at the SWP and CVP export facilities.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

May 18, 2010

Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

Dear Ms. Smith:

State Clearinghouse (SCH) Number: 1988020824
Delta Wetlands Project Place of Use DEIR

Staff for the Central Valley Flood Protection Board has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2).

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);

- Vegetation plantings will require the submission of detailed design drawings; identification of vegetation type; plant and tree names (i.e. common name and scientific name); total number of each type of plant and tree; planting spacing and irrigation method that will be within the project area; a complete vegetative management plan for maintenance to prevent the interference with flood control, levee maintenance, inspection and flood fight procedures (Title 23, California Code of Regulations CCR Section 131).

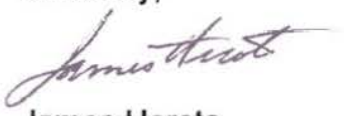
2-1

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

2-1 Cont

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

Sincerely,



James Herota
Staff Environmental Scientist
Floodway Protection Section

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Letter 2: James Herota, Staff Environmental Scientist, Floodway Protection Section, State of California – The Resources Agency, Central Valley Flood Protection Board

2-1 Comment noted. Prior to initiating construction activities of the reservoir levees, pumps and siphons, the Project will apply for an Encroachment Permit from the Central Valley Flood Protection Board (CVFPB or Board) in addition to review and approval from the local reclamation districts. To reflect this, the text in the first paragraph on page 7-18 is revised to read as follows:

The Central Valley Flood Protection Board (formerly the Reclamation Board) ~~Encroachment Permit~~ (CVFPB) requires an encroachment permit for any non-federal activity along or near federal flood damage reduction project levees and floodways or in CVFPB-designated floodways to ensure that proposed local actions or projects do not impair the integrity of existing flood damage reduction systems to withstand flood conditions. The CVFPB can also assert jurisdiction on non-Corps and non-State levees. Therefore, the Project will consult with the CVFPB and will submit an application for ~~The Project will not require~~ a CVFPB Encroachment Permit as necessary~~, as the Project levees are not federal flood damage reduction project levees~~.

Linda S. Adams
Secretary for Environmental Protection

California Regional Water Quality Control Board
Central Valley Region

Katherine Hart, Chair

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

Arnold Schwarzenegger
Governor

26 May 2010

Ms. Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

DELTA WETLANDS PROJECT DRAFT PLACE OF USE EIR

Thank you for the opportunity to review the project EIR. The project consists of the use of two Delta islands as water storage reservoirs and two Delta islands as mitigation wetlands habitat to make up for the loss of habitat on the reservoir islands. The project also consists of the project operations, which is to flood the islands during periods of high flow then release the water for export to the designated places of use or to release water to improve estuarine habitat.

The Central Valley Water Board is pleased that the draft EIR includes information from the draft Basin Plan Amendment for the Control of Methylmercury and Total Mercury in the Sacramento-San Joaquin Delta Estuary. The Basin Plan Amendment was adopted by the Central Valley Water Board on 22 April 2010. However, it will not become effective until it has been approved by the State Water Board, the Office of Administrative Law and the US Environmental Protection Agency. The Basin Plan Amendment includes the elements of a total maximum daily load to address the methylmercury impairment of the Delta.

3-1

The draft EIR recognized the potential for generation of methylmercury by the habitat islands so the project includes mitigation measures to participate in management efforts to evaluate and minimize health risks associated with eating fish contaminated with mercury, participate in a monitoring program to evaluate methylmercury loading and procedures to minimize methylmercury loading from wetlands, and after completion of these studies to implement methylmercury control actions. The project also includes mitigation measures to incorporate feasible wetland design features as these are identified, reduce discharge of water with high concentrations of methylmercury, and trap sediment in order to reduce discharge of methylmercury attached to sediment.

However, the draft EIR does not address the potential for generation of methylmercury from the islands that will be used for water storage. The Basin Plan Amendment identifies discharges from reservoirs and other water management activities as potential sources of methylmercury and requires that entities that own or operate such facilities within the Delta participate in control studies to evaluate management practices that can be implemented to minimize methylmercury production and release to the Delta. In addition, responsible entities

3-2

should be prepared to implement appropriate control actions when the studies are completed. The draft EIR should be revised to recognize the potential to increase concentrations of methylmercury through the reservoir operations or the conveyance of the water through the channels of the Delta. 3-2 Cont

Resolution No. R5-2010-0043 adopting the Basin Plan Amendment is enclosed for your information. If you have any questions on these matters, feel free to contact me at 916-464-4643 or byee@waterboards.ca.gov. 3-3

Betty Yee

BETTY YEE
Senior Water Resource Control Engineer

Enclosure

cc: Ms. Katherine Mrowka, Division of Water Rights, State Water Resources Control Board, Sacramento

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2010-0043

AMENDMENTS TO THE WATER QUALITY CONTROL PLAN
FOR
THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS
FOR
THE CONTROL OF METHYLMERCURY AND TOTAL MERCURY IN THE
SACRAMENTO-SAN JOAQUIN DELTA ESTUARY

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

1. In 1975, the Central Valley Water Board adopted the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which has been amended occasionally.

2. The Basin Plan may be amended in accordance with the California Water Code (Water Code) section 13240, et seq.

3. Water Code section 13241 authorizes the Central Valley Water Board to establish water quality objectives and Water Code section 13242 sets forth the requirements for a program for implementation for achieving water quality objectives.

4. The federal Clean Water Act (CWA) section 303 requires the Central Valley Water Board to develop water quality objectives that are sufficient to protect beneficial uses designated for each water body found within its region.

5. The CWA section 303 requires the Central Valley Water Board to review the Basin Plan at least every three years and where appropriate modify water quality objectives or beneficial uses in the Basin Plan.

6. The Sacramento-San Joaquin Delta Estuary (Delta) has been identified under the federal Clean Water Act section 303(d) as impaired due to a fish consumption advisory for elevated concentrations of mercury in fish tissue, which poses a threat to humans. The mercury concentrations also pose a threat to wildlife and threatened and endangered species that consume Delta fish.

7. Pursuant to CWA section 303(d), a total maximum daily load (TMDL) is required to bring the impaired water bodies into compliance with water quality standards. These Basin Plan amendments satisfy the requirements of a TMDL. The draft staff report for the Basin Plan amendments contains TMDL elements including: the numeric targets used in the TMDL analyses; the source analyses for methylmercury and mercury; the linkage analysis between the targets and

methylmercury; seasonal variations and critical conditions analysis, load and waste load allocations; and a margin of safety.

8. The Consolidated Toxic Hot Spots Cleanup Plan (Water Code section 13394) adopted by the State Water Resources Control Board (State Water Board) identified the Delta as a toxic hot spot due to mercury. Water Code section 13392 requires that basin plans and water quality control policies be amended to prevent the creation of new toxic hot spots and the further pollution of existing hot spots.

9. The Water Quality Control Plan for the San Francisco Bay contains a TMDL for mercury in San Francisco Bay that assigned to the Central Valley a load allocation of 330 kilograms total mercury per year.

10. Section 131.38 of Title 40 of the Code of Federal Regulations (or the California Toxics Rule (CTR)) includes a criterion of 0.05 µg/L total recoverable mercury for freshwater sources of drinking water that is enforceable for all waters with a municipal and domestic water supply use designation, including the Delta.

11. The Central Valley Water Board recognizes that the Basin Plan does not include numeric fish tissue objectives for methylmercury, nor an implementation plan to control methylmercury and inorganic mercury discharges to the Delta; therefore, Basin Plan amendments are appropriate.

12. The proposed amendments modify Basin Plan Chapter II (Existing and Potential Beneficial Uses) to add the commercial and sport fishing (COMM) beneficial use as a designated beneficial use in the Delta and Yolo Bypass north of the Delta.

13. The proposed amendment modifies Basin Plan Chapter III (Water Quality Objectives) to add site-specific numeric fish tissue objectives for the Delta and Yolo Bypass north of the Delta.

14. The proposed amendments modify Basin Plan Chapter IV (Implementation) to include a methylmercury and inorganic mercury control program for the Delta and Yolo Bypass north of the Delta (Delta Mercury Control Program). The proposed amendments establish the loading capacity and allocations for methylmercury. The allocations are needed to provide a clear basis for implementation of actions to achieve compliance with applicable fish tissue objectives. The loading capacity and allocations also satisfy the federal requirements for a TMDL.

15. The proposed amendments modify Basin Plan Chapter IV (Implementation) to include interim total mercury limits for NPDES dischargers within the Delta and Yolo Bypass and total mercury reduction requirements for tributary watershed inputs to the Delta and Yolo Bypass. The draft final staff report for the Basin Plan amendments explains how the TMDL methylmercury allocations, interim total mercury limits for NPDES dischargers, and total mercury reduction requirements for tributary watershed inputs to the Delta and Yolo Bypass are set to attain all applicable water quality standards, including the CTR, the San Francisco Bay

mercury TMDL allocation, and site-specific numeric fish tissue objectives for the Delta and Yolo Bypass north of the Delta.

16. The proposed amendments divide implementation into two phases. In Phase 1, the proposed amendments require dischargers of methylmercury to conduct studies to identify potential methylmercury control methods and evaluate the effectiveness, cost, and potential environmental effects of identified methylmercury control methods. The proposed amendments also require specific point source dischargers to implement pollution minimization programs during the first phase of the control program, and non-point sources are required to reduce sediment in runoff.

    At the end of Phase 1, the Central Valley Water Board will evaluate the completed studies, and will consider: modification of methylmercury objectives, allocations, and implementation schedules for methylmercury controls; and a Mercury Offset Program to compensate for loads in excess of the methylmercury allocations. The proposed amendments require dischargers to implement methylmercury management practices during Phase 2 of the control program.

17. The proposed amendments modify Basin Plan Chapter V (Surveillance and Monitoring) to include monitoring requirements to allow the Central Valley Water Board to assess progress in reducing inorganic mercury and methylmercury discharges and to determine compliance with fish tissue objectives.

18. The Central Valley Water Board has considered the factors set forth in Water Code section 13241, including economic considerations, in developing this proposed amendment. The costs of implementing the proposed amendments are reasonable, considering the size of the geographic area and the number of methylmercury dischargers affected by the amendment.

19. The proposed amendments include an estimate of the cost of the implementation program to agriculture and identify potential sources of financing, as required by Water Code section 13141.

20. Central Valley Water Board staff developed a draft staff report and draft Basin Plan amendments for independent, external scientific peer review in June 2006 in accordance with Health and Safety Code section 57004. The draft final staff report and amendments have been changed to conform to the recommendations of the peer reviewers or staff has provided sound rationale for why individual recommendations were not adopted.

21. The Central Valley Water Board finds that the scientific portions of the proposed Basin Plan amendments are based on sound scientific knowledge, methods, and practices in accordance with Health and Safety Code section 57004.

22. The Central Valley Water Board finds that the proposed amendments are consistent with the State Water Board Resolution No. 68-16, in that the addition of

fish tissue objectives (i) considers maximum benefit to the people of the State, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies, and the proposed amendment is consistent with the federal Antidegradation Policy (40 C.F.R. § 131.12). The proposed amendments require actions to be taken to implement management practices to ensure compliance with the fish tissue objectives. Such actions are of maximum benefit to the people of the State. Control of discharges of inorganic mercury and methylmercury to the Delta is necessary to protect beneficial uses of the Delta. The proposed amendments will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies because the amendment is intended to result in compliance with the fish tissue objectives and contains an implementation plan that incorporates an adaptive management approach designed to avoid negative impacts to beneficial uses.

23. The regulatory action proposed meets the "Necessity" standard of the Administrative Procedures Act, Government Code section 11353, subdivision (b).

24. The Central Valley Water Board staff held a California Environmental Quality Act (CEQA)(Pub. Resources Code §21000, et seq.) scoping meeting on 29 September 2005, a Board workshop on 28 November 2005, public workshops on 18 and 19 September 2006, a Board workshop on 16 March 2007, Board hearings on 24-25 April 2008, and numerous meetings with stakeholders to receive comments on the draft amendments and to identify any significant issues that must be considered.

25. The basin planning process has been certified by the Resources Agency as an exempt regulatory program because its process adequately fulfills the purposes of CEQA. The Central Valley Water Board is therefore exempt from CEQA's requirement to prepare an environmental impact report, negative declaration, or initial study for the proposed amendments. Central Valley Water Board staff has prepared the required documentation for adoption of a Basin Plan amendment, including an environmental checklist and written report (staff report) (23 Cal. Code Regs. § 3777).

26. Central Valley Water Board staff has prepared draft final Basin Plan amendments and a staff report dated April 2010. The staff report includes environmental documentation consisting of a description of the project and proposed amendments, environmental analysis and checklist, identification of potentially significant adverse environmental impacts, an analysis of reasonable alternatives to the proposed amendments, an analysis of the reasonably foreseeable alternative methods of compliance with the proposed amendments, and an analysis of the reasonably foreseeable environmental impacts of the methods of compliance and mitigation measures. The environmental documentation also includes stakeholder comments, staff responses to comments, and this Board resolution.

27. The proposed amendments have the potential to cause significant adverse impacts upon the environment, primarily because implementation of the amendments may cause the design and location of proposed wetlands restoration projects to be reconsidered and perhaps modified. However, there are mitigation measures that, if employed, would substantially lessen the potentially significant adverse impacts. These mitigation measures are within the responsibility and jurisdiction of the dischargers implementing control actions, and not the Central Valley Water Board. Water Code section 13360 precludes the Central Valley Water Board from dictating the manner in which responsible agencies comply with any of the Central Valley Water Board's regulations or orders. When the dischargers responsible for implementing this amendment determine how they will proceed, the dischargers responsible for those parts of the project can and should incorporate mitigation into any subsequent projects or project approvals. Until additional methylmercury studies have been completed, it is not known whether wetlands that may contribute methylmercury to the Delta and Yolo Bypass also provide critical habitat to species of concern, and whether it will be possible to mitigate the potential impacts to less than significant levels.

28. From a program-level perspective, incorporation of the mitigation measures outlined in the staff report will foreseeably reduce most potential impacts to less than significant levels. Other impacts could be significant and therefore staff prepared a Statement of Overriding Considerations.

29. The Statement of Overriding Considerations evaluates the ecological and health benefits of implementing the proposed Basin Plan amendments in relation to the potentially significant adverse impacts. A fishery with mercury-contaminated fish is an environmental justice issue and is a threat to wildlife. Implementation of the proposed amendments will result in an overall improvement in water quality in the Delta region and will have a significant positive impact upon the environment by enabling humans and wildlife to safely consume Delta fish. To the extent significant adverse environmental effects could occur, the Central Valley Water Board has balanced the economic, legal, social, and other benefits of the amendments against the potentially unavoidable environmental risks and finds that specific economic, legal, social, and other benefits of the amendments outweigh the potentially unavoidable adverse environmental effects, such that those effects are considered acceptable.

30. Central Valley Water Board staff has circulated a Notice of Public Hearing, Notice of Filing, a written staff report, response to public comments documents, environmental checklist, and draft amendments to interested individuals and public agencies, including persons having special expertise with regard to the environmental effects involved with the proposed amendments, for review and comment in accordance with state and federal environmental regulations (23 Cal. Code Regs. § 3775, 40 C.F.R. Part 25, and 40 C.F.R. § 131).

31. Stakeholders, including representatives from irrigated agriculture, managed wetlands, wastewater treatment plants, municipal stormwater, environmental advocates, environmental justice advocates, and State and federal agencies, participated in a collaborative stakeholder process with Central Valley Water Board staff that contributed to the development of the proposed Basin Plan amendments for the Delta Mercury Control Program.

32. A subset of the stakeholders, with support from Central Valley Water Board staff, is developing an adaptive management plan that can be used by dischargers and other stakeholders to develop and implement activities required under Phase 1 of the Delta Mercury Control Program in an effective and efficient manner. The adaptive management plan includes, among other information: guiding principles for the overall Delta Mercury Control Program and for future offset policy, an organizational structure with roles and responsibilities, guidance for the Phase 1 methylmercury control studies and exposure reduction program, and potential funding strategies.

33. Responses to all comments have been prepared and the proposed amendments, staff report and environmental checklist have been revised as appropriate in response to comments.

34. The Central Valley Water Board held a public hearing on 22 April 2010, to receive testimony and adopt the draft Basin Plan amendments. Notice of the public hearing was sent to all interested persons and published in accordance with Water Code section 13244.

35. Based on the record as a whole, including draft Basin Plan amendments, the environmental document, accompanying written documentation, and public comments received, the Central Valley Water Board concurs with staff's conclusion that some actions to comply with the Basin Plan amendments may result in significant impacts and the Central Valley Water Board concurs with the Statement of Overriding Considerations. The Central Valley Water Board finds that the record as a whole and the procedures followed by staff comply with applicable CEQA requirements (Pub. Resources Code § 21080.5, 14 Cal. Code Regs. §15250, et seq., 23 Cal. Code Regs. § 3775, et seq.).

36. Basin Plan amendments must be approved by the State Water Board, Office of Administrative Law (OAL), and the United States Environmental Protection Agency (USEPA). The proposed amendments become effective under State law after OAL approval and become effective under the federal Clean Water Act after USEPA approval.

37. The Central Valley Water Board finds that the amendments to the Basin Plan were developed in accordance with Water Code section 13240, et seq.

THEREFORE BE IT RESOLVED:

1. Pursuant to Water Code section 13240 et seq., the Central Valley Water Board, after considering the entire record, including all late revisions, staff responses to comments, and oral testimony at the hearing, hereby approves the staff report and adopts the amendments to the Basin Plan as set forth in Attachment 1.

2. The Central Valley Water Board supports stakeholder development and implementation of an adaptive management plan that will help implement activities required under Phase 1 of the Delta Mercury Control Program.

3. Central Valley Water Board staff is directed to continue working with stakeholders in the development and implementation of the Phase 1 activities.

4. The Executive Officer is directed to forward copies of the Basin Plan amendments to the State Water Board in accordance with the requirements of Water Code section 13245.

5. The Central Valley Water Board requests that the State Water Board approve the Basin Plan amendments in accordance with the requirements of sections 13245 and 13246 of the Water Code and forward it to OAL and the USEPA for approval. The Central Valley Water Board specifically requests USEPA approval of all Basin Plan amendment provisions that require USEPA approval.

6. If during its approval process the Central Valley Water Board staff, State Water Board or OAL determines that minor, non-substantive corrections to the language of the amendments are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Central Valley Water Board of any such changes.

7. The Central Valley Water Board hereby approves and adopts the CEQA substitute environmental documentation, which was prepared in accordance with Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187, and directs the Executive Officer to sign the environmental checklist.

8. Following approval of the Basin Plan amendments by the OAL, the Executive Officer shall file a Notice of Decision with the Secretary for Resources in accordance with Public Resources Code section 21080.5, subsection (d)(2)(E), and California Code of Regulations, Title 23, section 3781.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 22 April 2010.

original signed by
PAMELA C. CREEDON, Executive Officer

Attachment 1: Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento-San Joaquin River Delta Estuary

Attachment 1

Resolution No. R5-2010-0043
Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento-San Joaquin River Delta Estuary

Revise Chapter II (Existing and Potential Beneficial Uses), Table II-1 for Sacramento San Joaquin Delta, to add as follows:

Yolo Bypass (8)

Sacramento San Joaquin Delta (8,9)

Addition to Table II-1 Footnote (8) under existing text:

COMM is a designated beneficial use for the Sacramento San Joaquin Delta and Yolo Bypass waterways listed in Appendix 43 and not any tributaries to the listed waterways or portions of the listed waterways outside of the legal Delta boundary unless specifically designated.

Addition to Table II-1 Footnote (9) under existing text:

COMM is a designated beneficial use for Marsh Creek and its tributaries listed in Appendix 43 within the legal Delta boundary.

Revise Chapter III (Water Quality Objectives), under "Methylmercury", to add as follows:

For the Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in Appendix 43, the average methylmercury concentrations shall not exceed 0.08 and 0.24 mg methylmercury/kg, wet weight, in muscle tissue of trophic level 3 and 4 fish, respectively (150-500 mm total length). The average methylmercury concentrations shall not exceed 0.03 mg methylmercury/kg, wet weight, in whole fish less than 50 mm in length.

Revise Chapter IV (Implementation), under "Mercury Discharges in the Sacramento River and San Joaquin River Basins", to add as follows:

Delta Mercury Control Program

The Delta Mercury Control Program applies specifically to the Delta and Yolo Bypass waterways listed in Appendix 43.

This amendment was adopted by the Regional Water Quality Control Board on [date], and approved by the U.S. Environmental Protection Agency on [date]. The Effective Date of the Delta Mercury Control Program shall be [Effective Date], the date of U.S. EPA approval.

Program Overview
The Delta Mercury Control Program is designed to protect people eating one meal/week (32 g/day) of trophic levels 3 and 4 Delta fish, plus some non-Delta (commercial market) fish. The Regional Water Board recognizes that some consumers eat four to five meals per week (128-160 g/day) of a variety of Delta fish species. The fish tissue objectives will be re-evaluated during the Phase 1 Delta Mercury Control Program Review and later program reviews to determine whether objectives protective of a higher consumption rate can be attained as methylmercury reduction actions are developed and implemented.

Additional information about methylmercury source control methods must be developed to determine how and if Dischargers can attain load and waste load allocations set by the Board. Information is also needed about the methylmercury control methods' potential benefits and adverse impacts to humans, wildlife, and the environment. Therefore, the Delta Mercury Control Program will be implemented through a phased, adaptive management approach.

Phase 1 spans from [Effective Date] through the Phase I Delta Mercury Control Program Review, expected to be in [9 years after the Effective Date]. Phase 1 emphasizes studies and pilot projects to develop and evaluate management practices to control methylmercury. Phase 1 includes provisions for: implementing pollution minimization programs and interim mass limits for inorganic (total) mercury point sources in the Delta and Yolo Bypass; controlling sediment-bound mercury in the Delta and Yolo Bypass that may become methylated in agricultural lands, wetland, and open-water habitats; and reducing total mercury loading to San Francisco Bay, as required by the Water Quality Control Plan for the San Francisco Bay Basin.

Phase 1 also includes: the development of upstream mercury control programs for major tributaries; the development and implementation of a mercury exposure reduction program to protect humans; and the development of a mercury offset program.

At the end of Phase 1, the Regional Water Board shall conduct a Phase 1 Delta Mercury Control Program Review that considers: modification of methylmercury goals, objectives, allocations and/or the Final Compliance Date; implementation of management practices and schedules for methylmercury controls; and adoption of a mercury offset program for dischargers who cannot meet their load and waste load allocations after implementing all reasonable load reduction strategies. The review also shall consider other potential public and environmental benefits and negative impacts (e.g., habitat restoration, flood protection, water supply, fish consumption) of attaining the allocations. The fish tissue objectives, the linkage analysis between objectives and sources, and the attainability of the allocations will be re-evaluated based on the findings of Phase 1 control studies and other information. The linkage analysis, fish tissue objectives, allocations, and time schedules shall be adjusted at the end of Phase 1, or subsequent program reviews, if appropriate.

Phase 2 begins after the Phase 1 Delta Mercury Control Program Review or [11 years after the Effective Date], whichever occurs first, and ends in 2030. During Phase 2, dischargers shall implement methylmercury control programs and continue inorganic (total) mercury reduction

programs. Compliance monitoring and implementation of upstream control programs also shall occur in Phase 2.

Load and Waste Load Allocations
Final methylmercury waste load allocations for point sources and load allocations for non-point sources are listed in Tables A through D. For each subarea listed in Table A, the sum of allocations for agricultural drainage, atmospheric wet deposition, open water, urban (nonpoint source), and wetlands and the individual allocations for tributary inputs (Table D), NPDES facilities and NPDES facilities future growth (Table B), and NPDES MS4 (Table C) within that subarea equals that subarea's assimilative capacity. New or expanded methylmercury discharges that begin after [Effective Date] may necessitate adjustments to the allocations.

Load allocations are specific to Delta subareas, which are shown on Figure xx-x. The load allocations for each Delta subarea apply to the sum of annual methylmercury loads produced by different types of nonpoint sources: agricultural lands, wetlands, and open-water habitat in each subarea, as well as atmospheric wet deposition to each subarea (Table A), and runoff from urban areas outside of Municipal Separate Storm Sewer System (MS4) service areas. The subarea allocations apply to both existing and future discharges.

Waste load allocations apply to point sources, which include individual NPDES permitted facility discharges and runoff from urban areas within MS4 service areas within the Delta and Yolo Bypass (Tables B and C, respectively).

Methylmercury allocations are assigned to tributary inputs to the Delta and Yolo Bypass (Table D). Future upstream control programs are planned for tributaries to the Delta through which management practices will be implemented to meet load allocations for tributary inputs assigned by the Delta Mercury Control Program.

Load allocations for the tributary inputs, urban areas outside of MS4 service areas, open-water habitat, and atmospheric deposition, and waste load allocations for the MS4s, are based on water years 2000 through 2003, a relatively dry period. Annual loads are expected to fluctuate with rainfall volume and other factors. As a result, attainment of these allocations shall be assessed as a five-year average annual load. Allocations for these sources will be re-evaluated during review of the Phase 1 Delta Mercury Control Program as wet year data become available.

Margin of Safety
The Delta Mercury Control program includes an explicit margin of safety of 10%.

Final Compliance Date
Methylmercury load and waste load allocations for dischargers in the Delta and Yolo Bypass shall be met as soon as possible, but no later than 2030, unless the Regional Water Board modifies the implementation schedule and Final Compliance Date.

During Phase 1, all dischargers shall implement reasonable, feasible controls for inorganic (total) mercury.

All dischargers should implement methylmercury management practices identified during Phase 1 that are reasonable and feasible. However, implementation of methylmercury

management practices identified in Phase 1 is not required for the purposes of achieving methylmercury load allocations for nonpoint sources until the beginning of Phase 2.

The Regional Water Board will, as necessary, include schedules of compliance in NPDES permits for compliance with water quality-based effluent limits based on the waste load allocations. The compliance schedules must be consistent with the requirements of federal laws and regulations, including, USEPA regulations 40 CFR 122.47, State laws and regulations, including State Water Board Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits, and the Final Compliance Date. The Regional Board will review the feasibility of meeting wasteload allocations based on reliable data and information regarding variability in methylmercury concentrations and treatment efficiencies and time needed to comply with the wasteload allocations. The Phase 1 Control Studies are designed to provide this information. As needed, the Regional Board shall incorporate the Phase 1 Control Studies into compliance schedules. When Phase 1 studies are complete, the Regional Board will review the need for additional time during Phase 2 for NPDES permittees to comply with the final wasteload allocations.

Implementation Program

Point Sources
The regulatory mechanism to implement the Delta Mercury Control Program for point sources shall be through NPDES permits.

Requirements for NPDES Permitted Facilities
By [six months after Effective Date], all facilities listed in Table B shall submit individual pollutant minimization program workplans to the Regional Water Board. The dischargers shall implement their respective pollutant minimization programs within 30 days after receipt of written Executive Officer approval of the workplans. Until the NPDES permitted facility achieves compliance with its WLA, the discharger shall submit annual progress reports on pollution minimization activities implemented and evaluation of their effectiveness, including a summary of mercury and methylmercury monitoring results.

During Phase 1, all facilities listed in Table B shall limit their discharges of inorganic (total) mercury to facility performance-based levels. The interim inorganic (total) mercury effluent mass limit is to be derived using current, representative data and shall not exceed the 99.9^{th} percentile of 12-month running effluent inorganic (total) mercury loads (lbs/year). For intermittent dischargers, the interim inorganic (total) mercury effluent mass limit shall consider site-specific discharge conditions. The limit shall be assigned in permits and reported as an annual load based on a calendar year. At the end of Phase 1, the interim inorganic (total) mercury mass limit will be re-evaluated and modified as appropriate.

NPDES permitted facilities that begin discharging to the Delta or Yolo Bypass during Phase 1 shall comply with the above requirements.

Requirements for NPDES Permitted Urban Runoff Discharges
MS4 dischargers listed in Table C shall implement best management practices (BMPs) to control erosion and sediment discharges consistent with their existing permits and orders with the goal of reducing mercury discharges.

The Sacramento MS4 (CAS082597), Contra Costa County MS4 (CAS083313), and Stockton MS4 (CAS083470) permittees shall implement pollution prevention measures and BMPs to minimize total mercury discharges. This requirement shall be implemented through mercury reduction strategies required by their existing permits and orders. Annually, the dischargers shall report on the results of monitoring and a description of implemented pollution prevention measures and their effectiveness.

The Sacramento MS4 (CAS082597), Contra Costa County MS4 (CAS083313), and Stockton MS4 (CAS083470) shall continue to conduct mercury control studies to monitor and evaluate the effectiveness of existing BMPs per existing requirements in permits and orders, and to develop and evaluate additional BMPs as needed to reduce their mercury and methylmercury discharges into the Delta and Yolo Bypass.

Nonpoint Sources

Nonpoint sources shall be regulated through the authority contained in State and federal laws and regulations, including State Water Board's Nonpoint Source Implementation and Enforcement Policy.

Table A contains methylmercury load allocations for non-point sources in the Delta and Yolo Bypass waterways listed in Appendix 43.

During Phase 1, all nonpoint sources in the Delta and Yolo Bypass shall implement reasonable, feasible actions to reduce sediment in runoff with the goal of reducing inorganic mercury loading to the Yolo Bypass and Delta, in compliance with existing Basin Plan objectives and requirements, and Irrigated Lands Regulatory Program requirements.

Attainment of methylmercury load allocations at the end of 2030 will be determined by comparing monitoring data and documentation of methylmercury management practice implementation for each subarea with loads specified in Table A and Table D.

For subareas not in compliance with allocations by 2030, the Regional Water Board may develop load allocations for individual sources and require individual monitoring and waste discharge requirements.

In subareas needing reductions in methylmercury, proponents of new wetland and wetland restoration projects scheduled for construction after [Effective Date] shall (a) participate in Control Studies as described below, or shall implement site-specific study plans, that evaluate practices to minimize methylmercury discharges, and (b) implement methylmercury controls as feasible. New wetland projects may include pilot projects and associated monitoring to evaluate management practices that minimize methylmercury discharges.

Phase 1 Control Studies

Point and nonpoint source dischargers, working with other stakeholders, shall conduct methylmercury control studies (Control Studies) to evaluate existing control methods and, as needed, develop additional control methods that could be implemented to achieve their methylmercury load and waste load allocations. The Regional Water Board will use the Phase 1 Control Studies' results and other information to consider amendments to the Delta Mercury Control Program during the Phase 1 Delta Mercury Control Program Review.

A Technical Advisory Committee, described below, will review the Control Studies' designs and results.

Study Participants

Control Studies can be developed through a stakeholder group approach or other collaborative mechanism, or by individual dischargers. Individual dischargers are not required to do individual studies if the individual dischargers join a collaborative study group(s).

Control Studies are required for:

a. Irrigated agricultural lands that discharge to the Yolo Bypass and Delta subareas that require methylmercury source reductions.

b. Managed wetlands and wetland restoration projects that discharge to the Yolo Bypass and Delta subareas that require methylmercury source reductions.

c. Existing NPDES permitted facilities in the Delta and the Yolo Bypass (listed in Table B).

d. Sacramento Area MS4, Stockton MS4, and Contra Costa County MS4 service areas within and upstream of the legal Delta boundary.

e. State and Federal agencies whose activities affect the transport of mercury and the production and transport of methylmercury through the Yolo Bypass and Delta, or which manage open water areas in the Yolo Bypass and Delta, including but not limited to Department of Water Resources, State Lands Commission, Central Valley Flood Protection Board, U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation. If appropriate during Phase 1, the Executive Officer will require other water management agencies whose activities affect methylmercury levels in the Delta and Yolo Bypass to participate in the Control Studies.

f. Other significant sources of methylmercury not listed above, as identified and deemed appropriate by the Executive Officer.

Dischargers in the Central Valley that are not subject to the Delta Mercury Control Program but may be subject to future mercury control programs in upstream tributary watersheds are encouraged to participate in the coordinated Delta Control Studies. Dischargers in and upstream of the Delta who participate in the Control Studies will be exempt from conducting equivalent Control Studies required by future upstream mercury control programs.

Study Objectives

The Control Studies shall evaluate existing control methods and, as needed, additional control methods that could be implemented to achieve methylmercury load and waste load allocations. The Control Studies shall evaluate the feasibility of reducing sources more than the minimum amount needed to achieve allocations.

Phase 1 studies also may include an evaluation of innovative actions, watershed approaches, offsets projects, and other short and long-term actions that result in reducing inorganic (total) mercury and methylmercury to address the accumulation of methylmercury in fish tissue and to reduce methylmercury exposure.

Dischargers may evaluate the effectiveness of using inorganic (total) mercury controls to control methylmercury discharges.

Dischargers may conduct characterization studies to inform and prioritize the Control Studies. Characterization studies may include, but not be limited to, evaluations of methylmercury and total mercury concentrations and loads in source waters, receiving waters, and discharges, to determine which discharges act as net sources of methylmercury, and which land uses result in the greatest net methylmercury production and loss.

Final reports for Control Studies shall include a description of methylmercury and/or inorganic (total) mercury management practices identified in Phase 1; an evaluation of the effectiveness, and costs, potential environmental effects, and overall feasibility of the control actions. Final reports shall also include proposed implementation plans and schedules to comply with methylmercury allocations as soon as possible.

If the Control Study results indicate that achieving a given methylmercury allocation is infeasible, then the discharger, or an entity representing a discharger, shall provide detailed information on why full compliance is not achievable, what methylmercury load reduction is achievable, and an implementation plan and schedule to achieve partial compliance.

Control Study Workplans

Control Studies shall be implemented through Control Study Workplan(s). The Control Study Workplan(s) shall provide detailed descriptions of how methylmercury control methods will be identified, developed, and monitored, and how effectiveness, costs, potential environmental effects, and overall feasibility will be evaluated for the control methods.

The Control Study Workplan(s) shall include details for organizing, planning, developing, prioritizing, and implementing the Control Studies.

The Control Studies will be governed using an Adaptive Management approach.

Technical Advisory Committee and Adaptive Management Approach

The Regional Water Board commits to supporting an Adaptive Management approach. The adaptive management approach includes the formation of a Stakeholder Group(s) and a Technical Advisory Committee (TAC). Regional Water Board staff, working with the TAC and Stakeholder Group(s), will provide a Control Study Guidance Document for stakeholders to reference.

The TAC shall be comprised of independent experts who would convene as needed to provide scientific and technical peer review of the Control Study Workplan(s) and results, advise the Board on scientific and technical issues, and provide recommendations for additional studies and implementation alternatives developed by the dischargers. The Board shall form and manage the TAC with recommendations from the dischargers and other stakeholders, including tribes and community organizations.

Board staff shall work with the TAC and Stakeholder Group(s) to review the Control Study Workplan(s) and results. As new information becomes available from the Control Studies or outside studies that result in redirection and/or prioritization of existing studies, dischargers may amend the Control Study Workplan(s) with Executive Officer approval.

Mercury Control Studies Schedule

1. By [six months after the Effective Date], entities required to conduct Control Studies shall submit for Executive Officer approval either: (1) a report(s) describing how dischargers and stakeholders plan to organize to develop a coordinated, comprehensive Control Study Workplan(s), or (2) a report describing how individual dischargers will develop individual Control Study Workplans. For dischargers conducting coordinated studies, the report shall include a list of participating dischargers, stakeholders, tribes, and community groups. Dischargers shall be considered in compliance with this reporting requirement upon written commitment to either be part of a group developing a Control Study Workplan or develop an individual Control Study Workplan.

2. Control Study Workplans shall be submitted to the Regional Water Board within [nine months of the Effective Date of this amendment]. With Executive Officer approval, an additional nine months may be allowed for Workplans being developed by a collaborative stakeholder approach. The Control Study Workplan(s) shall contain a detailed plan for the Control Studies and the work to be accomplished during Phase 1. Regional Water Board staff and the TAC will review the Workplans and provide recommendations for revising Workplans if necessary.

   Within four months of submittal, the Executive Officer must determine if the Workplans are acceptable. After four months, Workplans are deemed approved and ready to implement if no written approval is provided by the Executive Officer, unless the Executive Officer provides written notification to extend the approval process.

   Dischargers shall be considered in compliance with this reporting requirement upon timely submittal of workplans and revisions.

3. By [four years after the Effective Date], entities responsible for Control Studies shall submit report(s) to the Regional Water Board documenting progress towards complying with the Control Study Workplan(s). The report shall include amended workplans for any additional studies needed to address methylmercury reductions. The TAC will review the progress reports and may recommend what additional or revised studies should be undertaken to complete the objectives of the Control Studies. Staff will review the progress reports and recommendations of the TAC and provide a progress report to the Regional Water Board.

4. By [seven years after the Effective Date], entities responsible for Control Studies shall complete the studies and submit to the Regional Water Board Control Studies final reports that present the results and descriptions of methylmercury control options, their preferred methylmercury controls, and proposed methylmercury management plan(s) (including implementation schedules), for achieving methylmercury allocations. In addition, final report(s) shall propose points of compliance for non-point sources.

If the Executive Officer determines that dischargers are making significant progress towards developing, implementing and/or completing the Phase 1 Control Studies but that more time is needed to finish the studies, the Executive Officer may consider extending a study's deadlines.

The Executive Officer may, after public notice, extend time schedules up to two years if the dischargers demonstrate reasonable attempts to secure funding for the Phase 1 studies but experience severe budget shortfalls.

Annually, staff shall publicly report to the Regional Water Board progress of upstream mercury program development, discharger and stakeholder coordination, Control Study Workplan status, implementation of Control Studies, actions implemented or proposed to meet load and waste load allocations, and the status of the formation and activities of the TAC.

By [four years after the Effective Date], the Executive Officer shall provide a comprehensive report to the Regional Water Board on Phase 1 progress, including progress of upstream mercury control program development, Control Studies, actions implemented or proposed to meet Delta Mercury Control Program load and waste load allocations, and the status and progress of the TAC.

If dischargers do not comply with Control Study implementation schedules, the Executive Officer shall consider issuing individual waste discharge requirements or ordering the production of technical reports and/or management plans.

Phase 1 Delta Mercury Control Program Review

By [nine years after Effective Date] at a public hearing, and after a scientific peer review and public review process, the Regional Water Board shall review the Delta Mercury Control Program and may consider modification of objectives, allocations, implementation provisions and schedules, and the Final Compliance Date.

If the Executive Officer allows an extension for the Control Studies' schedule, then the Delta Mercury Control Program Review may be delayed up to two years. If the Delta Mercury Control Program Review is delayed more than one year, the Regional Water Board should consider extending the schedule for Phase 2 implementation of methylmercury controls, and the Final Compliance Date.

The Regional Water Board shall assess: (a) the effectiveness, costs, potential environmental effects, and technical and economic feasibility of potential methylmercury control methods; (b) whether implementation of some control methods would have negative impacts on other project or activity benefits; (c) methods that can be employed to minimize or avoid potentially significant negative impacts to project or activity benefits that may result from control methods; (d) implementation plans and schedules proposed by the dischargers; and (e) whether methylmercury allocations can be attained.

The Regional Water Board shall use any applicable new information and results of the Control Studies to adjust the relevant allocations and implementation requirements as appropriate. Interim limits established during Phase 1 and allocations will not be reduced as a result of early actions that result in reduced inorganic (total) mercury and/or methylmercury in discharges.

As part of the Phase 1 Delta Mercury Control Program Review and subsequent program reviews, the Regional Water Board may consider adjusting the allocations to allow methylmercury discharges from existing and new wetland restoration and other aquatic habitat enhancement projects if dischargers provide information that demonstrates that 1) all reasonable management practices to limit methylmercury discharges are being implemented and 2) implementing additional methylmercury management practices would negatively impact fish and wildlife habitat or other project benefits. The Regional Water Board will consider the merits of the project(s) and whether to require the discharger(s) to propose other activities in the

watershed that could offset the methylmercury. The Regional Water Board will periodically review the progress towards achieving the allocations and may consider additional conditions if the plan described above is ineffective.

The Regional Water Board shall conduct the Phase 1 Delta Mercury Program Review based on information received in Phase 1. If the Regional Water Board does not receive timely information to review and update the Delta Mercury Control Program, then allocations shall not be raised but may be lowered and the 2030 Final Compliance Date shall not be changed for those individual dischargers who did not complete the Phase 1 requirements.

The Regional Water Board shall require implementation of appropriate management practices. The methylmercury management plan(s) developed in Phase 1 shall be initiated as soon as possible, but no later than one (1) year after Phase 2 begins.

The Regional Water Board shall review this control program two years prior to the end of Phase 2, and at intervals no more than 10 years thereafter.

Compliance Monitoring

Within two years after the start of Phase 2, entities responsible for meeting load and waste load allocations shall monitor methylmercury loads and concentrations and submit annual reports to the Regional Water Board. The points of compliance for waste load allocations for NPDES facilities shall be the effluent monitoring points described in individual NPDES permits. The points of compliance for MS4s required to conduct methylmercury monitoring are those locations described in the individual MS4 NPDES permits or otherwise determined to be representative of the MS4 service areas and approved by the Executive Officer on an MS4-specific basis. The points of compliance and monitoring plans for non-point sources shall be determined during the Control Studies. Compliance with the load allocations for nonpoint sources and waste load allocations for MS4s may be documented by monitoring methylmercury loads at the compliance points or by quantifying the annual average methylmercury load reduced by implementing pollution prevention activities and source and treatment controls.

Entities will be allowed to comply with their mercury receiving water monitoring requirements by participating in a regional monitoring program, when such a program is implemented.

Chapter V, Surveillance and Monitoring, contains additional monitoring guidance.

Requirements for State and Federal Agencies

Open water allocations are assigned jointly to the State Lands Commission, the Department of Water Resources, and the Central Valley Flood Protection Board as applicable. Other agencies that are identified in Phase 1 that implement actions and activities that have the potential to contribute to methylmercury production and loss in open water will be required to take part in the studies. In the Phase 1 review, the Regional Water Board will modify, as appropriate, the list of entities that are responsible for meeting the open water allocations. Open water allocations apply to the methylmercury load that fluxes to the water column from sediments in open-water habitats within channels and floodplains in the Delta and Yolo Bypass.

The State Lands Commission, Central Valley Flood Protection Board, Department of Water Resources, and other identified agencies shall conduct Control Studies and evaluate options to reduce methylmercury in open waters under jurisdiction of the State Lands Commission and

floodplain areas inundated by flood flows. These agencies shall evaluate their activities to determine whether operational changes or other practices or strategies could be implemented to reduce ambient methylmercury concentrations in Delta open water areas and floodplain areas inundated by managed floodplain flows. Evaluations shall include inorganic mercury reduction projects. By [six months after Effective Date] these agencies shall demonstrate how the agencies have secured adequate resources to fund the Control Studies. Regional Water Board staff will work with the agencies to develop the Control Studies and evaluate potential mercury and methylmercury reduction actions.

Activities including water management and impoundment in the Delta and Yolo Bypass, maintenance of and changes to salinity objectives, dredging and dredge materials disposal and reuse, and management of flood conveyance flows are subject to the open water methylmercury allocations. Agencies responsible for these activities in the Delta and Yolo Bypass include, but are not limited to, Department of Water Resources, State Lands Commission, Central Valley Flood Protection Board, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers (USACE), and the State Water Resources Control Board. Control Studies shall be completed for the activities that have the potential to increase ambient methylmercury levels. These agencies may conduct their own coordinated Control Studies or may work with the other stakeholders in comprehensive, coordinated Control Studies.

The agencies should coordinate with wetland and agricultural landowners during Phase 1 to characterize existing methylmercury discharges to open waters from lands immersed by managed flood flows and develop methylmercury control measures.

New wetland, floodplain, and other aquatic habitat restoration and enhancement projects, including but not limited to projects developed, planned, funded, or approved by individuals, private businesses, non-profit organizations, and local, State, and federal agencies such as USACE, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries, U.S. Environmental Protection Agency, U.S. Bureau of Reclamation, State Water Resources Control Board, California Department of Water Resources, and California Department of Fish and Game, shall comply with all applicable requirements of this program, including conducting or participating in Control Studies and complying with allocations. To the extent allowable by their regulatory authority, Federal, State, and local agencies that fund, approve, or implement such new projects shall direct project applicants/grantees/loanees to apply to or consult with the Regional Water Board to ensure full compliance with the water quality requirements herein.

Dredging and Dredge Material Reuse

Dredging activities and activities that reuse dredge material in the Delta should minimize increases in methyl and total mercury discharges to Delta waterways (Appendix 43). The following requirements apply to dredging and excavating projects in the Delta and Yolo Bypass where a Clean Water Act 401 Water Quality Certification or other waste discharge requirements are required. The Clean Water Act 401 Water Quality Certifications shall include the following conditions:

1. Employ management practices during and after dredging activities to minimize sediment releases into the water column.

2. Ensure that under normal operational circumstances, including during wet weather, dredged and excavated material reused at upland sites, including the tops and dry-side of levees, is protected from erosion into open waters.

In addition to the above requirements, the following requirements apply to the California Department of Water Resources, U.S. Army Corps of Engineers, the Port of Sacramento, the Port of Stockton, and other State and federal agencies conducting dredging and excavating projects in the Delta and Yolo Bypass:

1. Characterize the total mercury mass and concentration of material removed from Delta waterways (Appendix 43) by dredging activities.

2. Conduct monitoring and studies to evaluate management practices to minimize methylmercury discharges from dredge return flows and dredge material reuse sites. Agencies shall:

   - By [two years from Effective Date] project proponents shall submit a study workplan(s) to evaluate methylmercury and mercury discharges from dredging and dredge material reuse, and to develop and evaluate management practices to minimize increases in methyl and total mercury discharges. The proponents may submit a comprehensive study workplan rather than conduct studies for individual projects. The comprehensive workplan may include exemptions for small projects. Upon Executive Officer approval, the plan shall be implemented.

   - By [seven years after the Effective Date], final reports that present the results and descriptions of mercury and methylmercury control management practices shall be submitted to the Regional Water Board.

   Studies should be designed to achieve the following aims for all dredging and dredge material reuse projects. When dredge material disposal sites are utilized to settle out solids and return waters are discharged into the adjacent surface water, methylmercury concentrations in return flows should be equal to or less than concentrations in the receiving water. When dredge material is reused at aquatic locations, such as wetland and riparian habitat restoration sites, the reuse should not add mercury-enriched sediment to the site or result in a net increase of methylmercury discharges from the reuse site.

The results of the management practices studies should be applied to future projects.

<u>Cache Creek Settling Basin Improvement Plan and Schedule</u>
Department of Water Resources, Central Valley Flood Protection Board, and USACE, in conjunction with any landowners and other interested stakeholders, shall implement a plan for management of mercury contaminated sediment that has entered and continues to enter the Cache Creek Settling Basin (Basin) from the upstream Cache Creek watershed. The agencies shall:

1. By [one year after Effective Date] the agencies shall take all necessary actions to initiate the process for Congressional authorization to modify the Basin, or other actions as appropriate, including coordinating with the USACE.

2. By [two years after the Effective Date], the agencies shall develop a strategy to reduce total mercury from the Basin for the next 20 years. The strategy shall include a description of, and schedule for, potential studies and control alternatives, and an evaluation of funding options. The agencies shall work with the landowners within the Basin and local communities affected by Basin improvements.

3. By [four years after the Effective Date], the agencies shall submit a report describing the long term environmental benefits and costs of sustaining the Basin's mercury trapping abilities indefinitely.

4. By [four years after the Effective Date], the agencies shall submit a report that evaluates the trapping efficiency of the Cache Creek Settling Basin and proposes, evaluates, and recommends potentially feasible alternative(s) for mercury reduction from the Basin. The report shall evaluate the feasibility of decreasing mercury loads from the basin, up to and including a 50% reduction from existing loads.

5. By [six years after Effective Date], the agencies shall submit a detailed plan for improvements to the Basin to decrease mercury loads from the Basin.

The agencies shall submit the strategy and planning documents described above to the Regional Water Board for approval by the Executive Officer. During Phase 1, the agencies should consider implementing actions to reduce mercury loads from the Basin. Beginning in Phase 2, the agencies shall implement a mercury reduction plan.

Tributary Watersheds

Table D identifies methylmercury allocations for tributary inputs to the Delta and Yolo Bypass.

The sum total of 20-year average total mercury loads from the tributary watersheds identified in Table D needs to be reduced by 110 kg/yr. Initial reduction efforts should focus on watersheds that contribute the most mercury-contaminated sediment to the Delta and Yolo Bypass, such as the Cache Creek, American River, Putah Creek, Cosumnes River, and Feather River watersheds.

Future mercury control programs will address the tributary watershed methylmercury allocations and total mercury load reductions assigned to tributary inputs to the Delta and Yolo Bypass. Additional methylmercury and total mercury load reductions may be required within those watersheds to address any mercury impairment within those watersheds.

Mercury control programs will be developed for tributary inputs to the Delta by the following dates:

2012: American River;
2016: Feather, Sacramento, San Joaquin, and Mokelumne Rivers, and Marsh and Putah Creeks; and
2017: Cosumnes River and Morrison Creek.

Mercury Offsets

The intent of an offset program is to optimize limited resources to maximize environmental benefits. The overall objectives for an offset program are to (1) provide more flexibility than the

current regulatory system provides to improve the environment while meeting regulatory requirements (i.e., load and wasteload allocations) at a lower overall cost and (2) promote watershed-based initiatives that encourage earlier and larger load reductions to the Delta than would otherwise occur.

On or before [nine years after Effective Date] the Regional Water Board will consider adoption of a mercury (inorganic and/or methyl) offsets program. During Phase 1, stakeholders may propose pilot offset projects for public review and Regional Water Board approval. The offsets program and any Phase 1 pilot offset projects shall be based on the following key principles:

- Offsets shall be consistent with existing USEPA and State Board policies and with the assumptions and requirements upon which this and other mercury control programs are established.
- Offsets should not include requirements that would leverage existing discharges as a means of forcing dischargers to bear more than their fair share of responsibility for causing or contributing to any violation of water quality standards. In this context "fair share" refers to the dischargers' proportional contribution of methylmercury load.
- Offset credits should only be available to fulfill a discharger's responsibility to meet its (waste) load allocation after reasonable load reduction and pollution prevention strategies have been implemented.
- Offsets should not be allowed in cases where local human or wildlife communities bear a disparate or disproportionate pollution burden as a result of the offset.
- Offset credits should be available upon generation and last long enough (i.e., not expire quickly) to encourage feasible projects.
- Creditable load reductions achieved should be real, quantifiable, verifiable, and enforceable by the Regional Water Board.

Alternatives to direct load credits may be developed.

Exposure Reduction Program

While methylmercury and mercury source reductions are occurring, the Regional Water Board recognizes that activities should be undertaken to protect those people who eat Delta fish by reducing their methylmercury exposure and its potential health risks. The Exposure Reduction Program (ERP) is not intended to replace timely reduction of mercury and methylmercury loads to Delta waters.

The Regional Water Board will investigate ways, consistent with its regulatory authority, to address public health impacts of mercury in Delta fish, including activities that reduce actual and potential exposure of and mitigate health impacts to those people and communities most likely to be affected by mercury in Delta caught fish, such as subsistence fishers and their families (*State Water Board Resolution No. 2005-0060*).

By [one year after Effective Date], Regional Water Board staff shall work with dischargers (either directly or through their representatives), State and local public health agencies (including California Department of Public Health, California Office of Health Hazard Assessment, and county public health and/or environmental health departments), and other stakeholders, including community-based organizations, tribes, and Delta fish consumers, to complete an Exposure Reduction Strategy. The purposes of the Strategy will be to recommend to the Executive Officer how dischargers will be responsible for participating in an ERP, to set

performance measures, and to propose a collaborative process for developing, funding and implementing the program. The Strategy shall take into account the proportional share of methylmercury contributed by individual dischargers. If dischargers (either directly or through their representatives) do not participate in the collaborative effort to develop the ERP, the Regional Water Board will evaluate and implement strategies, consistent with the Regional Water Board's regulatory authority, to assure participation from all dischargers or their representatives.

The objective of the Exposure Reduction Program is to reduce mercury exposure of Delta fish consumers most likely affected by mercury.

The Exposure Reduction Program must include elements directed toward:

- Developing and implementing community-driven activities to reduce mercury exposure;
- Raising awareness of fish contamination issues among people and communities most likely affected by mercury in Delta-caught fish such as subsistence fishers and their families;
- Integrating community-based organizations that serve Delta fish consumers, Delta fish consumers, tribes, and public health agencies in the design and implementation of an exposure reduction program;
- Identifying resources, as needed, for community-based organizations and tribes to participate in the Program;
- Utilizing and expanding upon existing programs and materials or activities in place to reduce mercury, and as needed, create new materials or activities; and
- Developing measures for program effectiveness.

The dischargers, either individually or collectively, or based on the Exposure Reduction Strategy, shall submit an exposure reduction workplan for Executive Officer approval by [two years after Effective Date]. The workplan shall address the Exposure Reduction Program objective, elements, and dischargers' coordination with other stakeholders. Dischargers shall integrate or, at a minimum, provide good-faith opportunities for integration of community-based organizations, tribes, and consumers of Delta fish into planning, decision making, and implementation of exposure reduction activities.

The dischargers shall implement the workplan by six months after Executive Officer approval of workplan. Every three years after workplan implementation begins, the dischargers, individually or collectively, shall provide a progress report to the Executive Officer. Dischargers shall participate in the Exposure Reduction Program until they comply with all requirements related to their individual or subarea methylmercury allocation.
The California Department of Public Health, the California Office of Environmental Health Hazard Assessment, and the local county public health and/or environmental health departments should collaborate with dischargers and community and tribal members to develop and implement exposure reduction programs and provide guidance to dischargers and others that are conducting such activities. The California Department of Public Health and/or other appropriate agency should seek funds to contribute to the Exposure Reduction Program and to continue it beyond 2030, if needed, until fish tissue objectives are attained.

The State Water Board should develop a statewide policy that defines the authority and provides guidance for exposure reduction programs, including guidance on addressing public health impacts of mercury, activities that reduce actual and potential exposure of, and mitigating health impacts to those people and communities most likely to be affected by mercury.

Exceptions for Low Threat Discharges

Discharges subject to a waiver of waste discharge requirements based on a finding that the discharges pose a low threat to water quality, except for discharges subject to water quality certifications, are exempt from the mercury requirements of this Delta Mercury Control Program.

Discharges subject to waste discharge requirements for dewatering and other low threat discharges to surface waters are exempt from the mercury requirements of this Delta Mercury Control Program.

Revise Chapter IV (Implementation), under "Recommended for Implementation by the State Water Board", to add:

Delta Mercury

1. The State Water Board should consider requiring methylmercury controls for new water management activities that have the potential to increase ambient methylmercury levels as a condition of approval of any water right action required to implement the project. The State Water Board Division of Water Rights should consider requiring the evaluation and implementation of feasible management practices to reduce or, at a minimum, prevent methylmercury ambient levels from increasing from those changes in water management activities and flood conveyance projects that have the potential to increase methylmercury levels. The State Water Board should consider funding or conducting studies to develop and evaluate management practices to reduce methylmercury production resulting from existing water management activities or flood conveyance projects.

2. During future reviews of the salinity objectives contained in the Bay-Delta Plan, the State Water Board Division of Water Rights should consider conducting studies to determine whether proposed changes to salinity objectives could affect methylmercury production and should consider the results of these studies in evaluating changes to the salinity objectives.

Revise Chapter IV (Implementation), under "Recommended for Implementation by Other Agencies", to add:

Delta Mercury

1. USEPA and the California Air Resources Board should work with the State Water Board and develop a memorandum of understanding to evaluate local and statewide mercury air emissions and deposition patterns and to develop a load reduction program(s).

2. The State of California should establish the means to fund a portion of the mercury control projects in the Delta and upstream watersheds.

3. Watershed stakeholders are encouraged to identify total mercury and methylmercury reduction projects and propose and conduct projects to reduce upstream non-point sources of methylmercury and total mercury. The Regional Water Board recommends that state and federal grant programs give priority to projects that reduce upstream non-point sources of methylmercury and total mercury.

4. Dischargers may evaluate imposed administrative civil liabilities projects for total mercury and methylmercury discharge and exposure reduction projects, consistent with Supplemental Environmental Project policies.

Revise Chapter IV (Implementation), under "Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing", to add:

Delta Mercury Control Program

The total estimated costs (2007 dollars) for the agricultural methylmercury control studies to develop management practices to meet the Delta methylmercury allocations range from $290,000 to $1.4 million. The estimated annual costs for agricultural discharger compliance monitoring range from $14,000 to $25,000. The estimated annual costs for Phase 2 implementation of methylmercury management practices range from $590,000 to $1.3 million.

1. Potential funding sources include those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program and the Pesticide Control Program.

Revise Chapter V (Surveillance and Monitoring), under "Mercury and Methylmercury", to add as follows:

Delta

Fish Methylmercury Compliance Monitoring

The Regional Water Board will use the following specifications to determine compliance with the methylmercury fish tissue objectives in the Sacramento-San Joaquin Delta. Beginning 2025, Regional Water Board staff will initiate fish tissue monitoring. Thereafter compliance monitoring will ensue every ten years, more frequently as needed where substantial changes in methyl or total mercury concentrations or loading occur, but not to exceed ten years elsewhere.

Initial fish tissue monitoring will take place at the following compliance reaches in each subarea:

- Central Delta subarea: Middle River between Bullfrog Landing and Mildred Island;
- Marsh Creek subarea: Marsh Creek from Highway 4 to Cypress Road;
- Mokelumne/Cosumnes River subarea: Mokelumne River from the Interstate 5 bridge to New Hope Landing;
- Sacramento River subarea: Sacramento River from River Mile 40 to River Mile 44;
- San Joaquin River subarea: San Joaquin River from Vernalis to the Highway 120 bridge;

- West Delta subarea: Sacramento/San Joaquin River confluence near Sherman Island;
- Yolo Bypass-North subarea: Tule Canal downstream of its confluence with Cache Creek; and
- Yolo Bypass-South subarea: Toe Drain between Lisbon and Little Holland Tract.

Compliance fish methylmercury monitoring will include representative fish species for comparison to each of the methylmercury fish tissue objectives:

- Trophic Level 4: bass (largemouth and striped), channel and white catfish, crappie, and Sacramento pikeminnow.
- Trophic Level 3: American shad, black bullhead, bluegill, carp, Chinook salmon, redear sunfish, Sacramento blackfish, Sacramento sucker, and white sturgeon.
- Small (<50 mm) fish: primary prey species consumed by wildlife in the Delta, which may include the species listed above, as well as inland silverside, juvenile bluegill, mosquitofish, red shiner, threadfin shad, or other fish less than 50 mm.

Trophic level 3 and 4 fish sample sets will include three species from each trophic level and will include both anadromous and non-anadromous fish. Trophic level 3 and 4 fish sample sets will include a range of fish sizes between 150 and 500 mm total length. Striped bass, largemouth bass, and sturgeon caught for mercury analysis will be within the CDFG legal catch size limits. Sample sets for fish less than 50 mm will include at least two fish species that are the primary prey species consumed by wildlife at sensitive life stages. In any subarea, if multiple species for a particular trophic level are not available, one species in the sample set is acceptable.

Water Methylmercury and Total Mercury Compliance Monitoring

Compliance points for irrigated agriculture and managed wetlands methylmercury allocations shall be developed during the Phase 1 Control Studies.

In conjunction with the Phase 1 Control Studies, nonpoint sources, irrigated agriculture, and managed wetlands shall develop and implement mercury and/or methylmercury monitoring, and submit monitoring reports.

NPDES facilities' compliance points for methylmercury and total mercury monitoring are the effluent monitoring points currently described in individual NPDES permits.

During Phase 1 and Phase 2, facilities listed in Table B shall conduct effluent total mercury and methylmercury monitoring starting by [one year after the Effective Date]. Monitoring frequencies shall be defined in the NPDES permits. Effluent monitoring requirements will be re-evaluated during the Delta Mercury Control Program Reviews.

Facilities that begin discharging to surface water during Phase 1 and facilities for which effluent methylmercury data were not available at the time Table B was compiled, shall conduct monitoring.

Compliance points and monitoring frequencies for MS4s required to conduct methylmercury and total mercury monitoring are those locations and wet and dry weather sampling periods currently described in the individual MS4 NPDES permits or otherwise determined to be

representative of the MS4 service areas and approved by the Executive Officer on an MS4-specific basis.

Annual methylmercury loads in urban runoff in MS4 service areas within the Delta and Yolo Bypass may be calculated by the following method or by an alternate method approved by the Executive Officer. The annual methylmercury load in urban runoff for a given MS4 service area during a given year may be calculated by the sum of wet weather and dry weather methylmercury loads. To estimate wet weather methylmercury loads discharged by MS4 urban areas, the average of wet weather methylmercury concentrations observed at the MS4's compliance locations may be multiplied by the wet weather runoff volume estimated for all urban areas within the MS4 service area within the Delta and Yolo Bypass. To estimate dry weather methylmercury loads, the average of dry weather methylmercury concentrations observed at the MS4's compliance locations may be multiplied by the estimated dry weather urban runoff volume in the MS4 service area within the Delta and Yolo Bypass.

TABLE A
METHYLMERCURY LOAD AND WASTE LOAD ALLOCATIONS FOR EACH DELTA SUBAREA BY SOURCE CATEGORY

Source Type	DELTA SUBAREA													
	Central Delta		Marsh Creek		Mokelumne River		Sacramento River		San Joaquin River		West Delta		Yolo Bypass	
	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)	Current Load (g/yr)	Allocation (g/yr)
Methylmercury Load Allocations														
Agricultural drainage [d]	37	37	2.2	0.40	1.6	0.57	36	20	23	8.3	4.1	4.1	19	4.1
Atmospheric wet deposition	7.3	7.3	0.23	0.23	0.29	0.29	5.6	5.6	2.7	2.7	2.4	2.4	4.2	4.2
Open water	370	370	0.18	0.032	4.0	1.4	140	78	48	17	190	190	100	22
Tributary Inputs [a]	37	37	1.9	0.34	110	39	2,034	1,129	367	133			462	100
Inputs from Upstream Subareas	(b)	(b)	---	---	---	---	---	---	---	---	(b)	(b)	---	---
Urban (nonpoint source)	0.14	0.14	---	---	0.018	0.018	0.62	0.62	0.0022	0.0022	0.066	0.066	---	---
Wetlands [d]	210	210	0.34	0.061	30	11	94	52	43	16	130	130	480	103
Methylmercury Waste Load Allocations														
NPDES facilities [a]	1.3	1.3	0.086	0.086	0	0	162	90	40	15	0.0019	0.0019	1.0	0.42
NPDES facilities future growth [a]	---	0.32 [b]	---	0.21	---	0	---	8.6	---	2.1	---	0.25 [b]	---	0.60
NPDES MS4 [a]	5.4	5.4	1.2	0.30	0.045	0.016	2.8	1.6	4.8	1.7	3.2	3.2	1.5	0.38
Total Loads [c] (g/yr)	**668**	**668**	**6.14**	**1.66**	**146**	**52.6**	**2,475**	**1,385**	**528**	**195**	**330**	**330**	**1,068**	**235**

Table A Footnotes:

(a) Values shown for Tributary Inputs, NPDES Facilities, NPDES Facilities Future Growth, and NPDES MS4 represent the sum of several individual discharges. See Tables B, C, and D for allocations for the individual discharges that should be used for compliance purposes.

(b) The Central Delta subarea receives flows from the Sacramento, Yolo Bypass, Mokelumne, and San Joaquin subareas. The West Delta subarea receives flows from the Central Delta and Marsh Creek subareas. These within-Delta flows have not yet been quantified because additional data are needed for loss rates across the subareas. Federal and state agencies whose activities affect methylmercury loss and production processes in the Delta and Yolo Bypass are assigned joint responsibility for the open water allocation. These subarea inflows are expected to decrease substantially (e.g., 40-80%) as upstream mercury management practices take place. As a result, reductions for sources within the Central and West subareas and tributaries that drain directly to these subareas are not required.

(c) For each Delta subarea, the allocations in Table A for agricultural drainage, atmospheric wet deposition, open water, urban (nonpoint source), and wetlands plus the individual allocations for tributary inputs (Table D), NPDES facilities and NPDES facilities future growth (Table B), and NPDES MS4 (Table C) within that subarea equal the Delta subarea's TMDL (assimilative capacity).

(d) The load allocations apply to the net methylmercury loads, where the net loads equal the methylmercury load in outflow minus the methylmercury loads in source water (e.g., irrigation water and precipitation).

TABLE B
MUNICIPAL AND INDUSTRIAL WASTEWATER METHYLMERCURY (MeHg) ALLOCATIONS

PERMITTEE [a]	NPDES Permit No.	MeHg Waste Load Allocation [b] (g/yr)
Central Delta		
Discovery Bay WWTP	CA0078590	0.37
Lincoln Center Groundwater Treatment Facility	CA008255	0.018
Lodi White Slough WWTP	CA0079243	0.94
Metropolitan Stevedore Company	CA0084174	[c]
Unassigned allocation for NPDES facility discharges	[d]	0.31
Marsh Creek		
Brentwood WWTP	CA0082660	0.14
Unassigned allocation for NPDES facility discharges	[d]	0.16
Sacramento River		
Rio Vista Northwest WWTP	CA0083771	0.069
Rio Vista WWTP	CA0079588	0.056
Sacramento Combined WWTP	CA0079111	0.53
SRCSD Sacramento River WWTP	CA0077682	89
Unassigned allocation for NPDES facility discharges	[d]	8.5
San Joaquin River		
Deuel Vocational Inst. WWTP	CA0078093	0.021
Manteca WWTP	CA0081558	0.38
Mountain House Community Services District WWTP	CA0084271	0.37
Oakwood Lake Subdivision Mining Reclamation [f]	CA0082783	0.38 [f]
Stockton WWTP	CA0079138	13
Tracy WWTP	CA0079154	0.77
Unassigned allocation for NPDES facility discharges	[d]	1.7
West Delta		
GWF Power Systems [e]	CA0082309	0.0052
Mirant Delta LLC Contra Costa Power Plant	CA0004863	[e]
Ironhouse Sanitation District	CA0085260	0.030
Unassigned allocation for NPDES facility discharges	[d]	0.22
Yolo Bypass		
Davis WWTP [g]	CA0079049	0.17 [g]
Woodland WWTP	CA0077950	0.43
Unassigned allocation for NPDES facility discharges	[d]	0.42

Table B Footnotes:

(a) If NPDES facilities that have allocations in Table B regionalize or consolidate, their waste load allocations can be summed.

(b) Methylmercury waste load allocations apply to annual (calendar year) discharge methylmercury loads.

(c) A methylmercury waste load allocation for non-storm water discharges from the Metropolitan Stevedore Company (CA0084174) shall be established in its NPDES permit once it completes three sampling events for methylmercury in its discharges. Its waste load allocation is a component of the "Unassigned Allocation" for the Central Delta subarea.

(d) Table B contains unassigned waste load allocations for new discharges to surface water that begin after [the effective date of this amendment]. New discharges that may be allotted a portion of the unassigned allocation may come from (1) existing facilities that previously discharged to land and then began to discharge to surface water or diverted discharges to another facility that discharges to surface water as part of ongoing regionalization efforts; (2) newly built facilities that have not previously discharged to land or water; and (3) expansions to existing facilities beyond their allocations listed in Table B where the additional allocation does not exceed the product of the net increase in flow volume and 0.06 ng/l methylmercury. The sum of all new and/or expanded methylmercury discharges from NPDES facilities within each Delta subarea shall not exceed the Delta subarea-specific waste load allocation listed in Table B.

(e) Methylmercury loads and concentrations in heating/cooling and power facility discharges vary with intake water conditions. To determine compliance with the allocations, dischargers that that use ambient surface water for cooling water shall conduct concurrent monitoring of the intake water and effluent. The methylmercury allocations for such heating/cooling and power facility discharges are 100%, such that the allocations shall become the detected methylmercury concentration found in the intake water. GWF Power Systems (CA0082309) acquires its intake water from sources other than ambient surface water and therefore has a methylmercury allocation based on its effluent methylmercury load.

(f) The waste load allocation for the Oakwood Lake Subdivision Mining Reclamation (CA0082783) shall be assessed as a five-year average annual methylmercury load.

(g) The City of Davis WWTP (CA0079049) has two discharge locations; wastewater is discharged from Discharge 001 to the Willow Slough Bypass upstream of the Yolo Bypass and from Discharge 002 to the Conaway Ranch Toe Drain in the Yolo Bypass. The methylmercury load allocation listed in Table B applies only to Discharge 002, which discharges seasonally from about February to June. Discharge 001 is encompassed by the Willow Slough watershed methylmercury allocation listed in Table G.

TABLE C
MS4 METHYLMERCURY (MeHg) WASTE LOAD ALLOCATIONS FOR URBAN RUNOFF WITHIN EACH DELTA SUBAREA

Permittee	NPDES Permit No.	MeHg Waste Load Allocation [a, b] (g/yr)
Central Delta		
Contra Costa (County of) [c]	CAS083313	0.75
Lodi (City of)	CAS000004	0.053
Port of Stockton MS4	CAS084077	0.39
San Joaquin (County of)	CAS000004	0.57
Stockton Area MS4	CAS083470	3.6
Marsh Creek		
Contra Costa (County of) [c]	CAS083313	0.30
Mokelumne River		
San Joaquin (County of)	CAS000004	0.016
Sacramento River		
Rio Vista (City of)	CAS000004	0.0078
Sacramento Area MS4	CAS082597	1.0
San Joaquin (County of)	CAS000004	0.11
Solano (County of)	CAS000004	0.041
West Sacramento (City of)	CAS000004	0.36
Yolo (County of)	CAS000004	0.041
San Joaquin River		
Lathrop (City of)	CAS000004	0.097
Port of Stockton MS4	CAS084077	0.0036
San Joaquin (County of)	CAS000004	0.79
Stockton Area MS4	CAS083470	0.18
Tracy (City of)	CAS000004	0.65
West Delta		
Contra Costa (County of) [c]	CAS083313	3.2
Yolo Bypass		
Solano (County of)	CAS000004	0.021
West Sacramento (City of)	CAS000004	0.28
Yolo (County of)	CAS000004	0.083

Table C Footnotes:

(a) Some MS4s service areas span multiple Delta subareas and are therefore listed more than once. The allocated methylmercury loads for all MS4s are based on the average methylmercury concentrations observed in runoff from urban areas in or near the Delta during water years 2000 through 2003, a relatively dry period. Annual loads are expected to fluctuate with water volume and other factors. As a result, attainment of these allocations shall be assessed as a five-year average annual load. Allocations may be revised during review of the Delta Mercury Control Program to include available wet year data.

(b) The methylmercury waste load allocations include all current and future permitted urban discharges not otherwise addressed by another allocation within the geographic boundaries of urban runoff management agencies within the Delta and Yolo Bypass, including but not limited to Caltrans facilities and rights-of-way (NPDES No. CAS000003), public facilities, properties proximate to banks of waterways, industrial facilities, and construction sites.

(c) The Contra Costa County MS4 discharges to both the Delta and San Francisco Bay. The above allocations apply only to the portions of the MS4 service area that discharge to the Delta within the Central Valley Water Quality Control Board's jurisdiction.

TABLE D
TRIBUTARY WATERSHED
METHYLMERCURY (MeHg) ALLOCATIONS

Tributary	MeHg Load Allocation [a] (g/yr)
Central Delta	
Bear Creek @ West Lane / Mosher Creek @ Morada Lane (sum of watershed loads)	11
Calaveras River @ railroad tracks u/s West Lane	26
Marsh Creek	
Marsh Creek @ Highway 4	0.34
Mokelumne River	
Mokelumne River @ Interstate 5	39.3 (39) [b]
Sacramento River	
Morrison Creek @ Franklin Boulevard	4.2
Sacramento River @ Freeport	1,125 (1,100) [b]
San Joaquin River	
French Camp Slough downstream of Airport Way	4.0
San Joaquin River @ Vernalis	129 (130) [b]
Yolo Bypass	
Cache Creek	30 [c]
Dixon Area	0.77
Fremont Weir	39
Knights Landing Ridge Cut	22
Putah Creek @ Mace Boulevard	2.4
Ulatis Creek near Main Prairie Road	2.1
Willow Slough	3.9

Table D Footnotes:

(a) Methylmercury allocations are assigned to tributary inputs to the Delta and Yolo Bypass. Mercury control programs designed to achieve the allocations for tributaries listed in Table D will be implemented by future Basin Plan amendments. Methylmercury load allocations are based on water years 2000 through 2003, a relative dry period. Annual loads are expected to fluctuate with water volume and other factors. As a result, attainment of these allocations shall be assessed as a five-year average annual load. Allocations will be revised during review of the Delta Mercury Control Program to include available wet year data.

(b) Tributary load allocations rounded to two significant figures for compliance evaluation.

(c) The allocation for water from Cache Creek entering the Yolo Bypass in this table is designed to achieve fish tissue objectives in the Yolo Bypass and Delta established by the Delta Mercury Control Program. The allocation in Table IV-6.1 assigned by the Cache Creek Mercury Control Program applies to the Cache Creek Settling Basin and requires a greater reduction so that fish within the Settling Basin can achieve water quality objectives for methylmercury in fish tissue that apply to Cache Creek, including the Settling Basin.

Add New Appendix 43 to the Basin Plan as follows:

APPENDIX 43

Delta and Yolo Bypass Waterways Applicable to the Delta Mercury Control Program

Table A43-1 lists the Sacramento-San Joaquin Delta waterways and the Yolo Bypass waterways within the Delta and north of the legal Delta boundary to which the COMM beneficial use, site-specific methylmercury fish tissue objectives, Delta mercury control implementation program, and monitoring provisions apply. The list contains distinct, readily identifiable water bodies within the boundaries of the "Legal" Delta (as defined in California Water Code section 12220) that are hydrologically connected by surface water flows (not including pumping) to the Sacramento and/or San Joaquin rivers. The list also includes Knights Landing Ridge Cut, Putah Creek, and Tule Canal in the Yolo Bypass north of the legal Delta boundary. Figures A43-1, A43-2, and A43-3 show the locations of these waterways.

The methylmercury allocations set forth in the Delta methylmercury control program are specific to Delta subareas, which are shown on Figure A43-4. Table A43-2 lists the waterways within each of the subareas.

TABLE A43-1: DELTA AND YOLO BYPASS WATERWAYS

Map Label #	Waterway Name
1.	Alamo Creek
2.	Babel Slough
3.	Barker Slough
4.	Bear Creek
5.	Bear Slough
6.	Beaver Slough
7.	Big Break
8.	Bishop Cut
9.	Black Slough
10.	Broad Slough
11.	Brushy Creek
12.	Burns Cutoff
13.	Cabin Slough
14.	Cache Slough
15.	Calaveras River
16.	Calhoun Cut
17.	Clifton Court Forebay
18.	Columbia Cut
19.	Connection Slough
20.	Cosumnes River
21.	Crocker Cut
22.	Dead Dog Slough
23.	Dead Horse Cut
24.	Deer Creek (Tributary to Marsh Creek)
25.	Delta Cross Channel
26.	Disappointment Slough
27.	Discovery Bay
28.	Donlon Island
29.	Doughty Cut
30.	Dry Creek (Marsh Creek tributary)
31.	Dry Creek (Mokelumne River tributary)
32.	Duck Slough
33.	Dutch Slough
34.	Elk Slough
35.	Elkhorn Slough
36.	Emerson Slough
37.	Empire Cut
38.	Fabian and Bell Canal
39.	False River
40.	Fisherman's Cut
41.	Fivemile Creek
42.	Fivemile Slough
43.	Fourteenmile Slough
44.	Franks Tract
45.	French Camp Slough
46.	Georgiana Slough
47.	Grant Line Canal
48.	Grizzly Slough
49.	Haas Slough
50.	Hastings Cut
51.	Hog Slough
52.	Holland Cut
53.	Honker Cut
54.	Horseshoe Bend
55.	Indian Slough
56.	Italian Slough
57.	Jackson Slough
58.	Kellogg Creek
59.	Latham Slough
60.	Liberty Cut
61.	Lindsey Slough
62.	Little Connection Slough
63.	Little Franks Tract
64.	Little Mandeville Cut
65.	Little Potato Slough
66.	Little Venice Island
67.	Livermore Yacht Club
68.	Lookout Slough
69.	Lost Slough
70.	Main Canal (Duck Slough tributary)
71.	Main Canal (Italian Slough tributary)
72.	Marsh Creek
73.	Mayberry Cut
74.	Mayberry Slough
75.	Middle River
76.	Mildred Island
77.	Miner Slough
78.	Mokelumne River
79.	Mormon Slough
80.	Morrison Creek
81.	Mosher Slough
82.	Mountain House Creek
83.	North Canal
84.	North Fork Mokelumne River
85.	North Victoria Canal
86.	Old River
87.	Paradise Cut
88.	Piper Slough
89.	Pixley Slough
90.	Potato Slough
91.	Prospect Slough
92.	Red Bridge Slough
93.	Rhode Island
94.	Rock Slough

TABLE A43-1: DELTA AND YOLO BYPASS WATERWAYS, *Continued*

Map Label # / Waterway Name	Map Label # / Waterway Name
95. Sacramento Deep Water Channel	124. Toe Drain
96. Sacramento River	125. Tom Paine Slough
97. Salmon Slough	126. Tomato Slough
98. San Joaquin River	127. Trapper Slough
99. Sand Creek	128. Turner Cut
100. Sand Mound Slough	129. Ulatis Creek
101. Santa Fe Cut	130. Upland Canal (Sycamore Slough tributary)
102. Sevenmile Slough	
103. Shag Slough	131. Victoria Canal
104. Sheep Slough	132. Walker Slough
105. Sherman Lake	133. Walthall Slough
106. Short Slough	134. Washington Cut
107. Smith Canal	135. Werner Dredger Cut
108. Snodgrass Slough	136. West Canal
109. South Fork Mokelumne River	137. Whiskey Slough
110. Steamboat Slough	138. White Slough
111. Stockton Deep Water Channel	139. Winchester Lake
112. Stone Lakes	140. Woodward Canal
113. Sugar Cut	141. Wright Cut
114. Sutter Slough	142. Yosemite Lake
115. Sweany Creek	143. Yolo Bypass
116. Sycamore Slough	144. Deuel Drain
117. Taylor Slough (Elkhorn Slough tributary)	145. Dredger Cut
	146. Highline Canal
118. Taylor Slough (near Franks Tract)	147. Cache Creek Settling Basin Outflow
119. Telephone Cut	
120. The Big Ditch	148. Knights Landing Ridge Cut
121. The Meadows Slough	149. Putah Creek
122. Three River Reach	150. Tule Canal
123. Threemile Slough	

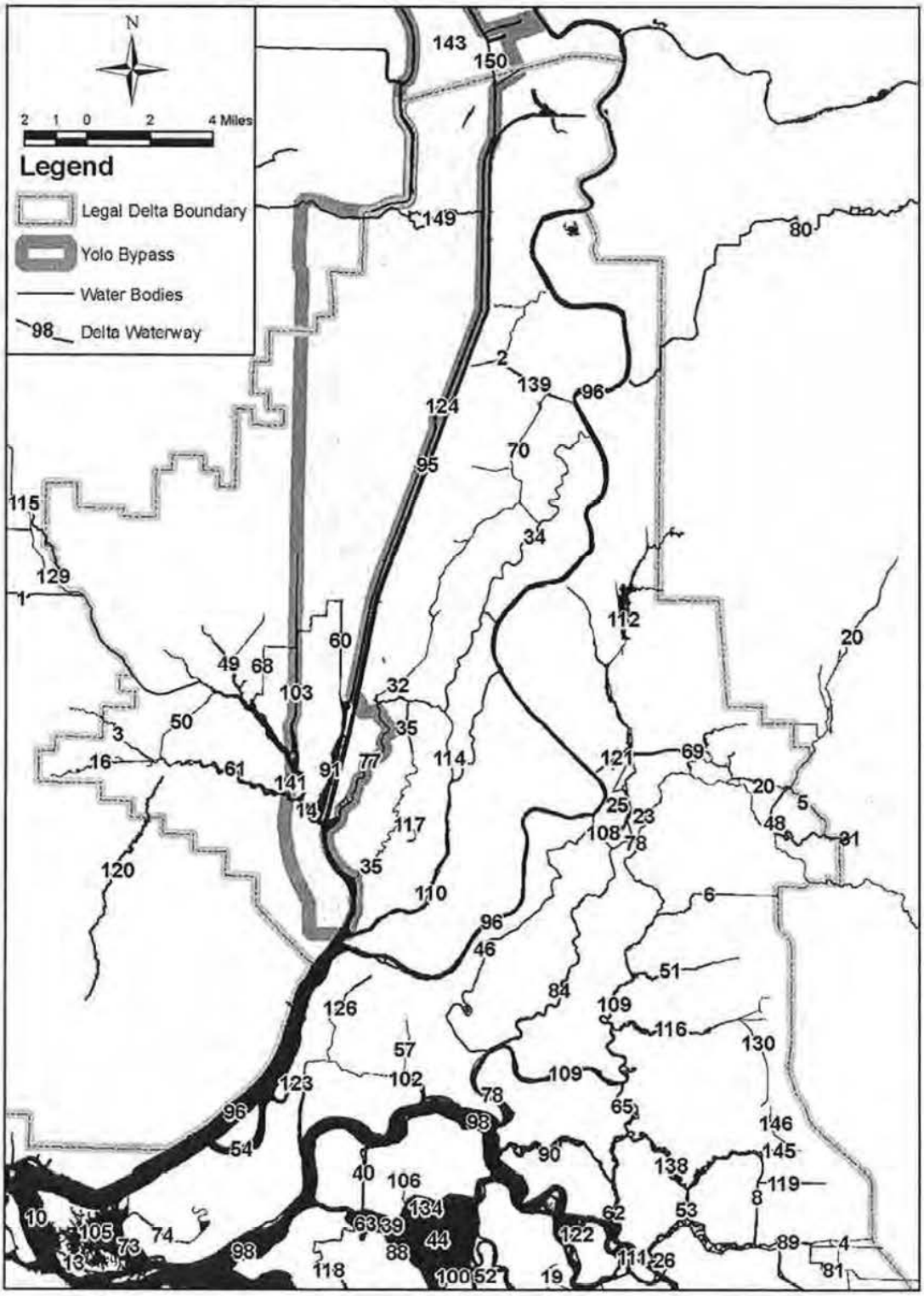


Figure A43-1: Delta Waterways (Northern Panel)

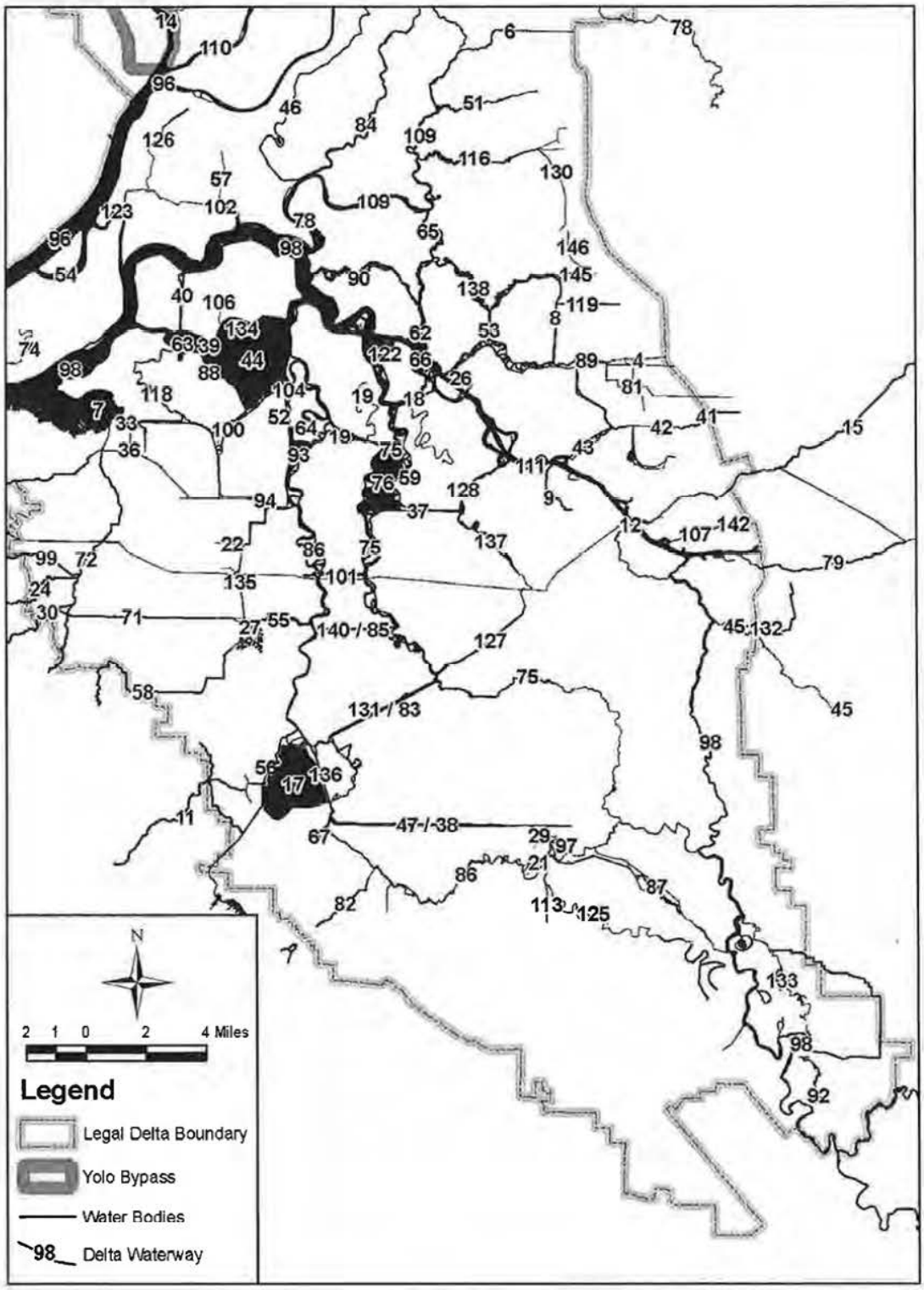


Figure A43-2: Delta Waterways (Southern Panel)

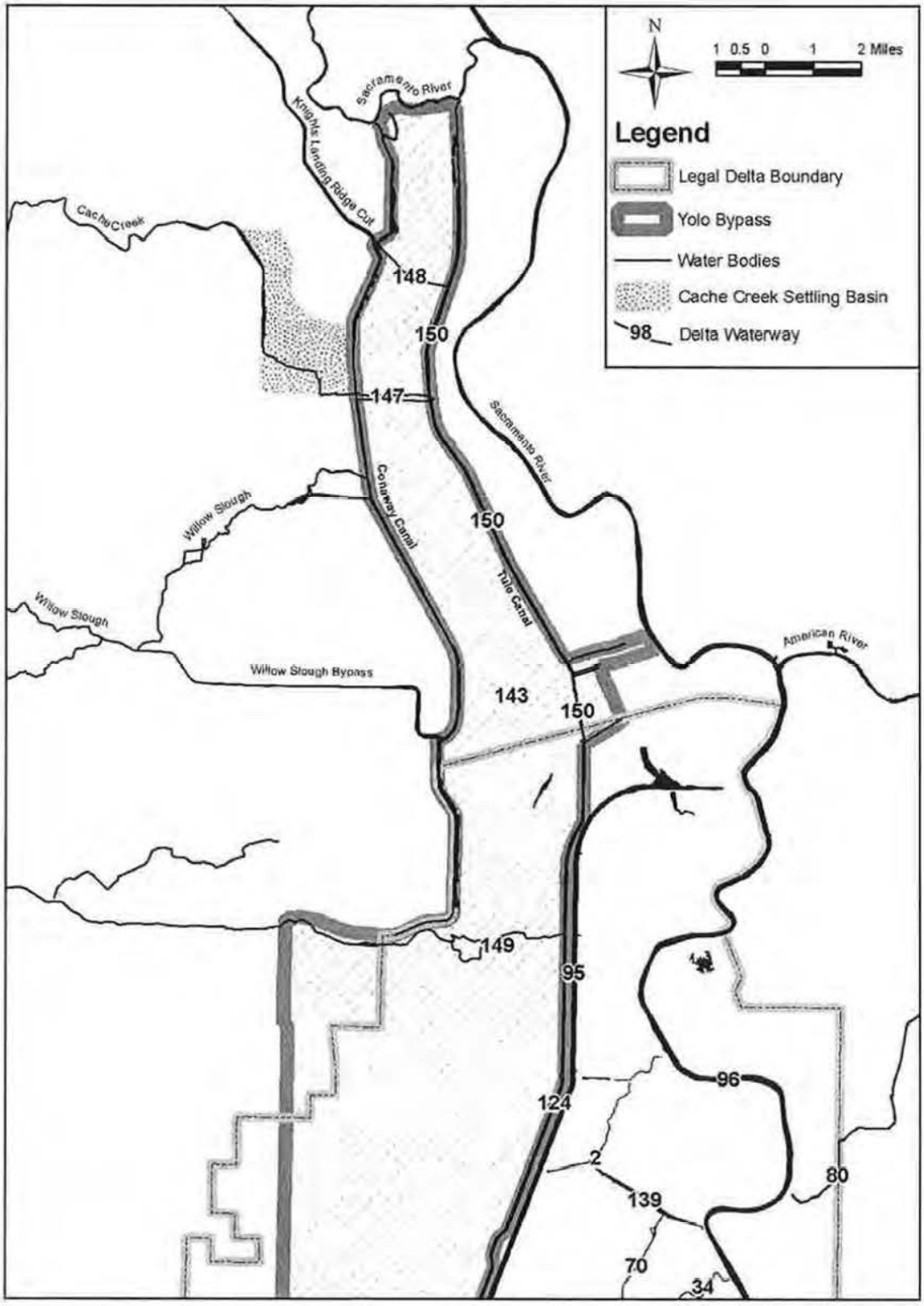


Figure A43-3: Northern Yolo Bypass

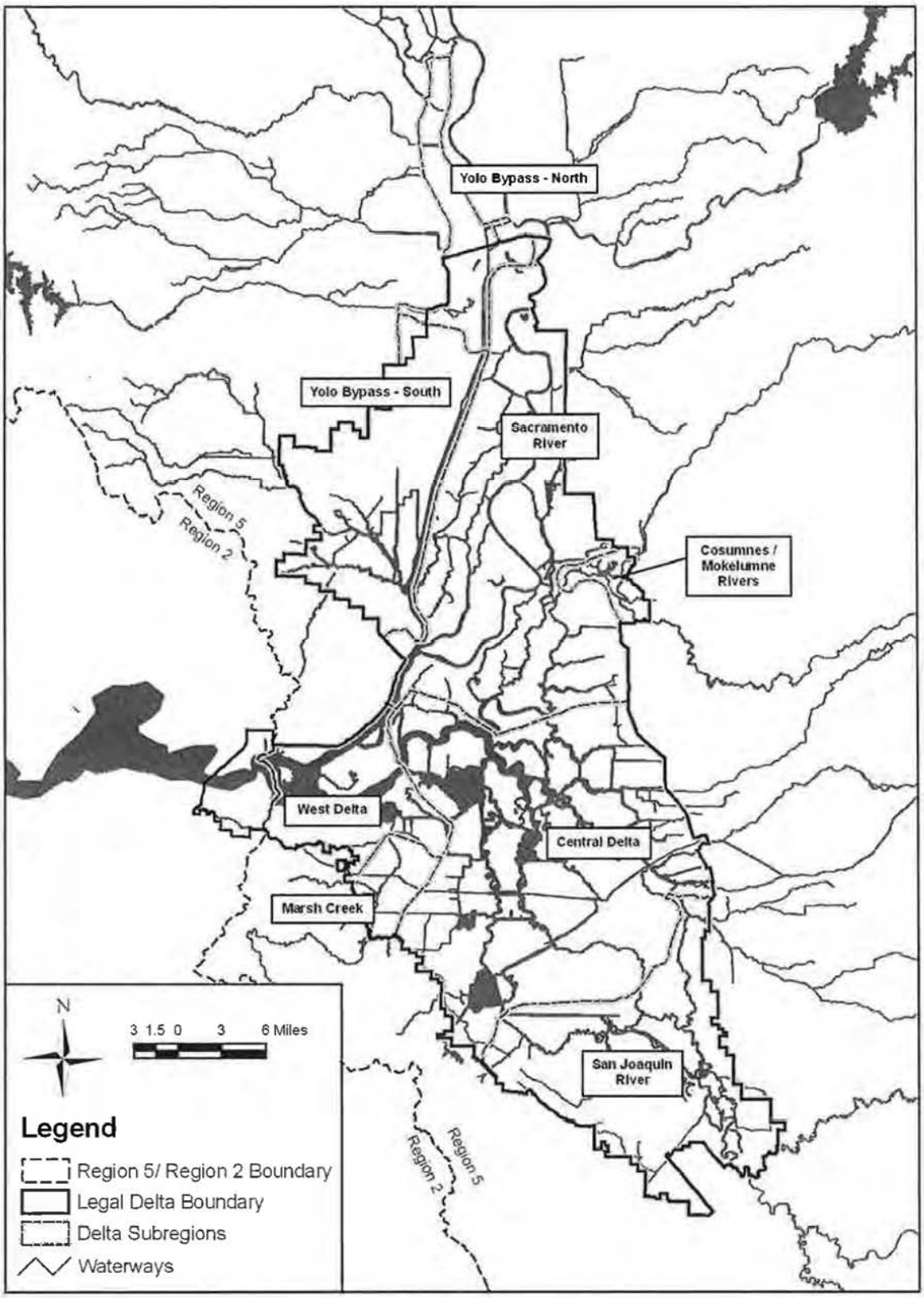


Figure A43-4: Subareas for the Delta Methylmercury Control Program

TABLE A43-2: DELTA AND YOLO BYPASS WATERWAYS BY METHYLMERCURY ALLOCATION SUBAREA

Waterway Name [Map Label #]	Waterway Name [Map Label #]	Waterway Name [Map Label #]
CENTRAL DELTA		
Bear Creek [4]	Indian Slough [55]	San Joaquin River [98]
Bishop Cut [8]	Italian Slough [56]	Sand Mound Slough [100]
Black Slough [9]	Jackson Slough [57]	Santa Fe Cut [101]
Brushy Creek [11]	Kellogg Creek [58]	Sevenmile Slough [102]
Burns Cutoff [12]	Latham Slough [59]	Sheep Slough [104]
Calaveras River [15]	Little Connection Slough [62]	Short Slough [106]
Clifton Court Forebay [17]	Little Franks Tract [63]	Smith Canal [107]
Columbia Cut [18]	Little Mandeville Cut [64]	Stockton Deep Water Channel [111]
Connection Slough [19]	Little Potato Slough [65]	Taylor Slough [nr Franks Tract] [118]
Dead Dog Slough [22]	Little Venice Island [66]	Telephone Cut [119]
Disappointment Slough [26]	Livermore Yacht Club [67]	Three River Reach [122]
Discovery Bay [27]	Main Canal [Indian Slough trib.] [71]	Threemile Slough [123]
Dredger Cut [145]	Middle River [75]	Tomato Slough [126]
Empire Cut [37]	Mildred Island [76]	Trapper Slough [127]
Fabian and Bell Canal [39]	Mokelumne River [78]	Turner Cut [128]
False River [39]	Mormon Slough [79]	Upland Canal [Sycamore Slough tributary] [130]
Fisherman's Cut [40]	Mosher Slough [81]	
Fivemile Creek [41]	North Canal [83]	Victoria Canal [131]
Fivemile Slough [42]	North Victoria Canal [85]	Washington Cut [134]
Fourteenmile Slough [43]	Old River [86]	Werner Dredger Cut [135]
Franks Tract [44]	Piper Slough [88]	West Canal [136]
Grant Line Canal [47]	Pixley Slough [89]	Whiskey Slough [137]
Highline Canal [146]	Potato Slough [90]	White Slough [138]
Holland Cut [52]	Rhode Island [93]	Woodward Canal [140]
Honker Cut [53]	Rock Slough [94]	Yosemite Lake [142]
MOKELUMNE/COSUMNES RIVERS		
Bear Slough [5]	Dry Creek [Mokelumne R. trib.] [31]	Lost Slough [69]
Cosumnes River [20]	Grizzly Slough [48]	Mokelumne River [78]
MARSH CREEK		
Deer Creek [24]	Main Canal [Indian Slough trib.] [71]	Rock Slough [94]
Dry Creek [Marsh Creek trib.] [30]	Marsh Creek [72]	Sand Creek [99]
Kellogg Creek [58]		
SACRAMENTO RIVER		
Babel Slough [2]	Little Potato Slough [65]	Stone Lakes [112]
Beaver Slough [6]	Lost Slough [69]	Sutter Slough [114]
Cache Slough [14]	Main Canal [Duck Slough trib.] [70]	Sycamore Slough [116]
Dead Horse Cut [23]	Miner Slough [77]	Taylor Slough [Elkhorn Slough tributary] [117]
Delta Cross Channel [25]	Mokelumne River [78]	
Duck Slough [32]	Morrison Creek [80]	The Meadows Slough [121]
Elk Slough [34]	North Mokelumne River [84]	Tomato Slough [126]
Elkhorn Slough [35]	Sacramento River [96]	Upland Canal [Sycamore Slough tributary] [130]
Georgiana Slough [46]	Snodgrass Slough [108]	
Hog Slough [51]	South Mokelumne River [109]	Winchester Lake [139]
Jackson Slough [57]	Steamboat Slough [110]	

TABLE A43-2: DELTA AND YOLO BYPASS WATERWAYS BY METHYLMERCURY ALLOCATION SUBAREA, *Continued*

Waterway Name [Map Label #]	Waterway Name [Map Label #]	Waterway Name [Map Label #]
SAN JOAQUIN RIVER		
Crocker Cut [21]	Middle River [75]	San Joaquin River [98]
Deuel Drain [144]	Mountain House Creek [82]	Sugar Cut [113]
Doughty Cut [29]	Old River [86]	Tom Paine Slough [125]
Fabian and Bell Canal [38]	Paradise Cut [87]	Walker Slough [132]
French Camp Slough [45]	Red Bridge Slough [92]	Walthall Slough [133]
Grant Line Canal [47]	Salmon Slough [97]	
WEST DELTA		
Big Break [7]	Horseshoe Bend [54]	San Joaquin River [98]
Broad Slough [10]	Marsh Creek [72]	Sand Mound Slough [100]
Cabin Slough [13]	Mayberry Cut [73]	Sherman Lake [105]
Donlon Island [28]	Mayberry Slough [74]	Taylor Slough [near Franks Tract] [118]
Dutch Slough [33]	Rock Slough [94]	Threemile Slough [123]
Emerson Slough [36]	Sacramento River [96]	
False River [39]		
YOLO BYPASS-NORTH [(a)]		
Cache Creek Settling Basin Outflow [147]	Toe Drain [124]/Tule Canal [150] Putah Creek [149)]	Sacramento Deep Water Ship Channel [95]
Knights Landing Ridge Cut [148]		
YOLO BYPASS-SOUTH [(a)]		
Alamo Creek [1]	Liberty Cut [60]	Sweany Creek [115]
Babel Slough [2]	Lindsey Slough [61]	Sycamore Slough [116]
Barker Slough [3]	Lookout Slough [68]	The Big Ditch [120]
Cache Slough [14]	Miner Slough [77]	Toe Drain [124]
Calhoun Cut [16]	Prospect Slough [91)]	Ulatis Creek [129]
Duck Slough [32]	Sacramento Deep Water Ship Channel [95]	Wright Cut [141]
Haas Slough [49]		
Hastings Cut [50]	Shag Slough [103]	

(a) Both the "Yolo Bypass-North" and "Yolo Bypass-South" subareas contain portions of the Yolo Bypass flood conveyance channel shown in Figure IV-4. When flooded, the entire Yolo Bypass is a Delta waterway. When the Yolo Bypass is not flooded, the Toe Drain [127] (referred to as Tule Canal [C] for its northern reach), Cache Creek Settling Basin Outflow [A], and Knights Landing Ridge Cut [B] are the only waterways within the Yolo Bypass hydrologically connected to the Sacramento River.

Letter 3: Betty Yee, Senior Water Resource Control Engineer, State of California, Regional Water Quality Control Board, Central Valley Region

3-1 The comment is noted that the Central Valley Regional Water Quality Control Board (RWQCB) acknowledges that the Draft Environmental Impact Report (DEIR) includes analysis of methylmercury by the proposed Habitat Islands and includes mitigation measures to minimize methylmercury production and release into the Delta.

3-2 Impact WQ-7 on page 4.2-44 of the DEIR evaluates the potential for the Project (which includes operation of both the reservoir and habitat islands) to increase methylmercury loading in the Delta. The impact was considered significant and Mitigation Measures WQ MM-1 and WQ MM-2 were recommended to reduce Project-generated methylmercury to less than significant. WQ MM-1 would require the project to comply with the Delta methylmercury total maximum daily load (TMDL), including to participate in control studies and implement approved control actions. See DEIR pages 4.2-44 and 4.2-45.

3-3 Comment noted. Thank you for providing a copy of Resolution No. R5-2010-0043.

NATURAL RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

June 23, 2010

VIA FACSIMILE (916) 456-6724
Megan Smith
ICF International
Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

Dear Ms. Smith:

Subject: Semitropic Delta Wetlands Place of Use Project Draft Environmental Impact Report

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Draft Environmental Impact Report (DEIR) for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's impacts on agricultural land and resources.

Project Description

The purpose of the Semitropic Delta Wetlands Place of Use Project (Project) is to increase the availability of water in the Delta for export or outflow by creating two reservoir islands for water storage, and implementing Habitat Management Plan (HMP) to create wildlife habitat on two other islands.

Project Location & Soils

The Project is located in the Delta. The specific project sites are Bacon Island and Webb Tract (reservoir islands) and Bouldin Island and Holland Tract (habitat islands). All of Bacon Island (5,570 acres) is currently under Williamson Act contracts. These contracts are in nonrenewal and expire December 2012. Virtually all of Bacon Island's soils have been classified as prime because of irrigation/drainage practices implemented on the island.

Webb Tract has a 139.2-acre parcel under Williamson Act contract. This contract is in nonrenewal and expires November, 2012 (Contra Costa County 2007). An estimated 4,374 acres on Webb Tract is prime farmland, 127 acres is farmland of statewide importance, and 86 acres is unique farmland.

The entire land area of Bouldin Island is under Williamson Act contracts; these contracts are in nonrenewal and expire December 2012. All but 54 acres of Bouldin Island's farmlands have been classified as prime; an estimated 50 acres are classified as farmland of statewide importance, and four acres as unique farmland.

Holland Tract has no parcels under Williamson Act contract. All farmland on Holland Tract has been designated as farmland of local importance.

Conversion of Agricultural Lands

Implementation of the above project would remove an estimated 5,570 acres of Class III soils on Bacon Island from agricultural uses on a long-term basis (for the life of the Project). These soils are comprised of an estimated 5,151 acres of prime farmland, 102 acres of farmland of statewide importance, and 10 acres of farmland of local importance.

Implementation of the above project would remove an estimated 5,140 acres of Class III soils and 275 acres of Class IV soils on Webb Tract from agricultural uses on a long term basis (for the life of the Project). These soils include an estimated 4,374 acres of prime farmland, 127 acres of farmland of statewide importance, and 86 acres of unique farmland.

Implementation of the above project would convert much of Bouldin Island to nonagricultural uses (i.e., wildlife habitat). Approximately 2,831 acres of prime farmland and eight acres of farmland of statewide importance would remain in use as agriculture (grains and pasture) for wildlife habitat, as described below, as part of the HMP. Because it has not yet been determined precisely where each crop would be planted on Bouldin Island, these acreage values as they apply to important farmland types are preliminary. In total, approximately 2,981 acres of prime farmland, 42 acres of farmland of statewide importance, and four acres of unique farmland would be converted to nonagricultural use.

4-1

Implementation of the project would convert an estimated 1,212 acres of farmland on the Holland Tract to nonagricultural uses (excluding 1,120 non-project acres and 1,808 acres planted in grain crops, pasture, and mixed agriculture/seasonal wetlands). However, the Holland Tract is wholly comprised of farmland of local importance.

Because the project would involve such a large-scale conversion of important farmland (over the entire length of the Project), the impact to agricultural resources has been

classified as significant and unavoidable. Therefore, the Division recommends that any subsequent CEQA document address the following items to provide a more comprehensive discussion of potential impacts of the Project on agricultural land and activities:

Mitigation Measures

The loss of agricultural land represents a permanent reduction in the State's agricultural land resources. To ensure continued habitat management and agricultural production on the habitat islands, the project applicant has committed to record conservation easements over Bouldin Island and Holland Tract lands controlled by DW Properties. The easements will be developed to be consistent with the HMP and will be recorded in San Joaquin County and Contra Costa County, respectively.

The Department encourages the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. If Williamson Act contracts are terminated, or if growth inducing or cumulative agricultural impacts are involved, the Department recommends that this ratio of conservation easements to lost agricultural land be increased. Conservation easements will protect a portion of those remaining land resources and lessen project impacts in accordance with CEQA Guideline section 15370. The Department highlights this measure because of its acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

4-1 Cont

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence the search for replacement lands can be conducted regionally or statewide, and need not be limited strictly to lands within the project's surrounding area.

The Department also has available a listing of approximately 30 "conservation tools" that have been used to conserve or mitigate project impacts on agricultural land. This compilation report may be requested from the Division at the address or phone number below. General information about agricultural conservation easements, the Williamson Act, and provisions noted above is available on the Department's website:

http://www.conservation.ca.gov/dlrp/index.htm

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

Thank you for giving us the opportunity to comment on this DEIR. If you have questions regarding our comments, or require technical assistance or information on agricultural land conservation, please contact Elliott Lum, Environmental Planner, at 801 K Street, MS 18-01, Sacramento, CA 95814; phone: (916) 324-0869; email: Elliott.Lum@conservation.ca.gov.

Sincerely,

Dan Otis
Program Manager
Williamson Act Program

cc:

State Clearinghouse

San Joaquin County Farm Bureau
P.O. Box 8444
Stockton, CA 95208-0444

San Joaquin Board of Supervisors
44 N. San Joaquin Street, Suite 627
Stockton, CA 95202

Contra Costa Board of Supervisors
651 Pine St., Room 107
Martinez, CA 94553

Letter 4: Dan Otis, Program Manager, Williamson Act Program, State of California, Natural Resources Agency, Department of Conservation, Division of Land Resource Protection

4-1 The comment recommends that the Project consider a variety of conservation tools to minimize the Project impacts on agricultural land.

Soils are categorized by Natural Resources Conservation Service (NRCS) according to eight classes (I–VIII) depending on the limitations to agricultural use imposed by specific soil and climatic criteria; the higher the class, the more restrictive the limitation. Soils in Class III have more limitations and hazards than those in Classes I and II. They require more difficult or complex conservation practices when cultivated.

	Bacon Island	Webb Tract	Bouldin Island	Holland Tract
Total Acreage	5625	5490	6006	2940
Acres Mapped as "Prime"	5151	4374	2981	0
Net Farmed Acreage 2002	4678	3249	5080	2750
Net Farmed Acreage 2008	4860	4064	4933	2884
Agriculture under Alternative 2	0	0	2831	1809
Net Production Loss	4860	4064	2102	1075
Net Prime loss	5151	4374	2981	0
Acres NRCS Class I or II	0	0	0	0

As shown in the table above, none of the Project islands have soils categorized by the NRCS as Class I or II. Most of the soils are categorized as Class III. *Class III* soils have "severe limitations that reduce the choice of plants or require special conservation practices, or both." Major limitations of the soils on the Project islands include subsidence, a high water table, and slow permeability. Drainage water must be pumped out continually to prevent flooding by the rising water table that is caused by the constant hydrostatic pressure of the water outside the island levees. Additionally, the shallow water table, in combination with the organic peat soils, creates a soil condition favorable to the outbreak of plant pathogens and destructive nematodes. Class III soils are usually not considered prime by NRCS or Centers for Disease Control and Prevention (CDC).

Bacon Island, Webb Tract, and Bouldin Island are heavily subsided as a result of nearly a century of intensive agriculture. As of 1995, the island floors were about 15 feet below mean sea level and as deep as 18 feet below mean sea level. Intensive agriculture has continued since 1995, as has subsidence at a rate of about half an inch per year. Today, the islands may be more than 20 feet below mean sea level in some areas. The ongoing subsidence exacerbates the high water table that constrains agriculture on the islands and makes maintenance of farmable land more expensive. Subsidence of the islands also makes the levees more difficult and

expensive to maintain. As the rich peat soils oxidize and are lost, the remaining soils are more mineralized and less fertile, further limiting farming. The above soil conditions, together with predicted sea level rises associated with climate change, strongly indicate that commercial agriculture on the islands as has been practiced in the past is not sustainable.

Even under current conditions, farming is a challenging enterprise in the Delta, a fact reflected in the value of agricultural land in the Delta being about one third the value of agricultural lands in San Joaquin County outside the Delta. http://www.calasfmra.com/db_trends/2008%20Trends%20Book.pdf

The comment recommends that the Project consider the list of conservation tools identified in the comment (Appendix C: Discussion Paper – Agricultural Land Conservation Tools, Williamson Act Advisory Committee Final Report). Many of the tools identified applied to development projects and local jurisdiction planning authority (e.g., zoning, ordinances, urban infill strategies, greenbelts and buffers, and urban limit lines). With the exception of conservation easements, these available tools are not applicable to the Project. With respect to agricultural conservation easements, the comment suggests that the search for agricultural lands for conservation can be conducted regionally or statewide. The following agricultural land mitigation is being implemented as part of the Project.

As noted in the comment and on page 4.8-23 of the DEIR, the Project includes recording conservation easements over Bouldin Island and Holland Tract lands controlled by the Project to ensure that the lands remain as wetlands and wildlife friendly agriculture as required by the Habitat Management Plan. In addition, as described on pages 4.8-42 to 4.8-43 the Project also provides for enhancing the sustainability of agriculture within the place of use through the water supplied by the Project, restores agricultural production on Project reservoir islands after they are used for water storage, and contributes to the sustainability of in-Delta agriculture.

In further response to the comment, the following mitigation measure has been added to Impact LU-2 under Alternative 2 on page 4.8-43, under Alternative 3 on page 4.8-46, and under Impact Cum-16 on page 5-54 under the Mitigation Measure header and before the existing text:

LU-MM-1: Provide Funding to Semitropic to Further District Goals of Sustaining Agriculture.

During the each of the first 10 years of the Project operations, Delta Wetlands will provide to the Semitropic Water Storage District $500,000, for a total of $5,000,000. The funding is intended to further the Semitropic's goals of sustaining agriculture through the provision of agricultural surface water to farmers within its boundaries at least cost and provide long term reliability. It would be used for the following purposes:

- Purchase of voluntary conservation easements over prime farmland in Semitropic.

- Purchase of imported water by the Semitropic.
- Development and operation of infrastructure needed to deliver water to and within Semitropic.
- Other purposes consistent with the Semitropic's mission.

This mitigation measure is consistent with Semitropic's authority and does not obligate it to undertake extraterritorial condemnation measures. Even with implementation of the above mitigation measure, agricultural impacts will remain significant and unavoidable.

As discussed on pages 4.8-43 and 4.8-46, no feasible mitigation measures are available to reduce this impact to a less than significant level. It is not feasible to create prime farmland. Locally, in the Delta, the sustainability of traditional agriculture is threatened by continued subsidence, climate change, and environmental regulation. Statewide, between 2006 to 2008, almost 100,000 acres of prime farmland were converted to other uses or lost prime status due to changed physical conditions, such as lack of water. (http://www.conservation.ca.gov/dlrp/fmmp/pubs/2006-2008/Pages/FMMP_2006-2008_FCR.aspx) The Project itself and the above mitigation measure address the most pressing issue for agriculture in California – water. Funding Semitropic Water District's mission to provide affordable and reliable water to farmers within its 221,000-acre district is a meaningful contribution to sustaining agriculture in California.

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

JUN 25 2010

Ms. Megan Smith
Project Manager
ICF International
630 K Street, Suite 400
Sacramento, California 95814

Dear Ms Smith:

The Department of Water Resources (DWR) submits the attached comments on the "Delta Wetlands Place of Use Draft Environmental Impact Report" (Draft EIR) dated April 2010 (SCH #1988020824). The enclosed document repeats some of the comments the DWR had provided on 1) January 9, 2009 for the Notice of Preparation for the Draft EIR and 2) August 2, 2000 for the May 2000 REIR/EIS.

DWR's comments address concerns about the potential impacts to the State Water Project (SWP) and other DWR activities where additional information and analysis is needed to more fully understand the proposed project. The Draft EIR does not fully disclose the impacts nor adequately evaluate and address the mitigation measures that may affect the SWP. Specifically, we have concerns about 1) the potential water quality and operational impacts to the SWP and 2) the levee stability and climate change analyses.

I hope these comments are helpful in responding to DWR's concerns. If you have any questions about our comments, please contact me at (916) 654-7180 or your staff may contact Stephen A. Cimperman, Supervising Engineer, Division of Statewide Integrated Water Management, at (916) 651-9285 or stephenc@water.ca.gov.

Sincerely,

Dale K. Hoffman-Floerke
Deputy Director

Enclosure

cc: (See attached list.)

Mr. Wilmar L. Boschman
Semitropic Water Storage District
1101 Central Avenue
Wasco, California 93260-0877

State Clearinghouse
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Mr. Michael Chotkowski
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Mr. Terry Erlewine
General Manager
State Water Contractors
1121 L Street, Suite 1050
Sacramento, California 95814-3944

The Department of Water Resources Comments on the Draft Delta Wetlands Place of Use Environmental Impact Report, April 2010

Prepared by ICF International, Sacramento, CA

Project Description and Alternatives – Chapter 2

Water Conveyance Contracts

A sentence should be added to Chapter 2 of the Delta Wetlands Place of Use Final EIR (Final POU EIR) stating: Water conveyance agreements must be executed among the Department of Water Resources (DWR), Delta Wetlands (DW), and the water agencies involved in the particular water purchase, which include provisions for monitoring to make conveyance quantity decisions related to the transfer. 5-1

Dam Safety Design and Review

The Draft EIR does not contain detailed design drawings suitable for DWR's Division of Safety of Dams (DSOD) review and final determination. Your Draft EIR should be revised to disclose that design documents will be submitted to DSOD for regulatory compliance.

The Delta Wetlands Project proposes water storage facilities in the Central Delta. Based on the limited information provided, the maximum water surface elevation of these facilities may be below elevation four feet. If so, these facilities will not come under our jurisdiction for dam safety. However, more information is needed to determine the jurisdictional status.

As defined in Section 6004 (c), Division 3, of the California Water Code, the levee of an island adjacent to tidal waters in the Sacramento-San Joaquin Delta, as defined in Section 12220, even when used to impound water shall not be considered a dam, and the impoundment shall not be considered a reservoir if the maximum possible water storage elevation of the impounded water does not exceed four feet above mean sea level, as established by the United States Geological Survey 1929 datum." 5-2

If the above criteria are not met, we will evaluate these facilities in accordance with Sections 6002 and 6003, Division 3, of the California Water Code. Per these criteria, dams 25 feet or higher with a storage capacity of more than 15 acre-feet, and dams higher than 6 feet with a storage capacity of 50 acre-feet or more are subject to State jurisdiction. The dam height is the vertical distance measured from the maximum possible water storage level to the downstream toe of the barrier.

If the proposed impoundment structures are subject to State jurisdiction, a construction application, together with plans and specifications, must be filed with the Division of Safety of Dams. All dam safety related issues must be resolved prior to approval of the application, and the work must be performed under the direction of a civil engineer registered in California. Sharon Tapia, our Design Engineering Branch Chief, is responsible for the application process and can be reached at (916) 227-4660. If you have any questions or need additional information, you may contact Office Engineer Randy Fessler at (916) 227-4601.

Project Operations - Chapter 3

Operations Impacts to the State Water Project

As a water right holder junior to DWR's water rights, your project is prohibited from impacting our operations.

The modeling completed to simulate DW's operations is not consistent with the current Operations Criteria and Plan biological opinions and therefore cannot adequately assess and disclose potential impacts to the Delta and State and Federal export operations. 5-3

An operations agreement to formalize real time coordination is needed to enforce existing water rights and prevent impacts to the State Water Project (SWP). This operations agreement should be included as part of the DW Project in the Final POU EIR. 5-3 Cont

Flow and Water Quality Impacts

The State Water Resources Control Board's (SWRCB) Water Rights Decision 1641 (D-1641) requires the SWP and CVP to meet flow and water quality requirements in the Delta. These requirements apply throughout the year at various locations within the Delta. Diversions from the DW Project may affect DWR's ability to help meet these requirements.

One of the requirements is the Habitat Protection Outflow (X2). This requirement begins in February and continues through June having inter-monthly connections. The X2 requirement can be satisfied by meeting either an equivalent flow or salinity concentration at Chipps Island or Port Chicago. If the standard is met for greater than the required number of days per month, then the additional days (or credit) can then be applied to the following month's requirement.

In the Water Quality chapter, under the Operations Criteria section, page 30, the first bulleted item describes In-Delta Storage operations that could potentially affect the X2 position. 5-4

The following is an excerpt from this item,

> "The Proposed Project would restrict diversions to storage to times when X2 is located at or downstream of Chipps Island. This restriction would have two benefits. It would ensure that the water diverted to storage is of low salinity and it would ensure that diversions to storage are unlikely to have deleterious fish effects associated with potential upstream movement of the X2 location."

The operation may not have deleterious fish effects, but it can cause the X2 position to shift eastward or upstream, which may affect the SWP and CVP's ability to meet the X2 requirements as stipulated in the D-1641 and the US Fish and Wildlife Service Biological Opinion. In addition, credit days are reduced when the DW Project diverts excess water, thereby impacting the two projects. DWR would have to change operations to make up for this deficiency in the following month by either increasing releases of stored water or reducing exports in the Delta to compensate for this eastward shift in X2. The impacts due to the shift in X2 position in any given time period may not be apparent until subsequent time periods. The modeling should be re-evaluated, results disclosed, and mitigation measures for negative impacts included in the Final POU EIR.

Another requirement is the agricultural water quality standards in the western/interior Delta. These standards apply between April 1 and August 15. Again, diversions from the DW Project may have an impact to the SWP; such that, DWR and/or the US Bureau of Reclamation (Reclamation) would have to either increase releases from upstream storage or decrease the exports. The hydrologic modeling should be re-evaluated, results disclosed, and mitigation measures for negative impacts included in the Final POU EIR. 5-5

Indirect Impacts to the SWP Due to Fish Presence

The SWP operations are greatly affected by the fish distribution in the Delta. The fishery agencies determine Old and Middle River flows that in turn directly regulate the SWP's ability to export. They evaluate the estimated fish distributions from observational data, as well as the potential influence of export operations on the fish distribution using a particle tracking model. They make a real-time determination after reviewing the combined Delta exports and its potential to influence the fish distribution. They also incorporate an entrainment risk assessment. 5-6

The DW Project's combined diversion rate is on the same order of magnitude as the Banks and Jones pumping plants. It appears that the additional diversions from the DW Project could increase the

presence of fish within the central and southern Delta. This would encourage the fishery agencies to impose a more positive Old and Middle River flow, thus causing the combined exports to be reduced and negatively impacting the SWP operations.

The diversion measures described on page 7 of Chapter 3, Project Operations, do not adequately cover this issue. In addition, the Protest Dismissal Agreements between DW, DWR, and Reclamation do not adequately cover this issue. The Final POU EIR should contain an assessment of the increased presence of fish within the central and southern Delta due to DW operations and resultant impact on the SWP and CVP exports. 5-6 Cont

The DW Project's combined diversions are also not required to have a positive flow past their screens during ebb tides to prevent inadvertent movement of smelt from the Cache Slough area. Increased fish presence may cause the fishery agencies to impose higher minimum Old and Middle River flow restrictions thus causing a reduction in SWP pumping rates and impacting SWP operations. The Final POU EIR should contain an assessment of the increased presence of fish within the central and southern Delta due to DW operations and resultant impact on SWP exports.

Modeling

In Appendix A, the mathematical modeling for In-Delta Storage Model is described as a post-processing of CalSim model results. The approach of post-processing operations of an In-Delta Storage facility inherently ignores some dynamic changes that would occur due to changes in conditions caused by the In-Delta Storage operations. Diversions into or from the DW Project would necessarily change the flows and thus the water quality in the Delta. These changes would then affect the SWP's real-time response to any such changes. Even small changes in Delta flows could lead to large impacts over time. The only way to control and manage these possible impacts is through enhanced real-time coordination between the DW Project and the SWP and CVP. An operations agreement to formalize real-time coordination is needed to enforce existing water rights and prevent impacts to DWR and Reclamation. This operations agreement should be included as part of the DW Project in the Final POU EIR. 5-7

Water Supply – Section 4.1

Water Transfers

In the Water Supply Chapter, pages 6 (second to the last paragraph on the page), 9 (last paragraph on page), and other locations throughout the document, includes a discussion of exports between September through November for storage in groundwater banks. This may be considered a transfer and partially outside the transfer window, defined as being between July and September, and is not allowed under the DW Project's current biological opinions. The hydrologic modeling should re-evaluate a shortened transfer window, disclose results, and mitigation measures for negative impacts included in the Final POU EIR. 5-8

DWR's Protest Dismissal Agreement (PDA)

A stipulation between DW Properties and the DWR was signed on July 23, 1997 that states operational buffers exist and essentially states that DW would not be able to divert while the Delta is in balanced conditions as defined by the Coordinated Operations Agreement between DWR and Reclamation.

It also states; 5-9

"When USBR and DWR have declared the Delta to be in excess water conditions under the COA, no diversion is authorized by permittee greater than the amount of excess water available as reasonably calculated by USBR and DWR."

The words "reasonably calculated by USBR and DWR" may be insufficient to protect the SWP and CVP for salinity and fish concerns and needs to be addressed. DWR believes an agreement is necessary to define and describe the real-time operations and coordination needed to meet Delta regulatory requirements, and a new PDA negotiated. 5-9 Cont

Water Quality - Section 4.2

Municipal Water Quality Concerns

The Place of Use EIR (POU EIR) (p. 2-15) indicates that the DW Project now incorporates a Water Quality Management Plan (WQMP) that was prepared as part of the water right protest dismissal agreements. Water quality mitigation measures included in the original 2001 FEIR have been eliminated, presumably because project modification (i.e., incorporation of the WQMP) is predicted to reduce impacts to less than significant levels. CEQA Guidelines Section 15147 states, in part, that the information contained in an EIR shall include relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. The POU EIR heavily relies on inclusion of the WQMP as a means to avoid impacts to water quality; however, there are many uncertainties associated with the WQMP and the feasibility of its implementation. The uncertainties in the WQMP preclude a full assessment of the potentially significant impacts to drinking water quality. Therefore, the project description, as defined under CEQA, seems incomplete. Furthermore, the POU EIR, including the WQMP, does not appear to identify the full range of potential municipal water quality impacts of the project (e.g., nutrients, taste & odor concerns, bacteria, and unregulated disinfection by-products). The Final POU EIR should evaluate and disclose these potential impacts and specific measures to avoid or mitigate them, or better describe why such impacts are not expected. 5-10

Effectiveness of the Proposed Water Quality Management Plan

The WQMP includes Drinking Water Protection Principles, calls for the establishment of a Water Quality Management Action Board (WQMAB), and the development of Annual Operating Plans subject to approval of the WQMAB. The Annual Operating Plans are to include water quality goals and objectives for diversions and discharges to and from project islands. The Annual Operating Plans will also include a description of the monitoring program, hydrodynamic models, particle tracking models, and the mitigation measures to be implemented by DW to offset any long-term net increase in TOC, TDS, bromide and chloride loading. As written, the WQMP relies on models and monitoring programs that do not currently exist, mitigation measures to be specified at a later time (WQMP, p. 3), and undefined "offsets" (WQMP, p. 7). More detail is needed if the WQMP is to serve as a reliable component of the project that will safeguard against potential impacts to the SWP and Delta water quality. Additional analysis should be completed to define the specific conditions under which DW could discharge water without impacting drinking water supplies. This would include setting limits on DW effluent quality based on ambient hydrologic and water quality conditions in the Delta. Proposed effluent limits should be based on modeling conducted as part of the environmental review process. 5-11

The current approach to mitigation seems inconsistent with CEQA Guideline requirements that state that mitigation measures should not be deferred to a future time (14 Cal. Code Regs., § 15126.4(B)). The CEQA Guidelines indicate that mitigation measures may specify a performance standard that can be met in multiple ways. While the WQMP does include screening criteria it does not include definitive standards that must be achieved. The WQMP instead provides a framework for negotiating mitigation. Additionally, it is not clear if the WQMAB will actually have authority to enforce the WQMP or require DW to conduct mitigation if a problem is identified. This concern was contemplated in Water Right Decision 1643 (D1643, p. 36), which indicated that the WQMP "does not establish a set of enforceable criteria for regulating the operation of the DW Project". Pursuant to CEQA, measures used to mitigate or avoid significant effects on the environment must be fully enforceable through permit conditions, agreements, or other measures (Public Resources Code, § 21081.6(b)). 5-12

DWR is concerned that processes set forth in the WQMP allow the owner of a water treatment plant to waive their protection under the WQMP (p. 5), allowing DW to initiate discharge or diversion from the islands even if the drinking water protection principles are being threatened. This issue was discussed in D1643 (p. 36) and addressed through inclusion of permit terms prohibiting the DW project from causing exceedances of USEPA drinking water MCLs at water treatment plants. It is not clear, however, if these water right permit terms are feasible, given that they cannot be evaluated until models and monitoring are established at a future time. D1643 (p. 3) indicates that DW plans to use water under its existing water rights to support the wildlife habitat on the habitat islands (i.e., Web Tract and Bacon Island) and that the water right applications (A029061, A029063, A030267, and A030269) and petitions relevant to the habitat islands have been canceled. Therefore, it is not readily apparent how water quality restrictions placed on discharges from the habitat islands would be enforced. 5-13

The POU EIR (p.4.2-42) indicates that the WQMP criteria for DOC are more stringent than the thresholds of significance defined in the previous EIR and therefore, project compliance with the WQMP will ensure that DOC impacts are less than significant. However, this statement seems to conflict with language on p. 4-2-37, which indicates that in some cases WQMP criteria are less restrictive than the significance criteria contained in the 2001 FIER. The text refers to the fact that the former significance criteria were expressed as a 0.8 mg/L increase in DOC attributable to the project at Delta export facilities as compared to a 1.0 mg/L increase in TOC allowed pursuant to the WQMP. We note that based on grab sample data collected for Water Years 2005-2007, average TOC/DOC concentrations at Banks were 2.8 and 2.9 mg/L respectively for the months of June through December. Therefore, an allowable increase of 1 mg/L in TOC concentration could amount to up to 34 percent increase in seasonal TOC loading to the SWP. The rationale for relaxing the TOC threshold and the basis for the 1.0 mg/L threshold in WQMP should be explained in the Final POU EIR. 5-14

It appears that the WQMP was crafted to provide protection and recourse for the larger urban water users. The SWP, however, is a source of water for more than 50 small drinking water treatment facilities, including water treatment facilities owned and operated by DWR. According to California Department of Health staff, many of these small facilities either exceed or have difficulty meeting current regulations for disinfection by-products (DBPs) (Carlucci 2010 pers comm). It is not clear if the WQMP will protect small SWP water system users. DW should evaluate and disclose the potential economic, regulatory, and public health impacts to these treatment facilities and their customers, given that the WQMP would allow for an incremental increase in TOC loading to the SWP. 5-15

Unanalyzed Potential Impacts Associated with Nutrients

The POU EIR (p. 4.2-1) indicates that the analysis of effects on water quality described recent changes to the existing environmental conditions and regulatory setting of the project, and that the water quality constituents selected for reassessment or first time assessment was based on new regulation, new information, or WQMP restrictions (p. 4.2-6). A significant amount of new information has been developed regarding the potential impact of nutrients to both drinking water and ecological systems since 2001 when the previous EIR/EIS was completed. Existing environmental conditions are better understood today than in 2001 when the Final Environmental Impact Statement concluded that project operations were not likely to change the supply or concentration of nitrate and phosphate in Delta channels and therefore these constituents were not selected for impact assessment (2001 FEIS, Vol. 1 page 3c-10,). Additionally, the previous analyses did not evaluate ammonia except to say that it oxidized rapidly to nitrate and so concentrations were usually low in Delta channels. Today, nutrients, and ammonium, in particular, have elevated importance in the drinking water, ecosystem and regulatory environment (e.g., CALFED Ammonia/ammonium Workshop, 2009). The POU EIR (pgs. ES-3, ES-4) indicates that updated resource analyses were conducted if new information showed an increase in the severity of impact, however, nutrient impacts were not sufficiently evaluated in the original analysis or in the 2010 POU EIR. Based on the criteria provided in the POU EIR, the impact of the project on nutrient loading to the Delta and the SWP merits further analysis. Specific information and comments pertaining to potential water quality impacts from the DW nutrient discharges follows. 5-16

The POU EIR states that one source of new information used for evaluating water quality was DWR's Report on Jones Tract Flood Water Quality Investigations, 2009 (p. 4.2-7). This document was used by

the DW to assess the impact of the project on dissolved organic carbon (DOC), but the Jones Tract report also contains information on the nutrient dynamics associated with impounded water. For example, concentrations of NH_3, TKN, Total P, and orthophosphate on Jones Tract were much higher than those detected in receiving water (nitrate and nitrate + nitrite were either similar or lower than receiving water). While variable, concentrations of NH_3 and TKN did not appear to decrease over time. The Jones Tract report points out that NH_3 levels reached concentrations similar to those found downstream of the Sacramento Regional Wastewater Treatment Plant (WWTP), which is the largest WWTP discharge in the Delta.

DW should evaluate whether project nutrient loads are likely to be significantly higher than current loads discharged under the island's farming operations. Given the concerns about current nutrient concentrations in the Delta and SWP&CVP, if it is determined that the project will cause increased nutrient loading, then mitigation should be developed. Likewise, provisions for nutrient control should be considered for incorporation into the WQMP.

New information available on nutrient discharges from a farmed peat island (CA Bay-Delta Authority ERP-02-08, Staten Island Wildlife-Friendly Farming Demonstration Projects) shows that the concentration of NH_3 in pooled Jones Tract waters were similar to those found on Staten Island. Since Webb Tract, Bacon Island, Jones Tract and Staten Island are all treated in the Department's Delta Island Consumptive Use Model as having similar soil make-ups (Jung, December, 2000, MWQI –CR#3), it is reasonable to assume that the nutrient dynamics observed on Staten Island and Jones tract could be used as approximations of what would occur on Webb Tract and Bacon Island. Under a worst case scenario, using the average of the highest NH_3 concentrations detected on Upper and Lower Jones tracts (0.49 mg/L) (similar and higher NH_3 levels were detected in pooled water on Staten Island), and assuming the maximum monthly project discharge of 2,000 cfs (POU EIR, p. 4.2-36), the NH_3 load discharged from the project would be approximately 2,300 kg/day. It is unclear whether 2,000 cfs or 4,000 cfs would be the maximum discharge rate for the project (see page 3-5), but if discharge was 4,000 cfs, NH_3 loads would double to about 4,600 kg/day. The highest daily load discharged off of Staten Island was 67 kg/day. Based on these projections, project operations could have the potential to increase NH_3 loads to receiving waters by a factor of 34 to 64 times over current farming operations. 5-16 Cont

For illustrative purposes, we compared the project's potential maximum NH_3 loading rates to the loading rates of the largest discharger of NH_3 in the Delta, the Sacramento Regional County Sanitation District (SRCSD) Wastewater Treatment Plant. SCRSD's current permitted discharge capacity is 181 mgd (average dry weather flow) and their current effluent flows average 141 mgd, while the plant's median ammonia level is 24 mg/L (Central Valley Regional Water Quality Control Board, NPDES Permit Renewal Issues Paper, 12/14/09). At the current average flow of 141 mgd, ammonium loads would be 12,801 kg/day. At permitted capacity, ammonium loads would be 16,443 kg/day. The potential ammonium loads from project discharges at 2,000 cfs represents approximately 18% of the average ammonium load of the largest discharger to the Delta At a discharge rate of 4,000 cfs, the ammonium load from the project would be equal to about 36% of SRCSD's daily average ammonium load. If the project is approved, it would potentially be one of the largest dischargers of ammonium to the Delta ecosystem. Additionally, the Central Valley Regional Water Quality Control Board is in the process of revising the SRCSDs NPDES permit. SRCSD is proposing to increase its permitted discharge from 181 to 218 mgd which could result in significant additional nutrient loading to the Delta and SWP. This is important because the SRCSD expansion was not one of the projects considered in the cumulative impact analysis (POU EIR, pgs. 5-2, 5-3). Furthermore, DW discharges are much closer to SWP export facilities than Sacramento County Regional Sanitation District's outfall.

From a drinking water perspective, NH_3 is a required precursor for forming nitrosamine disinfection by products (DBP). Nitrosamine DBPs are more carcinogenic than currently regulated DBPs, and are the most likely DBP to be regulated in drinking water by the EPA within the next 5 years (Bruce Macler, EPA, Region 9, pers comm. April 2010). An increase in NH_3 from DW has the potential to increase Nitrosamine DBP formation at SWP water treatment plants.

Unanalyzed Potential Impacts Associated with Drinking Water Taste and Odor

DW should also evaluate the potential effects associated with the changes in timing of nutrient loading and the potential for project discharges to increase the levels of taste and odor compounds present in drinking water supplies. As documented in the Staten Demonstration project, nitrate, ammonium, and TKN loading from a farmed Delta island were lowest in the summer and fall. Due to farming cycles, it is expected that similar loading patterns would be observed for most farmed Delta islands. Since the project proposes to discharge potentially high loads of nutrients in the summer and fall, when nutrient loading from the predominant land-use in the Delta is low, project discharges would likely increase nutrient concentrations at the Delta export locations, which in turn could lead to more algal production and taste and odor problems.

Algal blooms and aquatic plant growth already require chemical treatment and/or physical removal at certain SWP facilities, including Clifton Court, trash racks along the California Aqueduct, the South Bay Aqueduct, the Coastal Branch, and Southern California reservoirs. Copper sulfate is commonly used to treat algal blooms in the SWP, but this can lead to unintended adverse effects for drinking water treatment. For example, die off of treated algae can cause taste and odor problems and filter clogging. Additionally, the cost of additional treatment is passed on to DWR and the SWP&CVP contractors.

5-17

Recent research suggests that phytoplankton community assemblages can shift depending on whether the species preferentially uses ammonium (Glibert, 2010). Blue-green algae use ammonium preferentially. DW should therefore evaluate the potential for increased taste and odor associated with blue-green algal blooms from increased ammonium and other nutrient loading during periods of project discharge. With respect to nutrients and algal production, the Jones Tract Report documents that the State Water Project and Jones Tract received extensive media attention because of taste and odor problems in drinking water.

Geosmin and 2-methylisoborneol (MIB) produce earthy and musty taste and odor in drinking water. Geosmin is detectable by humans at less than 10 ng/L, and MIB is detectable by humans at 3 ng/L, with drinking water customer complaints rising steeply with increasing concentration. For example, in February 2009, a taste and odor event in the source waters of the SWP's North Bay Aqueduct forced multiple water suppliers to switch to alternate sources and produced hundreds of complaints. In the case of Jones Tract, DWR identified the blue-green algae, *Planktothrix perornata* as one of the main producers of taste and odor compounds. *Planktothrix* produces the taste and odor compound MIB at much higher rates than any other species observed in Southern California reservoirs, requiring repeated and costly algal prevention measures for the utility. Based on modeling of DOC, the Jones Tract Report concluded that taste and odor problems, due to algae at Banks, occurred from the high nutrient water transported out of Jones Tract. *Planktothrix* was also transported in the aqueduct to downstream reservoirs. This species of taste and odor algae had never been detected in a Southern California State Water Project Reservoir by Metropolitan Water District prior to the pump off of Jones Tract water (MWD, Member Agency Water Quality and Supply Webinair, 2009). Additionally, samples from within the flooded Jones Tract had geosmin concentrations as high as 30 ng/L, and MIB concentrations greater than 1000 ng/L in July 2004. Concentrations remained elevated through October 2004. During the same period, concentrations of taste and odor compounds increased at routine sampling sites at Clifton Court Forebay, Banks Pumping Plant, and the South Bay Aqueduct. This information strongly suggests that the project could exacerbate taste and odor concerns in the SWP; however, these issues were not evaluated and disclosed in the POU EIR or in previous environmental documents for the project. An evaluation should be conducted, the results disclosed, and mitigation measures for negative impacts to the SWP included in the Final POU EIR.

Bacteria Concerns

DW has never assessed the impacts to drinking water and public health associated with bacteria. Although bacterial levels fell in Jones Tract, once initial septic tank waste and decayed animal material was metabolized, spikes in fecal coliform levels have been found in reservoirs around the country due to large numbers of waterfowl using systems that are predator free. The water quality objective for contact recreation calls for a 30-day average of 200 MPN/100 mL with no more than 10% of the measurement

5-18

above 400 MPN/100mL for fecal coliform. The SWRCB is considering adopting *E. coli* freshwater monitoring objectives. If so, the median of 5 samples over a 30 day period cannot exceed 126 MPN/100 mL. At a minimum, fecal coliform and *E. coli* monitoring should be included in the WQMP, and if warranted, a management plan to discourage waterfowl needs to be implemented. Increased bacteria monitoring is also warranted based on the recreational uses near the island. 5-18 Cont

Flood Control and Levee Stability – Section 4.3

Impacts from Seepage Levels and Seismic Events

The POU EIR addresses potential environmental effects associated with the diversion and storage of water by the DW Project. To better understand the POU EIR, we have also reviewed the report prepared by Hultgren-Tillis Engineers, titled as "Geotechnical Evaluation, Seismically Repairable Levee, Webb Tract", dated December 30, 2009.

The review of the above mentioned reports indicate that the proposed design for the Reservoir Island calls for the following key features:

- Protect the slough side slope (2:1) with rip-rap and in over-steepened areas a waterside notch to create a bench and flatter slope
- Widened the crest to 45 feet
- The landside slope will be 3:1 on upper end and 10:1 on lower end
- Placement of a core trench through the levee prism

5-19

We believe that the proposed design will improve the slope stability and reduce the through-seepage for static loading conditions. The project has the burden to prove that proposed Reservoir Islands do not adversely affect the groundwater regime of the neighboring islands. In principle, we believe that the insertion of the core trench will address the through-seepage issue. However, a well planned seepage monitoring program is vital to fully address seepage issues that may adversely impact groundwater levels and should be added to the Final POU EIR.

Although the reports address the seismic impacts on the project through the concept of seismically repairable levees, seismic performance is not adequately addressed to demonstrate that the Reservoir Island levees would not breach under a considered design seismic event. Seismic-induced deformation (both inertial and liquefaction-induced) is a key indicator of the seismic stability of the levee, however, the reports lack information related to the seismic deformation. Specifically, the reports lack information regarding seismic design criteria used for the analyses including seismic design level, acceptable performance during a design event, and an emergency repair plan. If an uncontrolled release of reservoir water is a reasonable possibility due to a seismic event, then impacts on neighboring levees due to increases in hydraulic head and/or scour should be evaluated, disclosed and mitigation measures included in the Final POU EIR. 5-20

Vegetation and Wetlands – Section 4.6

The Delta Wetlands Project provides compensation for wetland and wildlife effects of the water storage operations on the reservoir islands by implementing a Habitat Management Plan on two habitat islands (Bouldin Island and Holland Tract). The habitat creation proposed would provide positive benefits for enhancing Delta habitats including AB360 habitat types, riparian, and freshwater wetlands. The environmental review for Delta Wetlands has undergone several iterations, and because the "habitat creation" plans were not thoroughly discussed in the most recent version, it was very difficult to review the habitat elements of the proposal. However, DWR has certain concerns that need to be clearly addressed: 5-21

- Habitat creation plans should be thoroughly vetted with an expert panel including scientists recognized for their work in wetland restoration and/or levee stability.
- Though recent versions of the EIR make statements that suggest the habitat island plans have not changed from earlier versions, the current rendition of the plan appears to provide less acreage than earlier versions. The habitat maps provided in the 2010 version of the EIR indicate that some of the earlier habitat areas may have been replaced with agriculture and/or development. This is not clear from the narrative. The reasons for these changes, if they exist, should be made explicit and evaluated using the California Environmental Quality Act (CEQA) checklist.
- Because the wetland delineation has expired, the Project applicant is consulting with the US Army Corps of Engineers regarding necessary updates to the wetland delineation and plans to conduct field studies necessary to re-verify the wetland delineation. This process must be completed before project impacts to wetlands can be evaluated as required under CEQA.
- Proposed habitat designs for created habitats should follow natural landscape contours and incorporate subsidence reversal techniques to minimize inundation due to accidental breaches in the long-term.
- Finally, the proposed project should include a long term management plan for habitat and levee maintenance.

5-21
Cont

Climate Change - Section 4.14

Outdated Climate Change Projections

To the extent required by CEQA Guidelines Section 15126.2, all significant state projects, including infrastructure projects, must consider the potential impacts of locating such projects in areas susceptible to hazards resulting from climate change. (CA Climate Adaptation Strategy 2009)

Cayan et al. 2006b citation is out of date. The 2009 Scenarios Report predicted 12 – 18 inches by 2050 and 21 - 55 inches by 2100.

Based upon this section, we cannot determine if this project would adversely affect the SWP&CVP due to effects of sea level rise and winter storm surge.

Neither Chapter 4.3 Flood Control and Levee Stability nor 4.14 Climate Change adequately address the potential environmental impact of a catastrophic failure of the Project's levees.

5-22

Climate change is expected to increase sea level as mentioned in the document. However several other impacts are also expected as a result of climate change. The additional impacts noted below are not adequately addressed in the document.

- A likely increase in the frequency and severity of storms driven by the atmospheric river or "pineapple express" phenomenon-the meteorological phenomenon responsible for all of the largest floods in Central Valley history (Dettinger, Hidalgo, & Tapash Das, 2009).
- Higher 3-day peak runoff patterns over the past 50 years as compared to conditions prior to 1955 (DWR, Progress on Incorporating Climate Change into Planning and Managing California's Water Resources, 2006).
- Significant increases in the percentage of precipitation that falls as rain instead of snow during winter storms in the Sierra Nevada (DWR, Progress on Incorporating Climate Change into Planning and Managing California's Water Resources, 2006).
- Winter snowpack in the Sierra Nevada is now smaller and is melting earlier than historically.
- Higher sea levels will continue to increase the stress on Delta levees, increasing the chances of failure (Cayan D. M., 2008).

- Higher sea levels will increase the possibilities of flooding at the mouths of rivers as high sea level stands (driven by tides, storm surges, El Niño influences and climate change driven sea level rise) coincide with high fresh water flows (Dettinger, Hidalgo, & Tapash Das, 2009).

Additionally, the planned operation of the project entails raising and lowering of the water levels in water supply storage islands, which are protected by earthen levees. This operation could result in rapidly changing differential head conditions between the river/slough side of levees and island/reservoir side of levees. There is no discussion of the ability of the levees to withstand these conditions. 5-22 Cont

Individually or synergistically these impacts have the potential to increase the stress on the Proposed Project's levees increasing the potential for a catastrophic failure that could have wide ranging impacts to water quality, water supply, and habitat throughout the Delta. These issues must be adequately investigated, analyzed, disclosed, and mitigated in order to make a determination of environmental significance in the Final POU EIR.

Cumulative Impacts – Chapter 5

Bay Delta Conservation Plan (BDCP)

Page 5-6 - The tunnel / all-tunnel option should be altered to reflect the preferred nomenclature of the "pipeline option." Delta Corridors is now "Separate Corridors Option." 5-23

Page 5-6, 5-7 - The BDCP section should also include a link to the BDCP website (http://baydeltaconservationplan.com/default.aspx). 5-24

In light of BDCP's restoration and conservation measures, which include the creation of intertidal habitat and potential North Delta diversions, consider analyzing the DW Project's impacts and cumulative impacts to tidal prism (intertidal habitat and wetland habitat). 5-25

Page 5-58 Climate change: Depending on the land cover (e.g., wetland, intertidal) created in the habitat management plan there will be GHG emissions (e.g., CO2 and CH3) that should be documented and included in the analysis. The Final POU EIR should address potential increases in GHG emissions. 5-26

ES-17; Impact UT-6:
Greater Sandhill Cranes are present on all islands (4.7-23); Mitigation measure for UT-MM-2 and UT-MM-10 will create a power line collision risk for a California fully protected species. Mitigation measure should consider placing power lines below and alongside levee to reduce collision risk. 5-27

Letter 5: Dale K. Hoffman-Floerke, Deputy Director, State of California – California Natural Resources Agency, Department of Water Resources

5-1 Comment noted. The project applicant has initiated discussions with the California Department of Water Resources (DWR) to develop a Conveyance Agreement and Operations Agreement. Water conveyance agreements will be executed among DWR, the Project, and the water agencies receiving Project water that will include provisions for monitoring to make conveyance quantity decisions related to the transfer.

5-2 As described on page 2-10 of the Draft Environmental Impact Report (DEIR), levees surrounding the proposed Reservoir Islands would be raised and widened to hold water at a maximum elevation of four feet above mean sea level. Typical cross sections are presented in Figure 2-5. As further explained on page 4.3-9, the Project design has incorporated operational controls to limit the depth of storage below Division of Dam Safety jurisdictional levels consistent with Water Code section 6004(c). Therefore, Division of Dam Safety oversight is not applicable to the proposed project or the alternatives, with the exception of Alternative 3. The Bouldin Island structure for Alternative 3 does include a new 20 foot structure to protect State Route (SR) 12 from water stored on the Island. Therefore, this structure would be subject to Division of Dam Safety jurisdiction. If Alternative 3 is selected, the Project applicant will file detailed plans with the Division of Dam Safety.

5-3 The comment states that as a junior water rights holder, the Project is prohibited from impacting DWR operations and that the modeling to simulate the Project's operations is not consistent with the current Biological Opinions (BO) so it does not adequately assess impacts to the Delta and State Water Project (SWP) and Central Valley Project (CVP) operations.

The DEIR analysis of exports is consistent with the Operations Criteria and Plan (OCAP) BO and does not need to be revised. Project exports would occur from July to November, with most exports (i.e., 80 percent) occurring in the July-September period which is the typical transfer window identified in the OCAP BOs. Exports would occur when SWP pumping capacity is available under OCAP rules. A small percentage of Project exports are modeled to occur in October and November (i.e., 20 percent), outside of the typical OCAP transfer window. All Project exports are under review in the re-consultation for updated biological opinions and incidental take authorization from the resources agencies.

See also Responses to Comments 5-1.

5-4 Project Final Operating Criteria (FOC) are described on pages 3-7 and 3-8 of the DEIR. Measure 3 prohibits X2 shifts greater than 2.5 kilometers (km). X2 is a well understood and easily modeled parameter. The DEIR used the In-Delta Storage Model (IDSM) to analyze the movement of X2 and quantify the impacts associated

with those changes. IDSM utilizes the Kimmerer- Monismith (K-M) equation, a widely accepted industry standard for estimating the position of X2 in the Delta since the 1990s. IDSM tracks X2 shifts and lists X2 end-of-month changes for years 1980-2003 (see Table 3-26 on page 3-66). The average change in monthly X2 position associated with Project diversions to storage [December to April] ranged between 0.1 to 0.3 km and water quality releases [September to November] resulted in improvements in average monthly X2 position in the -0.3 to -0.5 range. The modeled maximum impact was 1.9 km in December 1985 when outflow was 13,090 cubic feet per second (cfs) and close to the Project operating limit. A second modeled incident of 1.5 kilometer (km) "occurred" in January 1988. All other X2 impacts were less than 1.1 km. X2 requirements for the SWP and CVP can occur from February to June, as specified by the State Water Resources Control Board (SWRCB) in the 1995 Water Quality Control Plan (WQCP). The Chipps Island and Port Chicago X2 requirements are triggered by the previous month's Eight River Index (PMI) and the position of X2. Compliance with the X2 standard can be met three ways: maximum daily average electrical conductivity (EC) of 2.64 millimhos (mmhos), maximum 14-day running average EC of 2.64 mmhos, and 3-day running average net Delta outflow of 11,400 cfs or 29,200 cfs respectively. Daily modeling is not necessary at this time; however, real-time coordination with the SWP and CVP through an Operations Agreement will ensure that X2 changes will not impact CVP operations, especially as X2 approaches the Chipps Island or Port Chicago thresholds.

5-5 As identified on page 3-1 of the DEIR, Project diversions to storage would occur during high-flow periods (i.e., excess Delta outflow) between December and March and not during April 1 and August 15 when agricultural water quality standards would apply. Therefore, the Project would not affect DWR's operation of the SWP or the Bureau of Reclamation's (Reclamation) operation of the CVP to meet these standards.

5-6 To further assess the potential risk of larval longfin smelt entrainment into the proposed Project diversions, as well as the effects of potential changes to local Delta channel hydrodynamics, a Particle Tracking Model (PTM) study was performed. The PTM evaluated hydrologic conditions both with and without proposed Project diversion operations to assess potential changes fish movement, including the potential risk for entrainment onto the Reservoir Islands as a result of direct diversion through tracking the fate of simulated particles. The simulated injection of neutrally buoyant particles in each run occurred at seven stations throughout the Delta on January 1, January 15, February 1, and February 15 based on hydrologic conditions in 1992. This particular year (1992) was included as one of the three low outflow years used to analyze effects to longfin smelt as part of the PTM study run by California Department of Fish and Game (CDFG) for the Incidental Take Permit (ITP) SWP Effects Analysis. This particular year was chosen for the Project's PTM analysis because, although 1992 was a low outflow year, it had a modest flow increase in mid-February which would have met the criteria for Project diversions. Project diversions were 1,739 cfs onto one of the two Reservoir Islands. The simulation

analyses were run for a period of 90 days after each particle injection. Particle fate included diversion onto the Reservoir Islands, entrainment into the SWP or CVP export facilities, entrainment into agricultural diversions, retention in the south Delta, and transport downstream into Suisun Bay.

Results of particle fates were then assessed under conditions with and without the Project diversions. The findings suggested that when compared with the base case of No Project conditions, particles had only incremental increase in probability of being entrained into the SWP or CVP project intakes. For February diversions onto Bacon Island or Webb Tract the percentages of increased entrainment resulting from the Project were all less than 1.0 percent. Given these results, the likelihood of the Project causing substantial increases in fish presence resulting in significant impacts on the SWP and CVP exports is extremely low. Therefore the findings of the PTM are consistent with the analysis in the DEIR and the results do not change the conclusions or findings of the DEIR.

Two of the seven particle releasing stations included in the PTM study are located in the north Delta, immediately south of Cache Slough. The resulting percentages of increased entrainment (when compared with baseline No Project conditions) of these particles released from the Cache Slough station, assuming February diversions, was less than 0.3 percent. As such, the likelihood of the Project to cause increased movement of smelt from the Cache Slough area into the south Delta, thereby adversely impacting SWP operations, is extremely low.

5-7 See Responses to Comments 5-1 and 5-4.

5-8 The Project applications are being processed as standard applications to appropriate water, and not as transfers of water under existing water rights.

See Response to Comment 5-3.

The second full paragraph on page 3-9 of the DEIR is deleted.

5-9 See Response to Comment 5-1.

5-10 The 2000 Agreement to Resolve Certain Delta Wetlands Permit Issues (Protest Dismissal Agreement or PDA) between the California Urban Water Agencies and the Delta Wetlands Properties included a Water Quality Management Plan (WQMP). The WQMP was also included as part of the PDA between Delta Wetlands and Contra Costa Water District (CCWD). As noted in the comment, subsequent to the 2001 Final Environmental Impact Report (2001 FEIR), the Project was modified to incorporate the WQMP as an environmental commitment of the Project under consideration in the Place of Use DEIR.

In addition, the Record of Decision issued by the Corps on the 2001 Final Environmental Impact Statement (2001 FEIS) found that the criteria and additional restrictions on project operations contained in the WQMP have been incorporated into the Project and are more stringent than the water quality mitigation measures in the FEIS.

The project description includes a summary of the WQMP (page 2-18). In addition, the WQMP is further summarized on page 4.2-29 of the DEIR. In order to expand on the description of the elements included as part of the Project contained in the WQMP, which was included as part of the PDA between the California Urban Water Agencies and the Delta Wetlands Properties, the WQMP is included as Appendix A of this FEIR.

The comment asserts that there are uncertainties associated with implementation of the WQMP and that these uncertainties preclude a full assessment of the potentially significant impacts to drinking water quality as a result of Project implementation. Impacts to drinking water quality as a result of Project implementation were evaluated in Section 4.2 of the DEIR with the Project complying with the criteria set forth in the WQMP to ensure that the Project is operated to avoid degradation of drinking water supplies. The water quality analysis is described on pages 4.2-38 through 4.2-47 of the DEIR. Specifically, the analysis concluded the following for salinity, dissolved organic carbon (DOC) and methylmercury.

Salinity increases at Chipps Island (WQ-1), Emmaton (WQ-2), Jersey point (WQ-3), and at Rock Slough (exports) (WQ-4) were found to be less than significant because the maximum monthly increases in EC would not exceed the 20 percent significance criteria at each of these locations (see Tables 4.2-3, 4.2-4, 4.2-5 and 4.2-6 on pages 4.2-53 through 4.2-56). In addition, Impact WQ-5 identified that because the Project would release storage water in October and November in years when the water could not be exported for delivery there would be a potential for increases in Delta outflow that could reduce the export salinity.

As discussed in Impact WQ-6, discharges from Project islands could have relatively high DOC concentration that could result in significantly increase DOC levels in Delta exports. However, as discussed on page 4.2-43, implementation of the WQMP Comprehensive Monitoring Program would ensure that Project releases would be monitored to minimize DOC levels and would not adversely affect urban intakes. Because the WQMP is incorporated as part of the Project, as described above, DOC concentrations resulting from Project operations would not be significant.

Increases in methylmercury loading in the Delta (WQ-7) was determined to be significant because of the potential that the open water on the storage islands and the wetland habitat on the habitat islands could produce slightly more methylmercury than existing agricultural land uses on the Project islands. As described on page 4.2-44 of the DEIR, Mitigation Measures WQ-MM-1 and WQ-MM-2 would reduce

the Project's potential to release methylmercury through operating the Project in compliance with the proposed Total Maximum Daily Load (TMDL) Basin Plan amendments for mercury and incorporation of mercury methylation control measures in Project wetland design.

The DEIR also evaluated several other water quality parameters including: water quality near discharge locations (WQ-8); the potential for the Project to release contaminant residues (WQ-9), potential; release of contaminants to receiving waters as a result of construction activities (WQ-10); and increased loading of pollutants associated with recreational boating (WQ-11). Mitigation measures were proposed to reduce Impacts WQ-9 and WQ-11 to less than significant levels (see pages 4.2-46 and 4.2-47of the DEIR) that included conducting environmental site assessment and performing necessary remediation activities prior to Project operations, and reducing the number and size of Project recreational facilities.

As part of the WQMP, the Project would include implementation of a Comprehensive Monitoring Program that would be put in place prior to initiation of Project operations. The monitoring program would provide for the collection of data to support the screening of Project operations and the imposition of operational constraints to prevent both short-term and long-term adverse effects to drinking water quality (see pages 4 through7 of the WQMP).

See also Responses to Comments 5-11 through 5-18.

5-11 The Drinking Water Protection Principles of the WQMP require that the Project (see page 2 of the WQMP): (1) cause no adverse health impacts to water users; (2) not cause or contribute to non-compliance with current or future drinking water regulations; (3) cause no increase in the cost of water treatment or operations; (4) contribute to CALFED's progress toward achieving continuous improvement of Delta drinking water quality; and (5) minimize and mitigate for any degradation in the quality of drinking water supplies. The WQMP establishes a Water Quality Management and Action Board (WQMAB) to implement the WQMP (see page 2 of the WQMP). In addition, as identified in Response to Comment 5-10, the WQMP includes a monitoring program and operational constraints to prevent both short-term and long-term adverse effects to drinking water quality.

The approach presented in the WQMP allows for the adaptive management of the Project in response to real-time water quality data. An annual operating plan will be prepared each year in coordination with CVP, SWP, and CCWD operations, including sampling procedures, field methods, and computer models. Industry standard sampling techniques and field methods will be utilized (e.g., see sampling techniques and protocols of Municipal Water Quality Investigations (MWQI), Jones Tract Flood Water Quality Investigations). Readily available computer modeling to simulate water movement and water quality characteristics will be used to evaluate Project operations as water moves on and off islands and through the Delta (e.g., DSM2,

RMA, Fischer Delta Model). As more precise methods for measuring and calculating are developed that allow for an improved level of certainty, those methods would be used. Operational constraints include reducing, rescheduling or otherwise constraining reservoir discharges if they will exceed drinking water quality principles set forth in the WQMP. The WQMP also identifies tools for monitoring the potential for long-term water quality impacts. Once every three years the Project would submit an accounting of the net increase or decrease in total organic carbon (TOC), total dissolved solids (TDS), bromide and chloride loading in the water diverted from the Delta for urban use due to Project operations (including habitat island operations). Project operations would be monitored regardless of the fact that the analysis in the DEIR determined that the Project would result in salinity and DOC levels below the established thresholds (see Response to Comment 5-10).

5-12 As discussed in Response to Comment 5-10, the WQMP is part of the proposed Project and not a mitigation measure. Project operations would adhere to the requirements of the WQMP and comply with all applicable federal and State water quality requirements.

5-13 The WQMP on page 5 states that "If Project operations threatened a drinking water quality protection principle at the water treatment plant without offsetting benefits and the treatment plant owner has not waived its right to protection, Project operations will be reduced, rescheduled or otherwise constrained as necessary to prevent the impact from occurring". An intent of this provision is to allow an urban water supplier to waive the treatment plant protections afforded by the WQMP if the value of the water outweighs the value of the WQMP protections (e.g., during severe drought conditions). As described on page 4.2-30 of the DEIR, the WQMP includes operations criteria to ensure that estimated effects at treatment plants and operations do not cause modeled trihalomethane (THM) or bromate concentrations at any treatment plant to be greater than 80 percent of the established maximum containment level (MCL). See also Response to Comment 5-11. As further discussed on page 4.2-35, the WQMP restrictions on DOC (which is the largest component of TOC) and EC should be adequate to protect against elevated disinfection by-products (DBP) at the water treatment plans. However, should treatment plant operators have concerns about DBPs, the WQMP would enable them to restrict Project releases.

As described in Response to Comment 5-11, the WQMP, which is part of the Project (see Response to Comment 5-10) requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations. Habitat island discharges are similar in quantity and quality to existing agricultural operations and are not subject to water quality restrictions. As identified in Response to Comment 5-11, the WQMP also requires mitigation to prevent long-term water quality impacts. Such measures include a requirement that once every three years the Project would submit an accounting

of the net increase or decrease in TOC, TDS, bromide and chloride loading in the water diverted from the Delta for urban use due to Project operations (including habitat island operations). Therefore, the WQMP considers discharges from the proposed habitat islands in relation to mitigating for any long-term water quality impacts of the Project to urban water utilities.

5-14 There is no relaxation of threshold. DOC is the largest component of TOC. In the Delta, average DOC levels are approximately 80 percent of TOC. Therefore, measures to control TOC (1 miligrams per liter [mg/L]) are equivalent to measures to control DOC (0.8 mg/L).

To account for the amount of particulate organic carbon in waters (detritus and algae blooms that have not yet decayed) that constitutes the difference between DOC and TOC, which is often seasonally variable, the 2001 FEIR established a significance criteria of 0.8 mg/L DOC. This criteria represents 20 percent the long-term average DOC concentrations at the SWP exports (i.e., 20 percent of 4 mg/L), and not the variation in the seasonal average. Using 20 percent of the average baseline concentration was based on the general idea that the significance criteria should be greater than both natural variability (assumed to be at least 10 percent of specific numerical limit for variables with numerical limits or 10 percent of the mean value for variables without numerical limits) and measurement uncertainty (assumed to be at least 10 percent of measured or modeled variables) (see 2001 FEIR, pages 2-28 to 2-29).

5-15 As described on page 4.2-29 of the DEIR, a key principle of the WQMP is that the Project be operated to minimize and mitigate for any degradation of drinking water supplies. As discussed on page 3-1, Project storage water would be discharged into Franks Tract or Old River and Middle River channels for export when unused CVP or SWP pumping capacity is available. As discussed in Response to Comment 5-11, the WQMP includes operational constraints to protect receiving water quality and ensure any incremental increase in TOC loading is less than significant both in the short-term and long-term.

The WQMP monitoring and modeling assessment will provide a reliable implementation framework for minimizing drinking water quality impacts at all treatment facilities using Delta water. Project discharges would not change the normal range of TOC (e.g., maximum values during winter runoff events) that is experienced by the small treatment plants served by the SWP. Compliance with WQMP implementation procedures would limit the increases in TOC caused by Project discharges at all of these smaller treatment facilities, as well as at the major urban treatment plants.

5-16 The comment points out that new information has been made available since the analysis of nutrients was prepared in the 2001 FEIS and that now, nutrients and ammonium have elevated importance in the drinking water, ecosystem and regulatory

environment. The comment further states that nutrient loads from the Project islands should be evaluated to determine if they are likely to be significantly higher than nutrient loads discharged from Project islands as currently operated.

The 2010 DEIR and previous environmental documents considered the potential impacts related to nutrients and ammonia and concluded that the Project was not likely to change the supply or concentrations of nutrients and ammonia (e.g., see 2001 FEIS; page 3C-10). With respect to the 2009 Report on 2004 Jones Tract Flood Water Quality Investigations by DWR (Jones Tract Report), additional assessment is provided below for nitrate, ammonia, and phosphate, to the extent the conditions can be considered comparable.

Nitrate

Nitrate is commonly found in fertilizers. Further, ammonia, also commonly found in fertilizers, is converted into nitrate though oxidation (nitrification). The agricultural fields of Jones Tract may have been treated with ammonia and nitrate fertilizers prior to the June levee breach. Nitrate is also formed during decomposition of organic material. Nonetheless, as indicated in the comment, DWR found that "the average and the median nitrate levels in the Middle River were comparable to the concentrations found in the Jones Tract Floodwater" (DWR 2009; page 3-25). Further, with one exception, the concentrations of nitrate reported in surface water samples from Jones Tract ranged from non-detect to 3.2 mg/L, well below the established drinking water MCL for nitrate-N of 10 mg/L (DWR 2009; Figure 3.4.1). Historic sampling of agricultural discharges from Bacon Island showed nitrate levels ranging from 0.4-14 mg/L, with a mean concentration of 3.8 mg/L (DWR 2003; Table 8-5).

Ammonia

As noted above, in 2004, Jones Tract was used primarily for agricultural purposes, and ammonia could have been used regularly as a fertilizer. Ammonia in the soil and the natural degradation of organic matter under flooded conditions could have contributed to observed ammonia concentrations. For the period between June 4 and July 7, 2004, surface water samples were collected from Upper Jones Tract, Lower Jones Tract, and Middle River and analyzed for ammonia. During that period, ammonia levels ranged from: non-detect (<0.01 mg/L) to 0.08 mg/L on Upper Jones Tract; non-detect (<0.01 mg/L) to 0.40 mg/L on Lower Jones Tract; and 0.02 mg/L to 0.06 mg/L in Middle River. In several instances during this period, the levels reported in Middle River exceeded those reported for Jones Tract samples, and the average level in Upper Jones Tract samples was less than that reported for Middle River samples (DWR 2009; Table 3.4.1). The Jones Tract Report suggests that ammonia concentrations changed rapidly from week to week, and often the levels were below the detection limit. For instance, over a three-week period, ammonia results for samples from Lower Jones Tract varied from non-detect [June 10] to 0.40 mg/L [June 16] and then back down to 0.02 mg/L [June 23; Middle River had results of 0.03 mg/L that day] (DWR 2009; Table 3.4.1).

The Jones Tract Report does not provide results for ammonia in the Middle River after July 7. Ammonia results for Jones Tract samples continued through November and continued to be highly variable. Sample results at different locations on the same date were highly variable. For instance, 0.18 ± 0.16 mg/L average ammonia was reported for Lower Jones Tract on August 2 (DWR 2009; Table 3.4.1). The variability demonstrated between sampling results reported for the same date suggests that non-temporal factors (e.g., sample location, sample handling, analytical uncertainty, etc) can significantly influence the results.

Notwithstanding the uncontrolled nature of the Jones Tract event, the Jones Tract Report found that "conditions were such that these total ammonia concentrations were well below those that are toxic to fish" (DWR 2009; page 3-24).

Phosphate

Phosphorus compounds are necessary nutrients for both plants and animals. Though not abundant in the natural environment, anthropogenic sources of phosphate include artificial fertilizers and wastewater discharges (DWR 2009). Total phosphorus includes inorganic (orthophosphate) and phosphorus contained in organic matter (organic phosphorus).

The total and orthophosphate concentrations in Jones Tract discharges were comparable to levels at the Banks Pumping Plant. After the levee was repaired, the total phosphorus in both Upper and Lower Jones remained relatively unchanged, ranging between 0.08 mg/L and 0.17 mg/L during monitoring. The median levels of total phosphorus in Middle River were about half the levels found in the Jones Tract. After the levee was repaired, the concentrations of orthophosphate were about 0.05 mg/L, or about half of the total phosphate. The orthophosphate concentrations measured in August showed a large increase. Total phosphorous concentrations in the San Joaquin River at Vernalis are consistently 0.2 mg/L and orthophosphate concentrations in the San Joaquin River are consistently 0.1 mg/L (Kratzer et al 2004). The Jones Tract Report reports that "The average and median levels of phosphorus in the Middle River during the flood recovery process were less than half the levels found in the Jones Tract floodwaters (DWR 2009; Table 3.4.1)." Table 3.4.1, however, shows average ammonia levels, not phosphorous levels and no results for phosphorous for the Middle River were found in the report.

The Jones Tract Report states:

A maximum contaminant level (MCL) in drinking water is not established for orthophosphate or total phosphorus. The phosphorus levels at Jones Tract were not very high, but were always measurable during the study. After the levee was repaired, total phosphorus and orthophosphate in the floodwater were comparable to levels at the H.O. Banks Pumping Plant in the Delta.

As previously stated, the annual source of nutrients, including nitrates, ammonia, and phosphorus, from the Reservoir Islands would be less than the existing source

from agricultural operations; therefore, concentrations of such nutrients from the Project Reservoir Islands will be lower than the existing concentrations from agricultural drainage.

Furthermore, as described in Response to Comment 5-10, the Project includes a WQMP. In recognition of the elevated concerns about nutrients in the aquatic environment, the Project will monitor for nitrates, ammonia, and phosphorous.

5-17 The comment suggests that the DEIR should evaluate potential effects associated with the change in timing and nutrient loading and the potential for Project discharges to increase the levels of taste and odor (T&O) effects to drinking water supplies. Specifically, the comment suggests that the Project could discharge potentially high loads of nutrients in the summer and fall, when nutrient loads at Delta export locations would be low under existing conditions which in turn, could lead to more algae production and associated T&O problems.

Algal/bacteria blooms occur when the population of a species of algae increases exponentially to dominate a water body. The species dominance that occurs during a bloom is generally temporary, lasting for a period of days to weeks, before the algae population crashes, returning to pre-bloom levels. Blooms are believed to be the result of environmental conditions that temporarily favor a particular species. Factors that favor individual species may include relative availability of nitrogen and phosphorus, temperature, and light conditions. Algal population dynamics are highly complex, and generally not predictable from basic environmental measurements. Instead, the effects of algae blooms on T&O compounds are monitored and used as early warning for the treatment plant operators, because T&O compounds are not removed in conventional water treatment processes, but can be treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose).

As described in Response to Comment 5-16, annual sources of nutrients, including nitrates and phosphorus, on the Reservoir Islands would be less than under existing agricultural operations. As a result, discharges from the Reservoir Islands are not expected to contribute to an increase in Delta channel nutrient concentrations over that which currently exists. Furthermore, as described in Response to Comment 5-10, the Project includes a WQMP. The WQMP would ensure that the Project is operated to minimize and mitigate for any degradation of drinking water supplies.

As noted in the comment, T&O incidents in the SWP are commonly associated with geosmin and 2-methylisoborneol (MIB) that are produced by certain algae and bacteria. The ability of individuals to detect these chemicals varies, but the general population can detect either compound at a concentration of about 10 ng/L (parts per trillion) and sensitive individuals can detect even lower concentrations.

The DWR Division of O&M, Water Quality Section has analyzed samples from SWP facilities for T&O producing compounds, MIB and geosmin, since 2000. This

monitoring provides a direct measurement of T&O potential in drinking water supplies. DWR O&M Division staff send out weekly email reports with the results from the previous week's monitoring to provide advanced notice of potential T&O problems to SWP Contractors. T&O issues are of greatest concern for CCWD intakes and the South Bay aqueduct, due to relatively short travel times (i.e., days) from the Delta to the treatment plants. No T&O incidents from MIB or geosmin have been reported from North Bay Aqueduct contractors. The algal blooms responsible for T&O incidents occur in the Delta channels, in Clifton Court Forebay (CCF) and the aqueducts and reservoirs of the SWP system. The rivers are not monitored for MIB and geosmin. Banks Pumping Plant and CCF are both monitored for MIB and geosmin.

The 2006 SWP Watershed Sanitary Survey identified that peak concentrations of MIB and geosmin occur each summer and levels exceeding 10 ng/L have been present for a number of weeks each summer in recent years. MIB has been more problematic than geosmin in the last three years. In July 2003, MIB reached 31 ng/L at Banks but was present at only 7 ng/L at Clifton Court Intake. DWR attributed the peaks to benthic cyanobacteria (i.e., blue-green algae) growing in Clifton Court. An MIB peak of 55 ng/L occurred at Clifton Court in late July 2004 and a peak of 74 ng/L was found at Banks less than a week later. Although DWR attributed these peaks to pumping water off of Jones Tract after the levee break, similar peaks were seen both in 2003 and 2005, before and long after the Jones Tract breach. In August 2005, MIB peaked at 78 ng/L at Clifton Court and at 43 ng/L at Banks. This was followed by elevated concentrations at both locations in mid-September. DWR reports that the timing and amplitude of these spikes clearly indicate the origin of the T&O event was the Delta, rather than Clifton Court. These data indicate that T&O issues can arise both in the Delta channels and within Clifton Court Forebay. Data shows that the peak levels of MIB at Banks also show up in the SBA at Del Valle (Check 7). During the summers of 2003, 2004, and 2005, MIB and geosmin were both found at levels that resulted in customer complaints. The MIB and geosmin concentrations were highest in July-August of each year (not only 2004 when Jones Tract flooded).

The 2006 SWP Watershed Sanitary Survey indicates that peak MIB and geosmin concentrations found downstream in the California Aqueduct at O'Neil Forebay (Check 13) are generally lower than the peak concentrations at CCF and Banks. MIB and Geosmin concentrations in San Luis Reservoir (Pacheco intake) have been very low. In contrast, Castaic Lake (terminal reservoir for SWP West Branch) has very high geosmin spikes occurring in June or July, apparently generated from algal blooms in the reservoir. In June 2004 (before Jones Tract flooding), geosmin was measured at 830 ng/L. The highest geosmin concentrations in the summer of 2002-2004 were between 200 and 830 ng/L.

MIB and geosmin are both measured at high concentrations in the East Branch of the aqueduct. The maximum concentrations recorded were 130 ng/L of MIB in September 2001 and 240 ng/L of geosmin in May 2003. DWR attributed the high levels of geosmin and moderate levels of MIB to benthic algae growing in the East

Branch. Peaks of MIB in July 2004 and 2005 also appear to have been generated in the East Branch. Results of monitoring at the outlet to Silverwood Lake show that MIB and geosmin concentrations suggest the same general pattern as the aqueduct inflow location. These data indicate that the source of MIB and geosmin is the California Aqueduct rather than algal growth in Silverwood Lake. The Sanitary Survey also presents extremely high concentrations of MIB and geosmin in Lake Perris. These measurements (much higher than upstream locations) suggest significant production of T&O compounds in Lake Perris. These high T&O compounds are of particular interest because Lake Perris is a major source for Metropolitan Water District of Southern California's drinking water, although water is typically not drawn from Lake Perris when T&O conditions are adverse.

During the 2004 Jones Tract flooding event, MIB and geosmin were not analyzed by MWQI staff. MIB reached 1,000 ng/L in samples collected while water was being pumped from Jones Tract (DWR 2009). At that time, Jones Tract was contributing 5 to 10 percent of the water at Banks and may have been responsible for the elevated MIB levels (70 ng/L) at Banks (although as described above, high MIB and geosmin concentrations have been measured at CCF and Banks each summer). However, as stated previously, unusually high levels of geosmin were detected at Castaic Lake before the Jones Tract failure occurred.

This summary of SWP measurements of the major T&O compounds, geosmin and MIB, indicates that T&O are generally associated with blue-green benthic algae in the CCF, along the aqueduct, and in the terminal reservoirs. There is no definitive information to conclude that these T&O compounds originated from the temporary discharge of water from Jones Tract in July and August 2004. There is no evidence to suspect that a major source of T&O compounds will be created on the Project Reservoir Islands because annual sources of nutrients, including nitrates and phosphorus, on the Reservoir Islands would be less than under existing agricultural operations. See also Responses to Comments 5-10, 5-11, 5-12, 5-13 and 5-16.

5-18 The comment suggests that the Project has not assessed the impact to drinking water and public health associated with bacteria and that fecal coliform and E. coli monitoring should be included as part of the WQMP. The comment also suggests that a management plan to discourage waterfowl should be implemented and increased monitoring of bacteria based on recreational uses near the islands is required.

Coliform bacteria have been monitored for decades to assess the microbiological quality of drinking water. These bacteria are present in the intestines of humans and other warm-blooded animals and are found in large numbers in fecal wastes. Most species occur naturally in the aquatic environment so their presence does not always indicate fecal contamination. Fecal coliform and *Escherichia coli* (*E. coli)* are more specific indicators of mammalian fecal contamination.

Samples were collected from Jones Tract and from Middle River near the levee breach on June 16, 23, and 30, 2004 and analyzed for total coliform, fecal coliform, and *Escherichia coli* (*E. coli*). Bacterial densities on the flooded agricultural peat soil islands were high initially, but one week later bacterial densities had decreased both in island and river water. By the third week, Middle River coliform densities were higher than in Jones Tract water. No further bacteria densities were collected.

The Project islands are currently managed to provide high quality waterfowl habitat in support of ongoing recreation on the islands and consistent with existing agricultural production. Similar habitat would be created on the Habitat Islands which could also support upland game. The Project could result in a net increase of low- to medium-quality shallow water wetland waterfowl habitat on the Reservoir Islands during some years (see page 4.9-23 of the DEIR). Although wildlife currently use the islands and would continue to use the islands after project implementation, there is no evidence to suggest that the habitat features of the Project islands would increase overall waterfowl use in the Delta as a whole or that fecal coliform or E. coli would be elevated compared to existing conditions. Furthermore, there is no evidence that waterfowl and other wildlife utilization of Delta islands contribute fecal coliform and E. coli in a manner that affects drinking water and public health.

The Project also includes some recreational facilities that would increase the demand for wastewater disposal facilities. The recreational facilities could also increase the number of people in contact with surrounding waters. As described under Impact UT-12 on page 4.4-29 of the DEIR, as part of recreational facility design, the Project would install a new sewage disposal system at each facility consistent with San Joaquin County and Contra Costa County requirements which would decrease the risk of an inadvertent spill of sewage from island facilities.

5-19 Comment noted that the proposed reservoir island levee design will improve the slope stability and reduce the through-seepage for static loading conditions.

The Project includes a comprehensive seepage monitoring and control program. It is summarized on pages 2-19 and 2-20 of the DEIR and described in detail in the Protest Dismissal Agreement between Delta Wetlands Properties and the East Bay Municipal Utility District, included as an appendix to the 2001 FEIR.

5-20 Levee stability is addressed in Section 4.3 of the DEIR. As described on page 4.3-12, the Project also includes an environmental commitment that requires compliance with the recommendations in the *Preliminary Design Report: Reservoir Island Levees, Delta Wetlands Project* which would provide increased stability. On page 4.3-5 it is stated that final levee design will be subject to engineering review. Project levees would have a larger footprint than current levees; therefore, they would be more stable and the risk of failure during a seismic event would likely be less when compared to existing conditions.

In the unlikely event of an outward Project levee failure that affects neighboring levees, the Project would be responsible for the cost of all mitigation and remedial actions; however, the effects of an outward breach were evaluated in the 2000 Revised EIR/S (see Appendix H, page 3-18) and were found to be short-term and minor in nature.

In addition, as described in Response to Comment 5-19, the Project Reservoir Islands maximum storage elevation was reduced by 2 feet. As a result, total storage capacity would be reduced by 23 taf and the flows that could affect neighboring levees would be less.

5-21 As described in the draft Habitat Management Plan (HMP), the Habitat Management Advisory Committee (HMAC) will provide technical oversight of habitat island management, including the review of habitat creation plans. Per Table 22 in the draft HMP, the HMAC will likely include technical experts from CDFG), United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (Corps), and at least one conservation organization.

Regarding changes to habitat composition on the habitat islands, as described on page 4.6-5 of the DEIR, "the types and distribution of crops and distribution of wetlands on the islands have changed with the largest change occurring on Holland Tract." These changes are reflected in Table 4.6-8, which provides updated acreages for the effects of Alternative 1 and 2, including reservoir creation and habitat creation/management activities. Changes to habitat conditions since the 2001 FEIR and 2001 FEIS have occurred primarily through changes in agricultural practices as shown in Table 4.6-5. As shown in Table 4.6-7, the acreage of habitat to be developed on the Habitat Islands has not changed since the 2001 FEIR and 2001 FEIS.

As discussed on page 4.6-6 in the DEIR, wetland mapping was updated in 2008 using a combination of aerial photograph interpretation and field survey. An additional survey was completed in 2010. Updated wetland acreages are provided in revised Table 4.6.4 (attached). The updated wetland acreages do not change any conclusions reached in the DEIR. This information represents the most current information regarding wetland habitat for the islands, and is providing the basis for the updated delineation submitted to the Corps. The California Environmental Quality Act (CEQA) does not require that a wetland delineation be verified by the Corps prior to evaluating potential impacts to wetland features in a CEQA document.

Regarding proposed habitat designs please refer to the draft HMP for design criteria and preliminary plans for habitat creation (Figures 2 through 7). In addition, the draft HMP provides for long term management; please see page 11 of the draft HMP.

5-22 Climate change and the potential effects of climate change as they relate to the Project are described in Section 4.14 of the DEIR, including sea level rise, rapid changes in climate, flooding, temperature change etc. The analysis in Section 4.3 of the DEIR takes into consideration the effects of climate change, such as sea level rise, on levee

stability. The potential for raising and lowering water levels in the reservoir islands associated with Project operations to affect levee stability was evaluated in the 2001 FEIR. As discussed on page 3D-16, the drawdown rate was not considered to be rapid enough to result in slope failure due to saturated soils. The risk was considered minimal and replacement or shoring up of saturated soils could be addressed during routine maintenance through the additional of fill material.

As discussed in Response to Comment 5-20, the Project levees will be designed to reduce the risk of failure, and therefore, impacts to SWP and CVP supplies.

5-23 Comment noted. The third full paragraph on page 5-6 of the DEIR is revised to read as follows:

…. Conveyance ~~A~~alternatives currently being evaluated include: ~~comprise the following conveyance options; through-Delta; east alignment (tunnel and channel); west alignment (tunnel and channel); all-tunnel; or dual conveyance (combines portions of east, west, or all-tunnel alignments with some elements of through-Delta alignment)~~dual conveyance (pipeline/tunnel, eastern and western alignment unlined canal, and eastern or western alignment lined canal: and an isolated facility (pipeline/tunnel, eastern and western alignment unlined canal, and eastern or western alignment lined canal),. …

5-24 Comment noted. The following is added after the first sentence on page 5-7 of the DEIR:

Additional information about the Bay Delta Conservation Plan (BDCP) can be obtained through the BDCP website: http://baydeltaconservationplan.com/default.aspx

5-25 The cumulative impacts evaluated in Chapter 5 include the BDCP. As described on page 5-49 and 5-51, it is anticipated that the Project would, when combined with BDCP actions, result in a net increase in tidal wetlands within the Delta.

5-26 As described on page 4.14-13 of the DEIR, existing and future no-project greenhouse gas (GHG) emissions are generated by three primary sources: peat oxidation, farming and recreation. The amount of existing GHG emissions due to these sources on the Project Islands is presented in Table 4.14-2. As discussed, the agricultural oxidation rate would be reduced by almost 90 percent if Project Islands were converted to reservoirs or wetlands. As further discussed on page 5-58, the increase in GHG emissions associated with recreational activities, habitat, and water supply operations would be outweighed by reductions in peat oxidation related GHG emissions associated with the inundation of Bacon Island and Webb Tract.

5-27 Mitigation Measure UT-MM-2 would replace existing electrical distribution lines on Webb Tract with new or relocated distribution lines located along perimeter levees

on Webb Tract. Mitigation Measure UT-MM-10 would do the same on Webb and Holland Tracts and Bouldin Island. These lines would replace existing lines; they do not represent additional lines on the islands. They would be installed overhead, similar to existing installations on the Islands and elsewhere in the Delta, and would not result in a net increase in collision threats for greater sandhill crane.

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, Governor
John McCamman, Director

June 28, 2010

Mr. Wilmar L. Boschman
Semitropic Water District
1101 Central Avenue
Wasco, CA 93280-0877

Dear Mr. Boschman:

Subject: Delta Wetlands Project, Draft Place of Use Environmental Impact Report, SCH #1988020824, Sacramento-San Joaquin River Delta, Contra Costa, Sacramento, and San Joaquin Counties

Department of Fish and Game (DFG) personnel have reviewed the above Delta Wetlands Project (Project) Draft Place of Use Environmental Impact Report (EIR). The Project is located in the central portion of the Sacramento-San Joaquin River Delta (Delta) on the islands of Webb Tract, Bacon Island, Bouldin Island, and Holland Tract. The surrounding waterways include the Mokelumne River, Potato Slough, San Joaquin River, False River, Old River, Connection Slough, Middle River, Holland Cut, and Sand Mound Slough.

The Project as a whole proposes to increase the availability of water in the Delta for export or outflow by storing water on two existing Delta islands (Webb Tract and Bacon Island). Impacts to wetlands and wildlife species caused by inundation of Webb Tract and Bacon Island are proposed to be mitigated by implementation of a Habitat Management Plan (HMP) on the remaining two habitat islands (Bouldin Island and Holland Tract). The Project will divert and store freshwater inflow on the reservoir islands during times of winter "surplus" in the Delta until released for rediversion and conveyance using State Water Project (SWP) and Central Valley Project (CVP) facilities to south-of-Delta users. DFG is identified as a Trustee Agency pursuant to the California Environmental Quality Act (CEQA) section 15386 and is responsible for the conservation, protection, and management of the State's biological resources.

Since the circulation of the original EIR in 2001, the Delta has experienced significant declines in the abundance of Sacramento and San Joaquin Delta fishes including Delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), winter-run Chinook salmon (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon and Central Valley fall-run Chinook salmon. DFG's previous comments on the Notice of Preparation (NOP) explained that the new CEQA analysis must reflect current Delta conditions, including all new information pertinent to known limiting factors. DFG remains concerned that the analysis provided in the draft EIR does not adequately evaluate the Project in the context of current conditions and underestimates the effect of the Project on

6-1

listed species. The EIR does not provide adequate mitigation for those impacts that are disclosed or designates them as "unavoidable." The EIR should evaluate all potential mitigation measures and should provide sufficient justification if those measures would be considered infeasible. 6-1 Cont

Incidental Take Authorization

The EIR relies upon outdated conditions from the original Incidental Take Permit (ITP) even though DFG has informed the Project proponent that the current ITP is no longer consistent with the California Endangered Species Act (CESA). In a letter dated March 8, 2010, DFG informed Delta Wetlands, Inc. that it had recently evaluated the Project in the context of current conditions in the Delta and found that the existing ITP authorization suffered from several deficiencies. The deficiencies compelled DFG to request that Delta Wetlands apply for a new ITP to bring the Project into compliance with CEQA and CESA. DFG had originally issued the ITP in June 2001 to address impacts of the "taking" of several State listed species pursuant to Fish and Game Code sections 2081(b) and 2081(c), and California Code of Regulations, Title 14 section 783 et seq. DFG's recent review determined that the existing ITP is not consistent with DFG's issuance criteria as required under Fish and Game Code section 2081(b) (1-4). Specifically, the ITP does not fulfill DFG's requirement that all impacts of the taking of Covered Species be minimized or fully mitigated. DFG remains concerned that the extensive loss of habitat and proposed water expansion activities has the potential to cause significant adverse impacts to terrestrial and fisheries resources. The current ITP, Final Operations Criteria (FOC) and Habitat Management Plan (HMP) are not sufficient to address impacts to listed species and do not afford sufficient mitigation measures as required under CEQA. 6-2

Hydraulic Analysis

DFG recommended in the NOP that the EIR re-visit the hydraulic analysis and modeling of the overall Project. Unfortunately, the analysis conducted in the draft EIR is still insufficient to evaluate the Project in the context of the current Delta conditions. Large scale planning models such as CalSIM II are not considered the appropriate tool to determine actual water availability within the Delta or quantify the effect of the Project on sensitive resources. Since CalSIM is a Statewide planning tool intended for use in reservoir and riverine routing, it yields coarse spatial resolution and is a poor representation of Project demands and water supplies. The model operates on a monthly times-step, which is useful in system-wide operation of SWP/CVP delta outflow, but has limited value for biological resource assessment or water availability analysis. The recent rapid drop in Delta fish populations has resulted in required fish protection measures that effectively reduce water deliveries for many Delta users with rights senior to the Project's. CalSIM does not consider the full amount of water under appropriation within the Delta and would therefore imply that water is available at the expense of existing in-Basin water users' ability to fully put their appropriative water to beneficial use. The analysis should be updated to evaluate the Project under current Delta conditions and should address the extent of take caused by the Project when all senior water users in the system are at full build out. DFG also requested that the new analysis consider the updated Biological Opinions for the Operations Criteria 6-3 6-4

and Plan (OCAP) for the SWP recently completed by U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) and revise the diversion and discharge criteria section to be consistent with OCAP. The analysis should also reflect the conditions placed upon the SWP in its recently issued longfin smelt ITP. At a minimum, the analysis in the EIR should be revised to: a) include recent data on water years beyond 1922-2003, b) evaluate the effect of climate change on the availability of water, c) use current fisheries population data to determine the percent of the population affected by operations (the current analysis used 1980-2003 fisheries data as its baseline), and d) evaluate integrated operations with SWP including potential increased entrainment caused by diverting water into the south Delta and reverse Middle and Old river (OMR) flow restrictions. The updated analysis should be provided to DFG in the revised ITP application and recirculated in the EIR.

6-4 Cont

Fisheries Impacts

The Delta serves as habitat and/or a migratory route for many Federal and State listed species including Central Valley steelhead (*Oncorhynchus mykiss*), Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Delta smelt, longfin smelt and green sturgeon (*Acipenser medirostris*).

The EIR fails to adequately disclose and adequately mitigate adverse impacts of the Project on these sensitive fishery resources. Though the EIR appears to recognize that the Project will likely have direct and cumulative impacts on listed fishes, it does not include sufficient mitigation to offset those impacts. The proposed season of diversion overlaps times when eggs and larvae of both longfin and Delta smelt are likely to be in the vicinity of the Project and would be entrained by diversion operations. Diversion operations are also likely to divert delta smelt, longfin smelt and Chinook salmon into the south Delta where they are more likely to be entrained within the SWP and CVP facilities. The EIR states that these impacts to listed species are considered "significant and unavoidable" but fails to adequately evaluate all potential minimization and mitigation measures or detail why alternative measures would not be feasible. Instead the proposed mitigation under the EIR is limited to the implementation of a Fishery Improvement Mitigation Fund and the establishment of a Shallow-Water Aquatic Habitat Conservation Easement on an existing 200 acres of shallow water habitat on Chipps Island. The implementation of a fund with an undetermined amount of funding for undefined benefit is not considered adequate mitigation for the loss of listed species. Also, DFG does not consider the preservation of existing habitat as sufficient mitigation to offset direct loss of listed fishes from entrainment by the Project or cumulative impacts of the Project that may cause increased entrainment at the SWP or CVP facilities. As such, the EIR should evaluate all potential mitigation measures that might offset the adverse effects of the Project including a reduction in Project size, a reduction in the rate of diversion, or the implementation other mitigation measures that might be adequate to mitigate the Project's effects. The evaluation of potential mitigation measures should be detailed in the EIR and recirculated.

6-5

Wildlife Impacts

The Delta islands serve as habitat and/or a migratory route for many terrestrial Federal and State listed species including giant garter snake (*Thamnophis gigas*), riparian brush rabbit (*Sylvilagus bachmani riparius*), Swainson's hawk (*Buteo swainsoni*), western yellow billed cuckoo (*Coccyzus americanus occidentalis*), willow flycatcher (*Empidonax traillii*), greater sandhill crane (*Grus Canadensis tabida*), and California black rail (*Laterallus jamaicensis coturniculus*). The EIR fails to adequately disclose and adequately mitigate adverse impacts of the Project on these sensitive wildlife resources. The current Project would cause inundation of approximately 11,000 acres of habitat on Webb Tract and Bacon Island for Swainson's hawk, giant garter snake and other terrestrial species. The Habitat Management Plan, the sole form of mitigation referenced in the EIR, proposes to maintain and manage the remaining two islands totaling 9,000 acres as mitigation. Conservation and management of lesser existing habitat is not considered adequate mitigation for the permanent or temporary loss of listed species habitat. DFG recommends habitat loss be mitigated by creation of additional habitat at a minimum ratio of 3:1 or conservation of existing habitat at this ratio along with enhancement, management and funding in perpetuity. The resource assessment should be revised to include adequate mitigation for loss of habitat in the inundation sites and recirculated. 6-6

Water Quality

DFG recommended that the analysis reassess the effect of long- and short-term storage of water on existing agricultural islands on water quality and the effect of discharging the stored water during low flow conditions in the Delta. The EIR generally relies on to-be-developed monitoring measures to offset water quality impacts of the Project. The EIR should disclose the specific measures needed to offset the adverse effects of dissolved oxygen, methylated mercury, leaching of tannins, pesticides etc. on Delta resources. The analysis should also consider and mitigate the Project's effects on invasive species abundance, as well as food productivity for listed species. The EIR also states that an assessment of potential contamination sites will be conducted but does not disclose their location or proposed remediation measures. All potential contamination sites should be evaluated in the EIR and remediation measures disclosed prior to finalization of the document. 6-7

In previous letters, DFG recommended that a new ITP application be submitted to DFG for all listed species with the potential to be impacted by the Project. The ITP application should include a complete project description and the updated analysis provided in the revised EIR in addition to other required ITP application elements. The analysis should be sufficient to evaluate the effects of the Project on each Covered Species and will be used to evaluate and develop species-specific minimization and mitigation measures. All feasible minimization and mitigation measures that partially or fully offset unavoidable impacts to Covered Species should be included in the revised EIR prior to recirculation. 6-8

Due to the likelihood that the new analysis and subsequent ITP terms may affect the overall Project scope and design, DFG is further recommending that Semitropic Water Agency revise and recirculate the EIR after consultation with DFG staff. During the review process, DFG also recommends that NMFS and USFWS staff be included in discussions to assure that Project measures comply with Federal guidelines. DFG appreciates the opportunity to comment on the Delta Wetlands EIR. DFG staff is available to meet with you to clarify our comments and provide technical assistance on revisions to the Habitat Management Plan and Final Operation Criteria as a result of changes necessary to mitigate impacts. If you have any questions, please contact Ms. Corinne Gray, Staff Environmental Scientist, at (707) 944-5526; or Mr. Scott Wilson, Environmental Program Manager, at (707) 944-5584. 6 - 9

Sincerely,

Scott Wilson FOR

Charles Armor
Regional Manager
Bay Delta Region

cc: State Clearinghouse

Ms. Megan Smith
ICF Jones and Stokes Associates
msmith@jsanet.com

Letter 6: Charles Armor, Regional Manager, Bay Delta Region, State of California – California Natural Resources Agency, Department of Fish and Game

6-1 The Draft Environmental Impact Report (DEIR) considered new information and changed circumstances since publication of the 2001 Final EIR (2001 FEIR), including but not limited to changes in the status of listed species and the pelagic organism decline. The DEIR used appropriate analysis methods to evaluate and quantify impacts to listed species.

To further assess the potential risk of larval longfin smelt entrainment into the proposed Project diversions, as well as the effects of potential changes to local Delta channel hydrodynamics, a Particle Tracking Model (PTM) study was performed. The PTM evaluated hydrologic conditions both with and without proposed Project diversion operations to assess potential changes fish movement, including the potential risk for entrainment onto the Reservoir Islands as a result of direct diversion through tracking the fate of simulated particles. The simulated injection of neutrally buoyant particles in each run occurred at seven stations throughout the Delta on January 1, January 15, February 1, and February 15 based on hydrologic conditions in 1992. This particular year (1992) was included as one of the three low outflow years used to analyze effects to longfin smelt as part of the PTM study run by California Department of Fish and Game (CDFG) for the Incidental Take Permit (ITP) State Water Project (SWP) Effects Analysis. This particular year was chosen for the Project's PTM analysis because, although 1992 was a low outflow year, it had a modest flow increase in mid-February which would have met the criteria for Project diversions. The proposed Project diversion was assumed to be at a rate of 1,739 cubic feet per second (cfs) onto one of the two Reservoir Islands. The simulation analyses were run for a period of 90 days after each particle injection. Particle fate included diversion onto the Reservoir Islands, entrainment into the SWP or Central Valley Project (CVP) export facilities, entrainment into agricultural diversions, retention in the south Delta, and transport downstream into Suisun Bay.

Results of particle fates were then assessed under conditions with and without the Project diversions. The findings suggested that when compared with the base case of No Project conditions, particles had only incremental increase in probability of being entrained into the SWP or CVP project intakes. For assumed February diversions onto Bacon Island and Webb Tract the percentages of increased entrainment resulting from the Project were all less than 1 percent. Given these results, the likelihood of the Project causing substantial increases in fish presence resulting in significant impacts on the SWP and CVP exports is extremely low. Therefore the findings of the PTM are consistent with the analysis in the DEIR and the results do not change the conclusions or findings of the DEIR.

The DEIR included all mitigation measures imposed on the Project by CDFG in the Project ITP. For a discussion of mitigation measures for significant and unavoidable

impacts refer to Response to Comment 6-5. Impacts identified as significant and unavoidable (FISH-MM-5 through FISH-MM-9) addressed potential effects on listed fish species as a result of Project operations. Each of these impacts included recommended mitigation measures to reduce the magnitude of the impact consistent with California Environmental Quality Act (CEQA) Guidelines §15126.4(a). Nonetheless, the DEIR concludes that these impacts would remain significant and unavoidable. Pursuant to Public Resources Code §21081 and CEQA Guidelines §15091, the lead agency, Semitropic Water Storage District (Semitropic), will prepare and adopt specific written findings regarding significant impacts associated with the Project that cannot be avoided or reduced to a level that is less than significant.

6-2 Delta Wetlands has had several meetings with CDFG staff since the release of the DEIR to identify steps needed to either amend the original ITP or obtain a new ITP. These steps are being taken in parallel with other permitting steps outside of CEQA, including an updated Section 404 permit under the Clean Water Act and updated compliance under Section 7 of the Endangered Species Act. The amended or new ITP will stipulate any required changes to the final Habitat Management Plan (HMP) and/or Final Operations Criteria (FOC).

6-3 The comment states that large-scale planning models such as CALSIM II are not considered appropriate to determine actual water availability in the Delta or to quantify the effect of the Project on sensitive resources. CALSIM II is the planning model developed to simulate the operations of the SWP and CVP reservoirs and water delivery system for current and future facilities, flood control operating criteria, water delivery policies, instream flow and Delta outflow requirements. CALSIM II is currently the best available tool for determining surplus water availability in the Delta and export capacity of SWP and CVP facilities. As described on page A-4 in DEIR Appendix A, In-Delta Storage Model, CALSIM II is a widely accepted tool for modeling the SWP and CVP and is the primary system-wide hydrologic model being used by California Department of Water Resources (DWR) and United States Bureau of Reclamation (Reclamation) to conduct planning and water supply analyses of potential projects using a monthly time-step. Monthly time-step models are used by water managers to simulate water system operations for planning purposes. If monthly time-step model output does not reflect a water manager's experience or expectations, the manager may use professional judgment in refining and extrapolating from model results to provide insight into weekly or daily operations. Daily models typically tier off the results of a monthly time-step model.

CALSIM II is a monthly simulation of the SWP and CVP for defined facilities, hydrological conditions and a set of regulatory requirements using 82 years of historical hydrology from water year 1922–2003. As a result, the model captures the range of hydrologic conditions including wet, above normal, below normal, dry and critical dry years. Specifically as it relates to the Project, the range of years used a specific time period of 1980 – 2003 which still reflects a broad range of hydrologic conditions in the Delta.

CalSim II is set up to simulate and account for the effects of various regulatory requirements through a multi-step algorithm. CALSIM II "steps" simulate operations of the system under regulatory requirements and agreements. To address designated place of use deliveries, the recent Old and Middle River (OMR) flow criteria, groundwater bank integration, and the many issues of water operations in the Delta, an In-Delta Storage Model (IDSM) was developed to evaluate monthly Project operations under various regulatory requirements and rules of operation. IDSM also runs 15 minute simulations derived from the monthly CALSIM II model. This allows for consistency in the PTM analysis (see Response to Comment 6-1) which also runs on a 15-minute interval which is better able to take into account the many variables within the Delta-system (i.e. tidal influences, etc.).

The Memorandum Decision invalidating the 2008 Biological Opinion (BO) by U.S. Fish and Wildlife Service (USFWS) for the SWP/CVP Operations Criteria and Plan (OCAP), explained that CALSIM II "is the standard planning tool for evaluating project operations: and that no superior model has been identified" (page 75, ln 2-3; page 98, ln 26). In addition, the CALSIM model was used in the water supply EIR prepared for the Woodland-Davis Clean Water Agency water rights application, and the State Water Resources Control Board (SWRCB) accepted the applicant's conclusion that "[d]espite its limitations…the CALSIM II model is the best available tool for determining when water will be available for appropriation for its project." (SWRCB Water Right Decision 1650; page 5).

All Project exports would be reviewed during re-consultation for updated biological opinions and incidental take authorization.

6-4 See Responses to Comment 6-1 for an analysis of the potential risk of larval longfin smelt entrainment into the proposed Project diversions, as well as the effects of potential changes to local Delta channel hydrodynamics.

The Project operations are planned in such a way to reduce risk of entrainment of all sensitive fish species including juvenile salmon during Project discharges and diversions. All project diversions would come through positive barrier fish screens. The installed fish screens would be constructed to delta smelt standards, of 0.2 ft/sec approach velocity and a 1.75 millimeter (mm) screen mesh slot opening, which are above those required for salmonids (i.e., approach velocity is lower). Project discharge for export would occur during mid-summer and early fall months when salmon are not present in the central and south Delta due to high water temperatures. Given the commitment of the Project to install and operate positive barrier fish screens that meet the delta smelt design criteria on all diversions, the seasonal timing of diversions, and the seasonal and geographic distribution of salmonids, the risk of entrainment or impingement of all juvenile salmonids, including the Mokelumne River populations, as a result of project operations is very low.

Since the projected numbers associated with impacts of the proposed Project to fish species are generally quite small, the data were presented in the text of the DEIR as a percentage of salvage at the SWP and CVP facilities, in an effort to put the data into perspective. However, detailed impacts to fish species are also discussed in Appendix B of the DEIR which presents the findings of the IDSM modeling analysis. This section summarizes in detail the simulated losses for each species which are shown as a percentage of the total sample population, as well as a percentage of salvage at the SWP and CVP export facilities.

The DEIR analysis of exports is consistent with the OCAP BOs and does not need to be revised. Project exports would occur from July to November, with most exports (i.e., 80 percent) occurring in the July-September period which is the typical transfer window identified in the OCAP BOs. Exports would occur when SWP pumping capacity is available under OCAP rules. A small percentage of Project exports are modeled to occur in October and November (i.e., 20 percent), outside of the typical OCAP transfer window.

All Project exports are under review in the re-consultation for updated biological opinions and incidental take authorization from the resources agencies. See also Response to Comment 6-2.

6-5 The DEIR estimated that Project diversions (December–March) could result in average annual losses of 0.3 percent of delta smelt larvae and 0.4 percent average annual losses of longfin smelt larvae. Potential impacts to both delta and longfin smelt would be reduced by the environmental commitments, which are part of the Project and include reduced diversion operations when CDFG fishery sampling or site-specific fishery sampling show that larval delta or longfin smelt are in areas adjacent to the diversions. Additionally, the relative effect of such small losses of the larval life stages is exponentially less than similar magnitude effects would be on older life stages in terms of population-level responses.

Loss of delta and longfin smelt eggs are not likely as a result of Project operations. Since delta smelt and longfin smelt have adhesive eggs that are attached to sand or other substrates, eggs are not vulnerable to entrainment into water diversions. Therefore operation of the Reservoir Island diversions, Habitat Island diversions, or changes in south Delta export operations associated with the proposed Project would not affect delta smelt or longfin smelt eggs.

The DEIR concluded significant and unavoidable risk for juvenile Chinook salmon, juvenile steelhead, delta smelt, longfin smelt and green sturgeon due to the fact that after the implementation of all of the environmental commitments and the mitigation measures, risk of entrainment of small life forms of these fish is unavoidable. This is due in part to the limitations of technology, since current fish screen design can only prevent entrainment for fish greater than 15 mm in length. Additionally, the time frame for diversion cannot be changed significantly from

what is currently presented in the DEIR and still meet the Project's objectives; the design and goal of the Project is to capture excess flows in the winter/early spring period. Furthermore, the mitigation measures for this Project do not encompass all of the preventative actions being implemented to protect biological resources; the Project's environmental commitments, as described and incorporated into the Project, offset the Project's potential impacts to fish species, which are further mitigated by measures FISH-MM-1 through FISH-MM-6. Furthermore, the FOC described in the DEIR ensure that real-time data, which includes monitoring for presence of fish species presence, directly relate to Project operation limits and criteria. In this way, the Project is designed to be flexible in order to protect sensitive Delta fish populations.

The Fishery Improvement Mitigation Fund (FISH-MM-5), as described on pages 4.5-100 and 4.5-101 of the DEIR, will be funded with annual contributions which will be based on the annual quantity of water diverted to the Project Reservoir Islands, the amount of this water exported, and Project effects. Revised permit terms may be established by USFWS, CDFG, and National Marine Fisheries Service (NMFS). Initial funding will be provided prior to implementing the Project. Specific details regarding the exact amount of funding were not provided in the DEIR because the amount will be dependent upon agency findings within the revised Biological Opinions. Consultation with these agencies has been initiated, and additional details regarding exact funding levels are anticipated to be identified during this process.

The establishment of a shallow-water Aquatic Habitat Conservation Easement (FISH-MM-6 described on page 4.5-101 of the DEIR) is not being proposed as mitigation for the direct loss of fish from entrainment, rather as mitigation for potential losses of larval/early juvenile smelt rearing habitat associated with the shift of X2. For delta smelt, the average impact in terms of the loss of optimal salinity habitat was actually a very slight benefit of 0.04 square kilometer (km^2) increased area (9.9 acres). The maximum impact was a decrease of 0.79 km^2 (195 acres). This is approximately the size of the proposed conservation easement of 200 acres of habitat at Chipps Island. This measure is consistent with the 1997 NMFS BO: “Prior to construction, DW will secure a perpetual conservation easement for 200 acres of shallow-water aquatic habitat not currently protected by easement or covenant.”

6-6 The DEIR discloses the potential effects the Project could have on each of the species listed (pages 4.7-61 through 4.7-73). Furthermore, the DEIR describes the acres of suitable habitat that would be affected for each species, and the corresponding mitigation under the HMP (Ibid). For example, Impact W-5 describes the potential loss of approximately 509 acres of aquatic habitat and 443 acres of upland habitat for giant garter snake. It further commits to the creation of at least this same acreage to be created / restored on the habitat islands under the HMP. The suitability of the habitat lost versus that created under the HMP is also discussed. For example, it is estimated that approximately 9,978 acres of suitable

foraging habitat for Swainson's hawk would be impacted under Alternative 2 (Impact W-13). This foraging habitat is primary agricultural fields in active corn production, a crop type that does not provide ideal foraging opportunities for this species. As described under Impact W-13, the final HMP will require, at a minimum, 6,929 acres of suitable foraging habitat to be preserved or created on the habitat islands, and that this habitat shall be managed to provide higher quality foraging habitat than that lost on the Reservoir Islands. These project commitments will ensure that potential effects to State listed species are fully mitigated.

6-7 The comment suggests that the analysis reassess the effect of long- and short-term storage of water on water quality and the effect of discharging the stored water during low flow conditions in the Delta. Water quality impacts of the Project, including both reservoir and habitat islands, were addressed in Section 4.2 of the DEIR.

The comment also states that the EIR generally relies on to-be-developed monitoring measures to offset water quality impacts and that specific mitigation measures should be disclosed. The 2000 Agreement to Resolve Certain Delta Wetlands Permit Issues (Protest Dismissal Agreement or PDA) between the California Urban Water Agencies and the Delta Wetlands Properties included a Water Quality Management Plan (WQMP). The WQMP was also included as part of the PDA between Delta Wetlands and Contra Costa Water District (CCWD). Subsequent to the 2001 FEIR, the Project was modified to incorporate the WQMP as an environmental commitment of the Project under consideration in the Place of Use DEIR.

In addition, the Record of Decision issued by the Corps on the 2001 Final Environmental Impact Statement (2001 FEIS) found that the criteria and additional restrictions on project operations contained in the WQMP have been incorporated into the Project and are more stringent than the water quality mitigation measures in the FEIS.

The project description includes a summary of the WQMP (page 2-18). In addition, the WQMP is further summarized on page 4.2-29 of the DEIR. In order to expand on the description of the elements included as part of the Project contained in the WQMP, which was included as part of the PDA between the California Urban Water Agencies and the Delta Wetlands Properties, the WQMP is included as Appendix A of this FEIR. As previously stated, impacts to water quality as a result of Project implementation were evaluated in Section 4.2 of the DEIR with the Project complying with the criteria set forth in the WQMP to ensure that the Project is operated to avoid degradation of drinking water supplies.

The WQMP includes a comprehensive monitoring program and operational criteria. The approach presented in the WQMP allows for the adaptive management of the Project in response to real-time water quality data. An annual operating plan will be

prepared each year in coordination with CVP, SWP, and CCWD operations, including sampling procedures, field methods, and computer models. Industry standard sampling techniques and field methods will be utilized (e.g., see sampling techniques and protocols of Municipal Water Quality Investigations (MWQI), Jones Tract Flood Water Quality Investigations). Readily available computer modeling to simulate water movement and water quality characteristics will be used to evaluate Project operations as water moves on and off islands and through the Delta (e.g., DSM2, RMA, Fischer Delta Model). As more precise methods for measuring and calculating are developed that allow for an improved level of certainty, those methods would be used. Operational constraints include reducing, rescheduling or otherwise constraining reservoir discharges if they will exceed drinking water quality principles set forth in the WQMP. The WQMP also identifies tools for monitoring the potential for long-term water quality impacts. Once every three years the Project would submit an accounting of the net increase or decrease in total organic carbon (TOC), total dissolved solids (TDS), bromide and chloride loading in the water diverted from the Delta for urban use due to Project operations (including habitat island operations). Project operations would be monitored regardless of the fact that the analysis in the DEIR determined that the Project would result in salinity and Dissolved Organic Carbon (DOC) levels below the established thresholds.

The comment also raised concerns about invasive species and disclosure of potential contaminated sites.

With respect to invasive species, the Project would not include elements or sources of water that would introduce invasive species. Delta water is used to flood the reservoir Islands. As a result, Project operations would not affect the type or amount of invasive species in the Delta. Impacts to listed species are addressed in the DEIR in Sections 4.5 and 4.7. See also Responses to Comments 6-1, 6-4, 6-5 and 6-6.

With respect to potential contamination sites, the DEIR, on page 4.2-45, states that the 2001 FEIR and 2001 FEIS identified potential soil contamination resulting from historic agricultural operations or waste disposal practices on Project islands. This potential was based on soil sampling that was presented in Appendix C6 of the 2001 EIS (This information was also included in the 1995 DEIR/EIS in Volume II). The impact was determined to be significant with Mitigation Measure WQ-MM-3 recommended to reduce the impact to a less-than-significant level. Mitigation Measure WQ-MM-3 (see page 4.2-46 of the DEIR) requires that the Project applicant conduct site assessments and if there is an indication that contamination would mobilize into the stored water, develop and implement a remediation plan under the supervision of the Regional Water Quality Control Board (RWQCB). All remediation activities would be completed prior to the initiation of any Project water storage.

In addition, Phase I and Phase II site assessments were conducted for both the proposed reservoir islands (Bacon Island and Webb Tract) and the habitat islands (Bouldin Island and Holland Tract) as part of the Integrated Storage Investigations conducted by the DWR Division of Planning and Local Assistance in 2003 (*In-Delta Storage Program State Feasibility Study Draft Environmental Evaluations*, DWR Division of Planning and Local Assistance, July 2003). The Phase I site assessments for the islands determined that remediation would be required before the islands could be used as storage or habitat. A Phase II study was conducted by DWR. Seventy-seven soil samples were evaluated. Elevated levels of petroleum hydrocarbons were detected in some samples. Low concentrations of other potential contaminants including pesticides and heavy metals were also identified. Based on these results, DWR recommended that further investigations be conducted at identified locations. These results are consistent with the WQ-MM-3 requiring that potential contaminants be identified and mitigated prior to any water being stored as part of the Project.

6-8 See Response to Comment 6-2. Delta Wetlands is preparing and submitting an application for an amended or new ITP. The conditions of the amended or new ITP will be incorporated into the Project.

6-9 See Responses to Comments 6-1 through 6-8. Per recent meetings with CDFG staff, the applicant will include the USFWS and NMFS in meetings with CDFG to ensure that Project measures included in the ITP comply with federal guidelines. Revisions to the ITP would not require recirculation of the DEIR because the analysis contained in Chapter 4 of the DEIR includes project commitments (including the final HMP) that will adequately addresses the impacts of the Project and no new or substantially more severe impacts would occur.

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone **1-800-735-2929**
from Voice Phone **1-800-735-2922**

Contact Phone: **(916) 574-1900**
Contact FAX: **(916) 574-1885**

June 28, 2010

File Ref: SCH# 1988020824

Ms. Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

Subject: Delta Wetlands Place of Use Draft Environmental Impact Report

Dear Ms. Smith:

Staff of the California State Lands Commission (CSLC) has reviewed the Draft Environmental Impact Report (EIR) for the above referenced project and offer the following comments. The Semitropic Water Storage District is the lead agency under the California Environmental Quality Act (CEQA). For this project, the CSLC is both a Responsible and a Trustee agency.

As general background, the State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes of waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation and open space. The State owns sovereign fee title to tide and submerged lands landward to the mean high tide line (MHTL) as they existed in nature, prior to fill or artificial accretions. On navigable non-tidal waterways, the State holds fee ownership of the bed landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, as they last naturally existed. The State's sovereign interests are under the jurisdiction of the CSLC.

Many of the waterways surrounding Bacon Island, Holland Tract, Webb Tract and Bouldin Islands are State-owned sovereign lands under the jurisdiction of the Commission. To the extent, the proposed project involves improvements or any activities on State-owned sovereign fee lands waterward of the ordinary high water mark, including, but not limited to, recreational facilities, levee improvements, etc., a lease from the Commission will be required.

The following provides specific comments on the Draft EIR:

Effects of Sea Level Rise. The Draft EIR should consider the effects of sea level rise to any relevant resource categories of the proposed project. Please note that when

7-1

applying for a surface lease from the CSLC, staff has been directed to request information concerning the potential effects of sea level rise on the proposed project; and, if applicable, require applicants to indicate how they plan to address sea level rise and what adaptation strategies are planned during the projected life of the project. For further information, please see "A Report on Sea Level Rise Preparedness," which was approved by the CSLC at its meeting on December 17, 2009, meeting (the Report and accompanying Staff Report can be found on CSLC's website: http://www.slc.ca.gov/). One of the recommendations from the Report is to direct CSLC staff to consider the effects of sea level rise to hydrology, soils, geology, transportation, recreation, and other resource categories in all environmental determinations.

7-1 Cont

The document should contain and analyze data related to the Environmental Site Assessments, Phases 1 and 2, for the review and characterization of the soils and sediment that will be affected by the flooding of the delta islands. These proposed islands have been used for agricultural activities for many years and these activities could pose potential point source contamination into stored water. Preliminary soil sampling was conducted by DWR Environmental Site Assessment group to determine the extent of hydrocarbon and pesticide contamination within the islands of the project. A review of these materials is needed to determine the extent of the sediment contamination.

7-2

Thank you for the opportunity to review and provide comments on the above mentioned document. When more detailed project descriptions becomes available for each of the islands and their adjacent waterways, please contact Diane Jones, Public Land Manager, at 916-574-1843 or email at jonesd@slc.ca.gov for information about the CSLC's leasing requirements. If you have any questions concerning the environmental review, please contact Eric Gillies at (916) 574-1897 or by e-mail at gillee@slc.ca.gov.

Sincerely,

Cy R. Oggins, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
D. Jones, CSLC
C. Huitt, CSLC
E. Gillies, CSLC

Letter 7: Cy R. Oggins, Chief, Division of Environmental Planning and Management, State of California, California State Lands Commission

7-1 The potential effects of sea level rise were discussed in the Draft Environmental Impact Report (DEIR) in Section 4.14 Climate change. Long-term levee stability related to climate change is evaluated in Section 4.3 Flood Control and Levee Stability under Impact FC-1.

As identified in Chapter 7, the Project would involve applying for and obtaining a lease for siting facilities on state-owned land. As part of any application for a surface lease from the State Lands Commission, the necessary information about sea level rise would be provided.

7-2 The DEIR, on page 4.2-45, states that the 2001 Final Environmental Impact Report (2001 FEIR) and 2001 Final Environmental Impact Statement (2001 FEIS) identified potential soil contamination resulting from historic agricultural operations or waste disposal practices on Project islands. This potential was based on soil sampling that was presented in Appendix C6 of the 2001 FEIS. The impact was determined to be significant; Mitigation Measure WQ-MM-3 was recommended to reduce the impact to a less-than-significant level. Mitigation Measure WQ-MM-3 (see page 4.2-46 of the DEIR) requires that the Project applicant conduct site assessments and if there is an indication that contamination would mobilize into the stored water, develop and implement a remediation plan under the supervision of the Regional Water Quality Control Board (RWQCB). All remediation activities would be completed prior to the initiation of any Project water storage.

In addition, as part of the Integrated Storage Investigations conducted by the California Department of Water Resources (DWR) Division of Planning and Local Assistance in 2003 (*In-Delta Storage Program State Feasibility Study Draft Environmental Evaluations*, DWR Division of Planning and Local Assistance, July 2003), based on Phase II site assessment results DWR recommended that further investigations be conducted at identified hot spots. These results are consistent with the WQ-MM-3 requiring that potential contaminants be identified and mitigated prior to any water being stored as part of the Project. The Project will comply with requirements established by the State Lands Commission for obtaining a surface lease, including review of information characterizing soil contamination as a result of past agricultural practices such as the Integrated Storage Investigation report.

State Water Resources Control Board

Division of Water Rights
1001 I Street, 14th Floor ♦ Sacramento, California 95814 ♦ 916.341.5300
P.O. Box 2000 ♦ Sacramento, California 95812-2000
Fax: 916.341.5400 ♦ www.waterboards.ca.gov/waterrights

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

In Reply Refer to:KDM:A029062

JUN 2 8 2010

Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

Dear Ms. Smith:

DELTA WETLANDS PROJECT DRAFT PLACE OF USE ENVIRONMENTAL IMPACT REPORT (DRAFT EIR), WATER RIGHT APPLICATIONS 29062, 29066, 30268 AND 30270

Division of Water Rights (Division) staff has reviewed the Draft EIR and provides the following comments. The Delta Wetlands Project (Project) Place of Use EIR analyzes potential environmental effects associated with the diversion and storage of water by the Delta Wetlands Project and the supplying of that water to the places of use listed below and supplemental storage of water in the Semitropic and Antelope Valley groundwater banks.

The project will provide water to the Semitropic Water Storage District (Semitropic), Metropolitan Water District of Southern California, San Bernardino Valley Municipal Water District and Golden State Water Company. Page 2-6 indicates that Semitropic operates through cooperative agreements with six banking partners. Whenever necessary, Semitropic returns the stored water to the California Aqueduct for use by its partners by either entitlement exchange or pumpback. Delta Wetlands has not requested authorization from the Division to serve areas outside of the four locations identified herein. The EIR must analyze impacts to the entire place of use. Consequently, the EIR should clarify whether Semitropic will use all of the water within the place of use identified on maps provided to the Division with the change petitions. If this is not the case, additional change petitions to expand the place of use should be filed with the Division and the other service areas served by Semitropic should be analyzed in the EIR. 8-1

The EIR states the total evaporation and transpiration losses on the Delta islands. The EIR does not, however, identify the total losses associated with moving water from storage on the Delta Islands through the Delta to the groundwater basins, and subsequent losses from the groundwater basins prior to withdrawal for beneficial use. This information would be useful in determining how much of the water diverted in the Delta is eventually put to beneficial use. An estimate of total system losses is requested to be added to the EIR. 8-2

The diversion facilities description on page 2-9 does not state the type of mechanisms that will be added to the diversion siphons to measure diversions. Please describe how diversions will be measured: (a) as water is diverted onto the storage and habitat islands and (b) as water is released from storage. 8-3

Page 2-12 states that the project would utilize the existing irrigation water right licenses to supply water for wetlands and wildlife habitat purposes on the habitat islands. Wetland diversions typically would begin in September, and water would be circulated through the winter months. The maximum rate of proposed diversions onto Holland Tract and Bouldin Island would be 200 cubic feet per second (cfs) per island. Water likely would be applied to the habitat islands in most months.

Delta Wetlands manages diversions under Licenses 1405 and 1572 (Applications 2948 and 2952). License 1405 authorizes diversion of 71.56 cfs from March 1 to November 1 for irrigation purposes on Bouldin Island. License 1572 authorizes direct diversion of 63.44 cfs from March 1 to November 1 for irrigation purposes on Web Tract. The combined diversion rate is 145 cfs. The licenses cannot be used to divert water throughout the year for the habitat islands because the diversion seasons are limited. Division staff notes that License 1572 does not authorize use on either of the habitat islands, and neither license authorizes collection to storage. Moreover, the combined diversion rate under the licenses is insufficient for diversion of 200 cfs per island. 8-4

Division staff requests that the EIR be modified to reflect the limits of Licenses 1405 and 1572. An explanation should be provided regarding how the habitat islands can be maintained, while only directly diverting in compliance with the terms and conditions of the licenses. If there are any riparian rights that will be used for this Project, the number of acres of riparian land should be identified and a map identifying the riparian lands provided, together with a statement clarifying the quantity of water diverted pursuant to riparian rights. Any adverse impacts to resources resulting from the limited diversion season and quantities of the licenses and any additional limits based on riparian rights should be evaluated. A table should be provided, listing on a monthly basis the quantity of water needed for each habitat island and the legal basis of right that will be used to provide the water.

Page 3-6 states that simulated Project operations are simplified compared to D-1643 criteria. The Draft EIR also states that there are a few Project operating criteria in D-1643 that might be revised to allow Project diversions to be increased in moderate flow years. Please list the D-1643 criteria that were eliminated or are subject to modification. What is the basis for eliminating the D-1643 criteria? What criteria from D-1643 are being modified? What is the basis for the modifications? 8-5

The Draft EIR indicates, on pages 3-6, 4.2-40 and in other locations that diversions will occur during the period December through March. Nonetheless, page 3-7 lists the Final Operating Criteria Diversion Measures (Operating Criteria) – Measures 1, 2, 4 and 10 evaluate diversions during months that are outside of the December through March window and indicate that diversions may occur throughout the year. The EIR must be consistent. All of the text referring to a limited diversion period of December through March should be eliminated and the expanded diversion period identified, if Project diversions will occur throughout the year. If diversion will only occur from December through March, the Operating Criteria should be revised to reflect the limited diversion season. 8-6

Operating Criteria, Measure 10 specifies that water may be diverted from the Delta during the period June through October to match evaporation losses. This coincides with the Project 8-7

water delivery period. Therefore, it appears that Delta Wetlands intends to divert water onto the islands while it is also releasing water. Is this measure intended to reduce water quality impairment? Are there any changes in Project water quality, different from the impacts already presented in the Draft EIR, if diversions from June through October are not authorized? The Draft EIR does not evaluate the impacts of Term 91 on Project diversions. Diversions may not be authorized during the June through October period, if Term 91 is in effect. 8-7 Cont

The Operating Criteria does not include the no-diversion requirement for both April and May listed on Pages 12 and 13 of D-1643. Measure 4 eliminates diversions in April or May, but not in both months. An explanation for not included the protest settlement condition is requested. 8-8

The Draft EIR indicates that when water cannot be exported by the State Water Project (SWP) due to pumping constraints, water may be discharged to the Delta for improved estuarine habitat from December through June. Page 3-24 indicates that some storage will remain in the fall in about 50 percent of years and this water would be discharged and not carried over to successive water years for the purpose of preventing water quality degradation that may occur in the Reservoir Islands during a 2-year water storage period. Therefore, it appears that water may also be discharged from the reservoir islands during the fall. Please list all months when water may be discharged from the reservoir because there was no ability to convey the water south of Delta due to pumping constraints. 8-9

It is unclear to Division staff whether release of higher temperature water that has been subject to water quality degradation due to contact with peat soils should be construed as fish and wildlife enhancement. Please advise me regarding the sections of the Draft EIR that evaluate this issue. If no evaluation has been made of this issue, it should be evaluated. 8-10

Page 3-9 states that the Project discharges for increased export are assumed to be a water transfer from within the Delta and not subject to the 65% E/I export limits. The Division is not processing Applications 29062, 29066, 30268 and 30270 as transfer petitions. These are standard water right applications. Any permits issued will not authorize transfer of water. Consequently, this statement should be removed from the Draft EIR, and SWP conveyance capacity evaluated all applicable constraints. 8-11

Page 3-15 evaluates when water would be available for Project storage based on Delta inflow. There is also a statement of when full capacity exports could occur based on Delta outflow. This section should have also included an evaluation of how the Project diversions are affected by the limit of 15% of Net Delta Outflow in the months of January, February and March, which resulted from protest settlement. 8-12

Page 3-25 states that Project diversions generally would occur in April and May under the existing conditions. This appears to conflict with the protest settlement agreement that eliminates storage during April and May. An explanation is requested. 8-13

Page 3-29 states that there may be no Central Valley Project (CVP) or SWP pumping capacity during wet years. Nonetheless, on page 3-30, the draft EIR states that Project storage water could be exported in the summer or fall months in wet years and subsequently stored in the south of Delta groundwater basins. These statements appear to conflict. If there is no 8-14

available pumping capacity, how could water be transferred to the groundwater basins south of Delta? 8-14 Cont

Page 4.1-10 states that Project water transfers could be delivered directly to SWP contractors in some years. The place of use does not include the SWP, only four identified water users. This section should be modified to reflect the actual, proposed place of use. If water transfers are proposed, the Draft EIR should identify the persons that will receive the transferred water and evaluate any impacts to those additional places of use. 8-15

The Summary of Impacts section on pages 4.2-2 through 4.2-5 compares the 2001 FEIR and mitigation measures to the 2010 Place of Use EIR and mitigation measures. Under Impacts C-1, C-2, C-3, C-4, C-5, C-7, C-9, C-10, C-11, C-12, C-13 and C-15, the 2001 FEIR identified required mitigation measures, but the 2010 FEIR now states that no mitigation is required. This action is inappropriate. Mitigation measures such as restricting Project diversions to limit EC increases at Chipps Island (Impact C-1) are still required. Although the Draft EIR refers to environmental commitments, there is no section in the document listing the environmental commitments. Consequently, it appears that all mitigations, whether they are classified as environmental commitments or mitigation measures, must be listed as mitigation measures. Moreover, all environmental commitments or mitigation measures should be listed in the Mitigation Monitoring and Reporting Plan (MMRP). The Draft EIR should include an MMRP. 8-16

Page 4.2-45 states that discharges of stored water from the Project reservoir islands may adversely affect channel water quality near the discharge locations, however the Final Operating Criteria for fish protection identified discharge limits for temperature and dissolved oxygen. Implementing the Operating Criteria will ensure that these impacts are less than significant. Therefore, no mitigation is required. The Operating Criteria should be listed as a mitigation measure, because the criteria must be implemented in order to reduce impacts to a less than significant level.

Page 4.2-48 states that restrictions on Project operations are likely to maintain adequately low levels of salinity in the Delta. Operating Criteria are listed in the Water Quality Management Plan (WQMP). Therefore, the Draft EIR states that no mitigation is required. The WCMP should be listed as a mitigation measure, because the WCMP must be implemented in order to reduce impacts to a less than significant level. 8-17

Page 4.2-50 states that discharges of stored water from the Project reservoir islands may adversely affect channel water quality near the discharge locations. The Operating Criteria for fish protection identified discharge limits for temperature and dissolved oxygen. Therefore, no mitigation is required. The Operating Criteria for temperature and dissolved oxygen should be listed as a mitigation measure, because the Operating Criteria must be implemented in order to reduce impacts to a less than significant level.

The following statement on Page 4.5-4 does not make sense: Increased entrainment of fish at the SWP and CVP pumping facilities during export of discharged Project water would occur from July to November and would therefore avoid most sensitive species, although losses of Sacramento splittail and green sturgeon would be likely to occur. How would increased entrainment avoid impacts to sensitive species? 8-18

In Table 4.5-1 on page 4.5-7, the 2001 FEIR impacts and mitigation measures were compared to the 2010 mitigation measures. Mitigation measure F-2 from the 2001 FEIR required monitoring of water temperature of Project discharges and reducing discharge to avoid producing any increase in channel temperature greater than 1 degree F was eliminated. measure F-10. The 2010 EIR states that no mitigation is required. What is the basis for removing the mitigation measure? 8-19

Page 4.5-69 states that Project impacts on dissolved oxygen (DO) levels is addressed through a Project operating restriction. Therefore, no mitigation is required. The Operating Criteria for addressing algal bloom should be listed as a mitigation measure, along with the commitment to ensure that discharge is prohibited from reducing DO levels in the receiving channel by more than 1 mg/l. A monitoring program should be established. 8-20

Page 4.5-70 states that Project releases during September to November overlap upstream migrations of fall-run Chinook salmon and steelhead. This impact could substantially restrict the range of salmonids migrating through the Delta, both as juveniles and adults and could significantly reduce the abundance of juvenile Chinook salmon if the water temperature of discharged water is not monitored and controlled. The impact is less than significant with implementation of a temperature assessment and regulation program as an environmental commitment. Therefore, no mitigation is required. Inasmuch as the impact is not reduced to a level of non-significance without implementation of the environmental commitment, the commitment should be identified as a mitigation measure. 8-21

It is unclear to Division staff whether the Project modeling accounted for the amount of SWP capacity needed to move the San Joaquin River Restoration Flows to the Friant Contractors or the Exchange Contractors. Please identify the section of the EIR that evaluated this issue. 8-22

The Draft EIR discusses operation of San Luis Reservoir. It is unclear whether pumping capacity at the SWP Delta pumping facility is the only restricting factor regarding moving Project water south of Delta. Is there capacity downstream of San Luis Reservoir to move Project water? 8-23

Thank you for the opportunity to review the Draft EIR. If you have any questions regarding these comments, I can be reached at (916) 341-5363.

Sincerely,

Katherine Mrowka

Katherine Mrowka, Chief
Inland Streams Unit

Letter 8: Katherine Mrowka, Chief, Inland Streams Unit, State of California, State Water Resources Control Board, Division of Water Rights

8-1 The places of use evaluated in this Draft Environmental Impact Report (DEIR) are identified in Chapter 2 in Table 2-1 on page 2-3 and are described on pages 2-3 through 2-5. They are also shown in Figures 1-3 through 1-6 in Chapter 1 Introduction.

Since publication of the DEIR, San Bernardino Valley Municipal Water District determined that it will not be a place of use. All water sought in the applications to the State Water Resources Control Board (SWRCB) would be used within the following places of use identified in the petitions for change and accompanying maps: Semitropic Water Storage District; Metropolitan Water District (which includes Western Municipal Water District); and Golden State Water Company. As further described on page 2-3 through 2-5 of the DEIR, each of these identified water districts/companies serve customers throughout southern California.

If the places of use identified and evaluated in this EIR were to be modified, additional petitions to expand the places of use would be filed with the State Water Resources Control Board and additional environmental documentation would be prepared as appropriate to address any impacts not fully addressed in this DEIR.

8-2 Conveyance losses through the California Aqueduct, Delta Mendota Canal and other conveyance facilities (State Water Project (SWP) and Central Valley Project (CVP) delivery losses) are relatively constant and independent of year type or allocations. Therefore, the In-Delta Storage Model (IDSM) does not calculate the incremental conveyance losses through SWP and CVP because the CALSIM baseline model used in IDSM includes fixed losses of 64.5 thousand acre feet per year (TAF/yr) for SWP and 184.0 TAF/yr for CVP. This loss is assumed with or without Project water; therefore, Project operations would not significantly change the SWP and CVP losses. DWR customarily imposes a three percent conveyance loss factor for transfers utilizing the SWP. If DWR imposes this loss factor for conveyance of Project water, the Project water deliveries in Chapter 3 would be reduced by 3 percent.

As it relates to losses associated with groundwater storage, IDSM does not include groundwater bank losses and allows the user to specify losses from each groundwater bank. Project water used in ponds to recharge groundwater would not alter the typical evaporation rate which is approximately 1.5 to 4 percent of the volume. Any Project water left behind in the groundwater basin would not be considered a loss because it would remain in the basin for beneficial use.

8-3 Meters would be installed on all reservoir island diversion and discharge pipes. Meters would be installed and maintained as necessary to measure the rate and quantity of water diverted on and pumped off the reservoir islands. Habitat islands diversions would comply with requirements of existing appropriative and riparian rights.

8-4 Habitat island diversions would rely on both existing licensed appropriative and riparian rights. Table A1-8 of the 1995 DEIR/EIS provides average annual diversion quantities for the habitat islands of 19,000 acre-feet per year (AF/yr), significantly less than existing agricultural diversions of 51,000 AF/yr. Average monthly diversions for the habitat islands range from 0 to 2,400 acre-feet per month (AF/mo). Average diversion rates for each habitat island were provided in Table A1-8 of the 1995 DEIR/EIS. Maximum diversion rates throughout the month would vary according to actual rainfall, temperatures, and daily operations but will not exceed 200 cubic feet per second (cfs). Use of the existing water right License No. 1405 (A02948 - Bouldin) and License No. 1571 (A02951 - Holland) would be limited to the authorized season of diversion (3/1 to 11/1) and rates of diversion (71.56 cfs and 49.25 cfs, respectively). Existing riparian rights reported in Statements of Water Diversion and Use filed June 2009 would be utilized at rates and quantities similar to the current practice of diverting in late-Fall to leach salts and flood ponds and fields for Winter waterfowl habitat.

8-5 The FOC and D-1643 diversion criteria could be revised, as appropriate, based on review during re-consultation for updated biological opinions and incidental take authorization from the resources agencies. The Project anticipates that the criteria that may be revised by the resource agencies following re-consultation include the diversion limitations related to the Delta smelt Fall Mid-Water Trawl (FMWT) index (Measure 4), specified fraction of surplus Delta outflow (Measure 5), specified fraction of San Joaquin River inflow (Measure 7), fish monitoring provisions (Measure 8), and Delta Cross Channel (DCC) gates closure (Measure 9).

8-6 The proposed Project season of diversion to storage of December through March is more restrictive than a number of the FOC including Measures 1, 2, 4 and 10. These FOC measures would be reviewed during re-consultation for updated biological opinions and incidental take authorization from the resources agencies.

8-7 Diversion using existing water rights during June through October to match evaporative losses would occur only when water is being held in storage until a discharge opportunity arises. Diversion to match evaporative losses would not occur when stored Project water was being discharged for export or water quality enhancement. Diversion rates are low relative to Delta inflows and exports, very similar to existing agricultural diversions on the Project (e.g., 60 cfs per reservoir). Water quality would not significantly change on the reservoir islands because the evaporative losses are limited to a single season with no carryover storage across

multiple years. Topping off the reservoirs is a beneficial use under the existing water rights, which are not subject to Term 91.

8-8 Measure 4 eliminates Project diversions in both April and May. The discussion of Measure 4 on page 3-7 of the DEIR is revised to read as follows:

Measure 4 eliminates Project diversions in April ~~or~~ and May for fish protection…

8-9 See Table 3-15 C on page 3-55 of the DEIR. Project Discharge for Outflow (cfs) is expected to occur in September through November. Water is not anticipated to be discharged from December through June. Project releases for outflow would be considered during development of the final diversion criteria in consultation with the resource agencies and could be modified if required.

8-10 The DEIR did not identify release of higher temperature water due to contact with peat soils as fish and wildlife enhancement. Impacts to fisheries resulting from changes in temperature due to Project operations were evaluated in Section 4.5 Fisheries Resources of the DEIR. Specifically, under Impact FISH-4 on pages 4.5-69 and 4.5-70, the analysis concluded that without monitoring and controlling the water temperature of discharged water for outflow during September through November fall-run Chinook salmon and steelhead could be adversely affected. However, the Project includes implementation of a temperature assessment and regulation program (see page 4.5-46 of DEIR) that would result in a less than significant impact.

8-11 The comment is correct that the applications are not being processed as transfers. The Project applications are being processed as standard applications to appropriate water, and not as transfers of water under existing water rights.

Project exports would occur from July to November, with most exports (i.e., 80 percent) occurring in the July-September period which is the typical transfer window identified in the CVP Operations Criteria and Plan (OCAP) Biological Opinions (BO). Exports would occur when SWP pumping capacity is available under OCAP rules. A small percentage of Project exports are modeled to occur in October and November (i.e., 20 percent), outside of the typical OCAP transfer window. All Project exports are under review in the re-consultation for updated biological opinions and incidental take authorization from the resources agencies.

The second full paragraph on page 3-9 of the DEIR is deleted.

8-12 The DEIR did not assume that any of the FOC terms or D-1643 criteria would be relaxed, and all FOC and D-1643 criteria were included in the water supply IDSM modeling for the DEIR; however, several of the criteria or terms and conditions would no longer be necessary because they would be satisfied by the simplified Project operations criteria included in the DEIR. For example, the simplified

Project operations criterion that limits Project diversions to periods when Delta outflow remained greater than 11,400 cfs (X2 at Chipps Island) satisfies the FOC measures limiting Project diversions to 15 percent of net Delta outflow in January through March and the maximum change in X2 of 2.5 kilometers (km). The final decision about necessary terms and conditions remains the responsibility of the SWRCB, as stated on page 3-6 of the DEIR, "The State Water Board will revise or issue Project water rights that will include the actual criteria and objectives for controlling the Project operations in the Delta and for conveyance (pumping) and groundwater storage and place of use deliveries."

8-13 Project diversion would not occur in April and May. The first sentence in the first paragraph on page 3-25 of the DEIR is revised to read as follows:

Project diversions ~~generally~~ would not occur in April and May under the existing conditions ~~because of the assumed VAMP protection for San Joaquin River fish~~.

8-14 On page 3-29 of the DEIR the text states that the amount of Project water that could be exported to groundwater banks in wet years depends on available export capacity. In wet years, when the CVP and SWP are delivering most of the water demands, export pumping could be at permitted capacity. On page 3-30 of the DEIR the text notes that when water "could be exported" in wet years, it could be stored in the groundwater banks. These two statements do not conflict. In wet years, pumping capacity is generally not available nor would there be demand for Project water; however, if capacity were to be available, Project water could be exported and stored for a later period when demand for water is unmet.

8-15 See Responses to Comments 8-1 and 8-11.

8-16 The environmental commitments described on pages 2-15 through 2-20 and in appropriate technical sections of the DEIR are part of the proposed Project and not mitigation measures. If approved, Project operations would include adherence with the requirements established by the environmental commitments. In addition, the Project would be required to comply with all applicable regulatory requirements, including those associated with salinity increases at Chipps Island.

Furthermore, the Record of Decision issued by the Corps on the 2001 FEIS found that because the Project will implement all the measures in the environmental commitment plan that all appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

As discussed in Impact WQ-1 on page 4.2-39 of the DEIR, increased salinity at Chipps Island was determined to be less than significant in the DEIR because Project operations were modified to require a minimum outflow that would be less than that simulated in the 2001 FEIS and below the 20 percent significance criterion. Therefore, the impact is less than significant and no mitigation is required.

8-17 The FOC are considered part of the Project. Therefore, if approved, the Project would be operated in compliance with the FOC. In addition, the Project would be required to comply with all applicable regulatory requirements.

8-18 The comment is noted. The first sentence of the first full paragraph on page 4.5-4 of the DEIR is revised to read as follows:

~~Increased~~Export of discharged Project water [July to November] could increase entrainment of fish at the SWP and CVP pumping facilities. ~~during export of discharged Project water would occur from July to November and would therefore avoid most sensitive species, although losses of Sacramento splittail and green sturgeon would be likely to occur.~~ During this time period, special-status fish including delta smelt, longfin smelt, and salmonids are not typically present in the central and south Delta due to high water temperatures and other factors; and therefore, are not at risk to entrainment. Sacramento splittail and green sturgeon, however, are in the central and south Delta during the summer and early fall months, so risk of entrainment for these two species is still present.

8-19 The content of Mitigation Measure F-2 from the 2001 FEIR, which included the monitoring of water temperature of Project discharges and the reduction of discharge to avoid an increase in channel temperature greater than 1 degree, was incorporated into the Project as an environmental commitment. See also Response to Comment 8-16.

8-20 Dissolved oxygen (DO) monitoring and discharge criteria are part of the FOC, which has been incorporated into the Project as an environmental commitment and is described in greater detail on pages 4.5-46 to 4.6-47. See Response to Comment 8-17.

8-21 The comment is correct that Impact FISH-3 on pages 4.5-69 and 4.5-70 concluded that the September-November discharge for outflow period could significantly reduce the abundance of juvenile Chinook salmon. The impact was determined to be less than significant with the implementation of a temperature assessment and regulation program which is part of the Project as an environmental commitment. This program is described in detail on page 4.5-46 of the DEIR.

As described in Response to Comment 8-16, the environmental commitments are part of the proposed Project and not mitigation measures. Project operations would adhere to the requirements established by the environmental commitments, including the temperature assessment and regulation program. In addition, the Project would be required to comply with all applicable regulatory requirements.

Furthermore, the Record of Decision issued by the Corps on the 2001 FEIS found that because the Project will implement all the measures in the environmental commitment plan that all appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.

8-22 The CALSIM baseline does not include San Joaquin River Restoration Flows but they were included in the updated project list for the cumulative impacts analysis. Most restoration flows occur in April when there may be SWP capacity but no Project operation because of the April-May diversion prohibitions. Restoration flows during other months do not represent a significant quantity of water reaching the Delta or a measurable impact to SWP capacity and Project operations.

8-23 All aspects of the SWP system (including those downstream of San Luis Reservoir) were accounted for in the south of Delta deliveries, including pumping capacity, aqueduct capacity, groundwater bank capacity, and demands.

S J C O G, Inc.

555 East Weber Avenue • Stockton, CA 95202 • (209) 235-0600 • FAX (209) 235-0438

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

SJMSCP RESPONSE TO LOCAL JURISDICTION (RTLJ)
ADVISORY AGENCY NOTICE TO SJCOG, Inc.

To: Will Boschman, Semitropic Water Storage District

From: Anne~Marie Poggio, Regional Habitat Planner, SJCOG, Inc.

Date: May 27, 2010

Local Jurisdiction Project Title: Draft Delta Wetlands Place of Use EIR

Assessor Parcel Number(s): Undetermined

Total Acres to be converted from Open Space Use: Undetermined

Habitat Types to be Disturbed: Urban, Natural and Agriculture Habitat Land

Species Impact Findings: Findings to be determined by SJMSCP biologist.

Dear Mr. Boschman:

SJCOG, Inc. has reviewed application for the Draft Delta Wetlands Place of Use EIR. According to the report the overall purpose of the Project is to increase the availability of high-quality water in the Delta for export or outflow by strong water on two Reservoir Islands (Webb Tract and Bacon Island) and by doing so, increase the reliability of water supplies for Semitropic and other places of use including Golden State, Metropolitan, Western, and Valley District The storage of surplus Project water m the Semitropic Groundwater Storage Bank and Antelope Valley Water Bank for later use by those users will reduce groundwater overdraft and reduce pumping lift for water users within those basins as well as provide additional dry year water supply reliability for the Project users. Further, the Project would compensate for wetland and wildlife effects of the water storage operations on the Reservoir Islands by Implementing an HMP on two dedicated Habitat Islands (Bouldin Island and Holland Tract).

The Project purpose would be met by diverting Delta inflow during times of surplus Delta outflow (after all water quality or flow requirements for the San Francisco Bay/Sacramento-San Joaquin Delta [Bay-Delta] Estuary are met). The diverted water would be stored on the Reservoir Islands until released for export to south-of-Delta users, including Semitropic's service area and the other specified places of use, or for environmental benefits in the Bay-Delta estuary. No infrastructure or facilities, other than those already described in the State Water Board 2001 FEIR (SCH#1988020824), are proposed to support the Project purpose Water would be delivered via existing and previously approved facilities operated and maintained by the SWP, CVP, and those within the proposed places of use. As noted above, the Project would provide managed wetlands and wildlife habitat areas. Additionally, the Project would accommodate recreational uses

In response to the Draft Delta Wetlands Place of Use EIR, it is important to note that many of the water ways and islands stated in the document are considered potential habitat for Giant Garter Snake (GGS) and may require time restrains a buffer requirements (See SJMSCP Measures for GGS). Also, the SJMSCP requires mitigation for all impacts temporary and/or permanent. Both impacts are considered to be equal.

San Joaquin County is a signatory to San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Participation in the SJMSCP satisfies requirements of both the state and federal endangered species acts, and ensures that the impacts are mitigated below a level of significance in compliance with the California Environmental Quality Act (CEQA). The LOCAL JURISDICTION retains responsibility for ensuring that the appropriate Incidental Take Minimization Measure are properly implemented and monitored and that appropriate fees are paid in compliance with the SJMSCP. Although participation in the SJMSCP is voluntary, Local Jurisdiction/Lead Agencies should be aware that if project applicants choose against participating in the SJMSCP, they will be required to provide alternative mitigation in an amount and kind equal to that provided in the SJMSCP.

9-1

It should be noted that two important federal agencies (U.S. Army Corps of Engineers and the California Regional Water Quality Control Board) have not issued permits to the SJCOG and so payment of the fee to use the SJMSCP will not modify requirements that could be imposed by these two agencies. Potential waters of the United States [pursuant to Section 404 Clean Water Act] are believed to occur on the project site. It may be prudent to obtain a preliminary wetlands map from a qualified consultant. If waters of the United States are confirmed on the project site, the Corps and the Regional Water Quality Control Board (RWQCB) would have regulatory authority over those mapped areas [pursuant to Section 404 and 401 of the Clean Water Act respectively] and permits would be required from each of these resource agencies prior to grading the project site.

9-1 Cont

This Project is subject to the SJMSCP. Per requirements of the SJMSCP, this project must seek coverage due to required Army Corp permitting and Section 7 consultation. This project is subject to a case-by-case review. This can be a 90 day process and it is recommended that the project applicant contact SJMSCP staff as early as possible. It is also recommended that the project applicant obtain an information package. http://www.sjcog.org
After this project is approved by the Habitat Technical Advisory Committee and the SJCOG Inc. Board, the following process must occur to participate in the SJMSCP:

- Schedule a SJMSCP Biologist to perform a pre-construction survey ***prior to any ground disturbance***
- Sign and Return Incidental Take Minimization Measures to SJMSCP staff (given to project applicant after pre-construction survey is completed)
- Pay appropriate fee based on SJMSCP findings. **Fees shall be paid in the amount in effect at the time of issuance of Building Permit**
- Receive your Certificate of Payment and release the required permit

If you have any questions, please call (209) 468-3913.

cc Chris Elliott/Megan Smith ICF International

Ellen McBride USFWS
Dan Gifford DFG

Letter 9: Anne-Marie Poggio, Regional Habitat Planner, San Joaquin Council of Governments, Inc, San Joaquin Multi-Species Habitat Conservation & Open Space Plan

9-1 The project applicant is not seeking coverage under the San Joaquin Multi-Species Habitat Conservation & Open Space Plan SJMSCP and is instead seeking permits directly from the permitting agencies (United States Fish and Wildlife Service [USFWS] and California Department of Fish and Game [CDFG]) as well the United States Army Corps of Engineers (Corps) and Central Valley Regional Water Quality Control Board. The Corps is acting as the lead Federal agency for consultation with the USFWS under Section 7 of the Federal Endangered Species Act and the applicant is seeking an amended or new Incidental Take Permit from CDFG under the California Endangered Species Act.

CHIEF EXECUTIVE OFFICE
Richard W. Robinson
Chief Executive Officer

Patricia Hill Thomas
Chief Operations Officer/
Assistant Executive Officer

Monica Nino-Reid
Assistant Executive Officer

Stan Risen
Assistant Executive Officer

1010 10th Street, Suite 6800, Modesto, CA 95354
P.O. Box 3404, Modesto, CA 95353-3404
Phone: 209.525.6333 Fax 209.544.6226

STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

June 7, 2010

Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

SUBJECT: **ENVIRONMENTAL REFERRAL – SEMITROPIC WATER STORAGE DISTRICT – DELTA WETLANDS PLACE OF USE DRAFT ENVIRONMENTAL IMPACT REPORT**

Ms. Smith:

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time. 10-1

The ERC appreciates the opportunity to comment on this project.

Sincerely,

Christine Almen

Christine Almen, Senior Management Consultant
Environmental Review Committee

cc: ERC Members

Letter 10: Christine Almen, Senior Management Consultant, County of Stanislaus, Environmental Review Committee

10-1 The comment is noted that the Stanislaus County Environmental Review Committee has no comments on the Draft Environmental Impact Report.

Water Agency

County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-1229

Contra Costa County

June 28, 2010

Ms. Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

Dear Ms. Smith:

Thank you for the opportunity to comment on the Delta Wetlands Place of Use Environmental Impact Report, April 2010. Contra Costa County has provided comments on carlier iterations of the Delta Wetlands Project environmental documents.

We look forward to seeing substantive responses to many of the questions presented in our prior documents, as well as this letter, given the degree of scientific information generated in the last decade. In the intervening decade since full project review was performed, fundamental changes have occurred in the Delta, and programs currently being planned for the Delta at this time would seem to dictate that full reexamination of the project be forthcoming. Conditions in the Delta have and will continue to change so substantially as to render these project updates insufficient as a baseline for current and future planning and implementation purposes. The Bay Delta Conservation Plan (BDCP) currently underway on an expedited schedule may change fundamental components of the Delta and subsequently this project, including place of use considerations. We would suggest that perhaps short and long term places of use be considered, pre and post BDCP to promote a complete examination of where water stored on islands could best be utilized in those circumstances. Pre and post BDCP water quality, among other things would appear to be important to assess, being key to success of this project and ultimately, places of use.

11-1

It does not appear that fish and wildlife enhancement, Delta water quality or additional outflow places of use are still being considered at the same levels as the south of Delta locations. Is this the case? If so, we believe a thorough analysis of these Delta places of use be incorporated here. Were other places of use in and around the Delta considered? This could be important, as the need for water in different geographic areas may change as the BDCP is implemented. In addition, one goal of the recently passed legislative water package for the state is the need to reduce reliance on the Delta over time.

11-2

The problem of seepage still concerns us greatly, despite scientific assurances to the contrary in the document. Webb Tract is a key western Delta island, and as such provides a buffer from salinity intrusion into the Delta. Should a levee on Webb fail, and/or seepage from Webb cause another western Delta island or islands to fail, the effects would be disastrous to the Delta and to the state, including the state's water supply. Other geologic and hydrogeologic issues (extreme subsidence, sand lenses, peat soils), as well as increasing pressure from climate change, all create a level of risk that may not ultimately be acceptable. Are there emergency plans and funding banked in the event of a catastrophe caused by the Project? 11-3

Thank you for your consideration of our concerns and we look forward to receiving additional information on the Project. If you have questions, please feel free to contact me at rgoul@cd.cccounty.us.

Sincerely,

Roberta Goulart
Executive Officer

Letter 11: Roberta Goulart, Executive Officer, Contra Costa County Water Agency

11-1 As described on page 1-4 of the Draft Environmental Impact Report (DEIR), the analysis from the previous documents was updated to consider changed circumstances and new information that was not available at the time the 2001 Final Environmental Impact Report (2001 FEIR) was published. On page 1-5, the Bay Delta Conservation Plan (BDCP) was called out in the summary of new information that had occurred since the 2001 FEIR that could affect the existing conditions of the Delta or the understanding of potential impacts from Project operations. Therefore, DEIR did take into consideration the BDCP to the extent known. Specifically, it was included as part of the cumulative impact analysis presented in Chapter 5 of the DEIR.

11-2 The places of use evaluated in this DEIR are identified in Chapter 2 in Table 2-1 on page 2-3 and are described on pages 2-3 through 2-5. They are also shown in Figures 1-3 through 1-6 in Chapter 1 Introduction. In-Delta use for fish or water quality would be provided at the end of the year when export capacity would be insufficient to deliver all the stored water to the places of use. No other places of use have been identified, and none occur in or around the Delta. If other users express interest in deliveries of Project water, additional environmental documentation would be prepared as appropriate to address any impacts not fully addressed in this DEIR as part of a separate approval process.

11-3 The Project includes a comprehensive seepage monitoring and control program to avoid seepage issues and to provide early detection of seepage. The program is summarized on pages 2-19 and 2-20 of the DEIR and is described in detail in the Project Dismissal Agreement (PDA) between Delta Wetlands Properties and East Bay Municipal Utility District (EBMUD), included as an appendix to the 2001 FEIR. Levee stability is addressed in Section 4.3 of the DEIR.

As it relates to the Project's Remedial Action Fund, the Project is responsible for the cost of all mitigation and remedial actions resulting from proposed Reservoir Island operations. Financial assurances in the form of the Seepage and Monitoring Fund, Drawdown Fund, Remedial Action Fund, and Insurance are required under the terms of the EBMUD PDA, Attachment C. The fund dollar amounts specified in the EBMUD PDA are the initial deposits estimated to cover the first year of Project diversions to storage. The fund amounts for each subsequent year will be determined by the Monitoring and Action Board (MAB), provided that the annual fund amounts cannot be less than the prior year's actual fund withdrawals. Each fund shall be replenished prior to that year's diversions to storage. Furthermore, as described in more detail in Section IV of Attachment C, the Diversion Suspension Limits require prompt remedial action by the Project if certain groundwater elevations are exceeded, including to suspend diversion of water and to lower reservoir pool (water storage) elevations. By restricting the diversion and export water, the financial assurances and diversion suspension limits will ensure that Project-related seepage impacts are remedied in a timely manner.

NEUMILLER & BEARDSLEE
A PROFESSIONAL CORPORATION • ATTORNEYS & COUNSELORS
ESTABLISHED 1903

509 WEST WEBER AVENUE
FIFTH FLOOR
STOCKTON, CA 95203

POST OFFICE BOX 20
STOCKTON, CA 95201-3020

(209) 948-8200
(209) 948-4910 FAX

FROM MODESTO:
(209) 577-8200
(209) 577-4910 FAX

June 28, 2010

Sent via email to deltawetlandscomments@icfi.com and U.S. Mail

Megan Smith
ICF International, Delta Wetlands Comments
630 K Street, Suite 400
Sacramento, CA 95814

SUBJECT: COMMENTS ON DELTA WETLANDS PLACE OF USE DRAFT ENVIRONMENTAL IMPACT REPORT

Ms. Smith:

San Joaquin County and the San Joaquin County Flood Control and Water Conservation District (together County) have a long history of serious concerns with the Delta Wetlands Project and continue to have serious concern regarding the adequacy of the Delta Wetlands Place of Use Draft Environmental Impact Report (EIR). Section 15162 of the Guidelines for Implementation of the California Environmental Quality Act (CEQA) requires that a subsequent EIR be prepared when there is a substantial change in the project or its impacts in light of new information or environmental conditions. Since the time of certification of the Delta Wetlands Final Environmental Impact Report and Environmental Impact Statement (EIR/EIS) in 2001, the regulatory and operational landscape of the Sacramento-San Joaquin Delta (Delta) has changed dramatically. The 2001 basis for the quantification of impacts for the Delta Wetlands Project was allegedly the best availed at the time; however, the County is certain that a subsequent analysis using present day conditions would result in additional significant and unavoidable impacts. The County submits the following comments supporting the need for the preparation of a subsequent EIR based on inadequacy of the Place of Use EIR. 12-1

Changes in Delta Operations

The decline of pelagic organisms, most notably the Delta Smelt, has catalyzed the decision of Federal Circuit Court Judge Wanger to limit Delta exports based on adequate conditions for fish. Additionally, record low returns of spawning Chinook salmon to the Sacramento-San Joaquin Watershed have also triggered significant involvement of the Delta with the Federal Courts. The decline of both species is a 12-2

clear indicator of changing baseline conditions with respect to biological impacts due to Delta export operations. Since the release of the Revised Draft EIR in 2000, the coordinated operations criteria and plan (OCAP) for the Central Valley Project (CVP) and State Water Project (SWP) was developed as the baseline for Delta export operations. Modifications to OCAP based on recent Court mandated operations criteria and existing biological opinions must be reconsidered to adequately determine baseline conditions in the Delta so that the impacts to Delta Smelt and Chinook Salmon can be adequately quantified and disclosed.

12-2
Corp

Additionally, since the certification of the Delta Wetlands Final EIR/EIS in 2001, the Delta Water Supply Project, Freeport Regional Water Project, and Contra Costa Water District Alternative Intake Project are nearing completion. The Projects assert water rights senior to that of the Delta Wetlands Project and should be recognized in the re-quantification of the OCAP operational baseline. Delta Wetlands is required to re-analyze and disclose its direct and cumulative impacts in a subsequent EIR based on the substantial changes in baseline environmental conditions resulting in significant changes in mitigation measures.

12-3

Levee Stability and Seepage

The flooding of Jones Tract in 2004 is an example in how seepage works in the Delta. During the weeks and months while Jones Tract was flooded, repaired and pumped out, seepage onto the adjacent islands, McDonald and Lower Roberts, experienced seepage problems causing crop damage and erosion problems along the adjacent island levees. See attached photos labeled Photo Five and Photo Six of the evidence of seepage during the 2004 Jones Tract flood. Seepage problems and levee failures are real and remain a principal concern of the County with regard to the Delta Wetlands Project.

The Delta Wetlands Draft Place of Use inadequately describes how sea level rise will impact its ability to meet PL84-99 seepage requirement. The California Department of Water Resources (DWR) and the United States Army Corps of Engineers (USACE) have required local levee maintenance agencies to readdress seepage concerns for both urban and agricultural levees. The basis for design for Delta Wetlands Project levees is out of date therefore the proposed adherence to PL84-99 levee criteria and the implementation of the Seepage Mitigation and Monitoring Plan as proposed is out of date. CEQA guidelines require that a subsequent EIR be prepared to address changes to levee standards and environmental baseline which include: projected sea level rise, re-calculation of seepage gradients utilizing DWR and USACE recommended boring spacing and frequency, alternatives to meet target seepage gradients, adequacy of proposed interceptor well spacing, and re-consider cutoff walls or other seepage prevention techniques.

12-4

Despite the proposed mitigation measures and alleged adherence to PL84-99 standards, the County has no assurances that the proposed Delta Wetlands Project will be implemented, operated, and maintained adequately to reduce the impacts to the

local community to less than significant. The County insists that a performance guarantee or bonded commitment be established to ensure that all proposed mitigation measures perform as promised and that any and all unforeseen impacts due to the Delta Wetlands Project are immediately remedied. The County remains concerned if the Project as proposed and designed is feasible due to seepage and stability issues. 12-4 Cont

Growth Inducement and Alternatives to the Project

Growth Inducement within the Place of Use is inadequately addressed in the Place of Use Draft EIR. The 2000 Delta Wetlands Project Revised Draft EIR/EIS Alternatives Analyses did not specify a place of use and therefore did not consider other appropriate alternatives available to the proposed place of use that would provide more reliable water supplies with less impact to San Joaquin County and the Delta. The County is an advocate for the concept of Regional Self-sufficiency[1] for water resources Statewide. More economic and less environmentally damaging project concepts available to the proposed Delta Wetlands place of use include desalinization, increased recycling, urban and agricultural conservation and water use efficiency, limitations on urban growth, softening of agricultural demands by reverting back to non-permanent crops, land retirement, capture and use of urban stormwater runoff, and conjunctive use. The examples listed clearly demonstrate that a lesser environmentally damaging practicable alternative exists to the Delta Wetlands Project, therefore a subsequent EIR should be prepared to adequately address the issue of growth inducement within the place of use and consider project alternatives. 12-5

Transfers of Water Outside of the Place of Use

Water transfers both temporary and long-term have become more common since the certification of the Delta Wetlands Final EIR/EIS. Water transfers outside of the proposed place of use should be recognized as having potential significant impacts. The Delta Wetlands Place of Use Draft EIR is remiss in its lack of discussion regarding water transfers outside the proposed place of use. At a minimum, the Delta Wetlands Draft Place of Use EIR should have analyzed the impacts of water transfers outside of the proposed place of use at the program level with subsequent analysis of specific transfers at the project level as opportunities arise. A proposed mitigation strategy would be for Delta Wetlands to prepare an EIR for the physical transfer of Delta Wetlands Project water beyond the place of use and for the transfer of water which would be substituted by Delta Wetlands water to an area beyond the place of use. Specifically, the potential impacts of additional transfers involving Delta Wetlands Project water, as described above, include steadily increasing and hardening of water demands which are relied upon by Delta exporters, increased salinity in the San Joaquin River due to deliveries to the Westside of the Central Valley which requires additional releases from New Melones to meet water quality and flow objectives at Vernalis to the detriment of Stockton East Water District and Central San 12-6

[1] A Water Plan for the 21st Century: Regional Self-Sufficiency Scenario paper is posted at http://www.restorethedelta.org/rsss.pdf.

Joaquin Water Conservation District who hold Central Valley Project water supply contracts on the Stanislaus River.

In addition, the environmental review does not properly considered the new information due to the proposed transfer of existing Delta Wetlands water rights, including, but not limited to, limitations to the water available under any new water right due to the significant use of water on the proposed habitat areas and the limitations and changes to export pumping operations since the 2001 FEIR as identified in the attached letter dated January 30, 2009 from the Department of Water Resources. See also the attached "Summary Report for the Determination of Conserved Water Associated with the 2009 Webb Tract Water Transfer Pilot Study."

12-6 Cont

Traffic and Transportation Impacts

Increased traffic upon delta waterways and roads due to the Delta Wetlands Project will accelerate deterioration of County facilities. Specifically, the Bacon Island Road crossing the Middle River will be impacted. Both water and vehicular traffic will require additional opening and closing movements of the swing-span portion of Bacon Island Road Bridge. Negative accident statistics could be expected to increase on both water and roadways during periods of boater and vehicular queuing during bridge operation. The proposed project mitigation measures are, at present, insufficient to mitigate the accelerated wear and tear on County road and bridge operations.

PL84-99 freeboard requirements are proposed to be met in the context of projected sea level rise by adding material to the levees through routine maintenance. The increased level of heavy truck and equipment traffic on County roads and bridges including roads that atop levees must be considered The proposed mitigation Bacon Island Road from State Route 4 to Mandeville Island Bridge is not adequate for continuous loading by trucks and will fail if imported borrow and rock slope protection is trucked to Bacon Island. During construction, Delta Wetlands shall maintain the roadway in a passable and safe condition at all times. At the completion of construction, the road should be returned to its original condition or better. No construction staging will be allowed on the roadway. North Bacon Island Road shall not be closed in order to provide access to Mandeville Island. Delta Wetlands is subject to transportation permits for any construction generated trips that are oversize and/or overweight. Because of existing conditions, the County will not issue a permit for oversize or overweight vehicles that exceed the designated permit loading. The following mitigations measures should be added to items TRA-3 through TRA-6 on page ES-28:

12-7

a. Delta Wetlands Project is subject to the San Joaquin County Traffic Impact Mitigation Fee (TIMF) and Regional Transportation Impact Fee (RTIF) for trips generated on San Joaquin County public roadways.
b. Delta Wetlands Project is subject to transportation permits for any construction generated trips that are oversize and/or overweight.
c. Delta Wetlands Project is subject to encroachment permits for any work within the San Joaquin County right-of-ways.

d. Delta Wetlands Project is subject to encroachment permits for any proposed stoppage and/or detour of traffic within the right-of-way on San Joaquin County public roadways

12-7 Cont

Economic Impacts

The significant economic and environmental impacts within San Joaquin County due to the loss of agricultural lands due to the Project and the associated cumulative effects of such continue to be inadequately evaluated. There are significant changed circumstances to the national, state and local economy since the certification of the 2001 FEIR. The County's revenue has been significantly impacted due to the condition of the economy and the Delta Wetlands Project will further impact the County's revenue and tax structure and the agricultural economy due to the change of use of two islands within the County and two islands adjacent thereto that also impact the economy of the County. These economic impacts have not been adequately evaluated nor have adequate mitigation measures been identified.

12-8

Environmental Justice Considerations

Redirected impacts to the San Joaquin County Community through the unlawful operation of the SWP and CVP are a burden that is outrageously unjust. Redirected impacts are evident as the principles of Environmental Justice are applied. The additional burden proposed by the Delta Wetlands Project is inadequately addressed in every phase of the Delta Wetlands Project CEQA administrative record. The proposed mitigation measures do not address the concerns of the San Joaquin County Community who will inevitably bear the burdens of the Delta Wetlands Project.

In 1997, the Council on Environmental Quality[2] released guidelines for the consideration of Environmental Justice principles in the development of projects and actions. These Principles should be used to determine whether actions or projects have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, or Indian tribes. These Principles are bulleted below.

12-9

- Consideration of the demographic composition of the affected area;
- Consideration of relevant public health data;
- Recognition of interrelated cultural, social, occupational, historical, or economic factors as it applies to the physical sensitivity of a community to particular impacts;
- Development of effective public participation;
- Inclusion of community representatives from affected areas; and
- Inclusion of Tribal representation.

[2] Environmental Justice: Guidance Under the National Environmental Quality Act published December 10, 1997 by the Council for Environmental Quality as established by Executive Order 12898 and Presidential Memorandum.

Section 15162 of the Guidelines for Implementation of CEQA Guidelines requires that a subsequent EIR be prepared. The County strongly suggests that a subsequent Environmental Impact Statement also be prepared where the issues of Environmental Justice can be thoroughly considered along with other issues required under the National Environmental Policy Act and the Clean Water Act. 12-10

San Joaquin County appreciates your consideration of our comments regarding the Delta Wetlands Project Draft Place of Use Environmental Impact Report. Should you have any questions, please contact Brandon Nakagawa, San Joaquin County Public Works - Senior Civil Engineer, at (209) 468-3089.

Sincerely,

Thomas J. Shephard, Sr.
Special Water Counsel

C: T.R. Flinn, Director of Public Works
Thomas M. Gau, Chief Deputy
Dr. Mel Lytle, Water Resources Coordinator
Mark Connelly, Engineering Services Manager
Brandon Nakagawa, Senior Civil Engineer
Mark Hopkins Environmental Coordinator

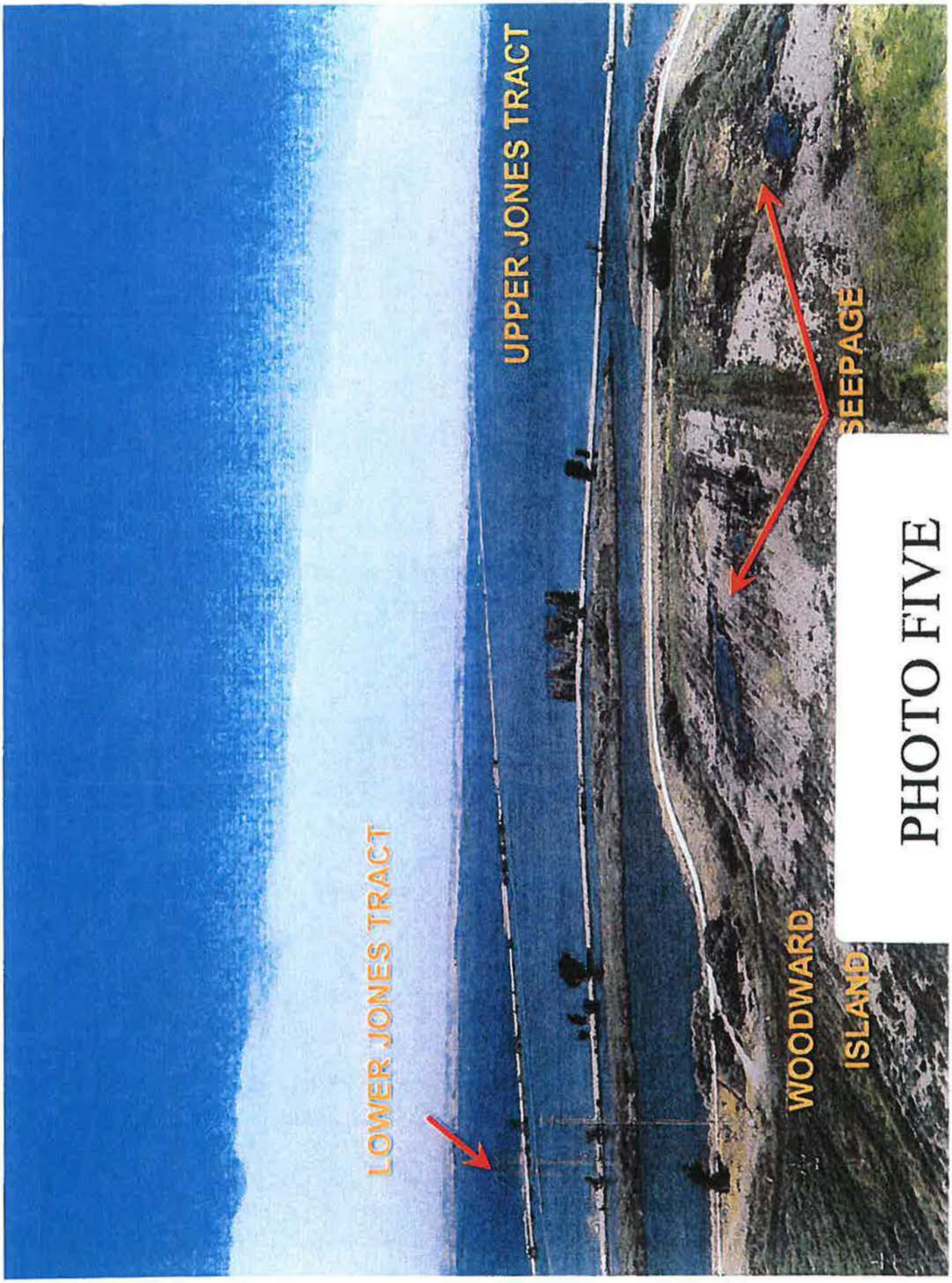

LOWER JONES TRACT
UPPER JONES TRACT
SEEPAGE
WOODWARD ISLAND

PHOTO FIVE

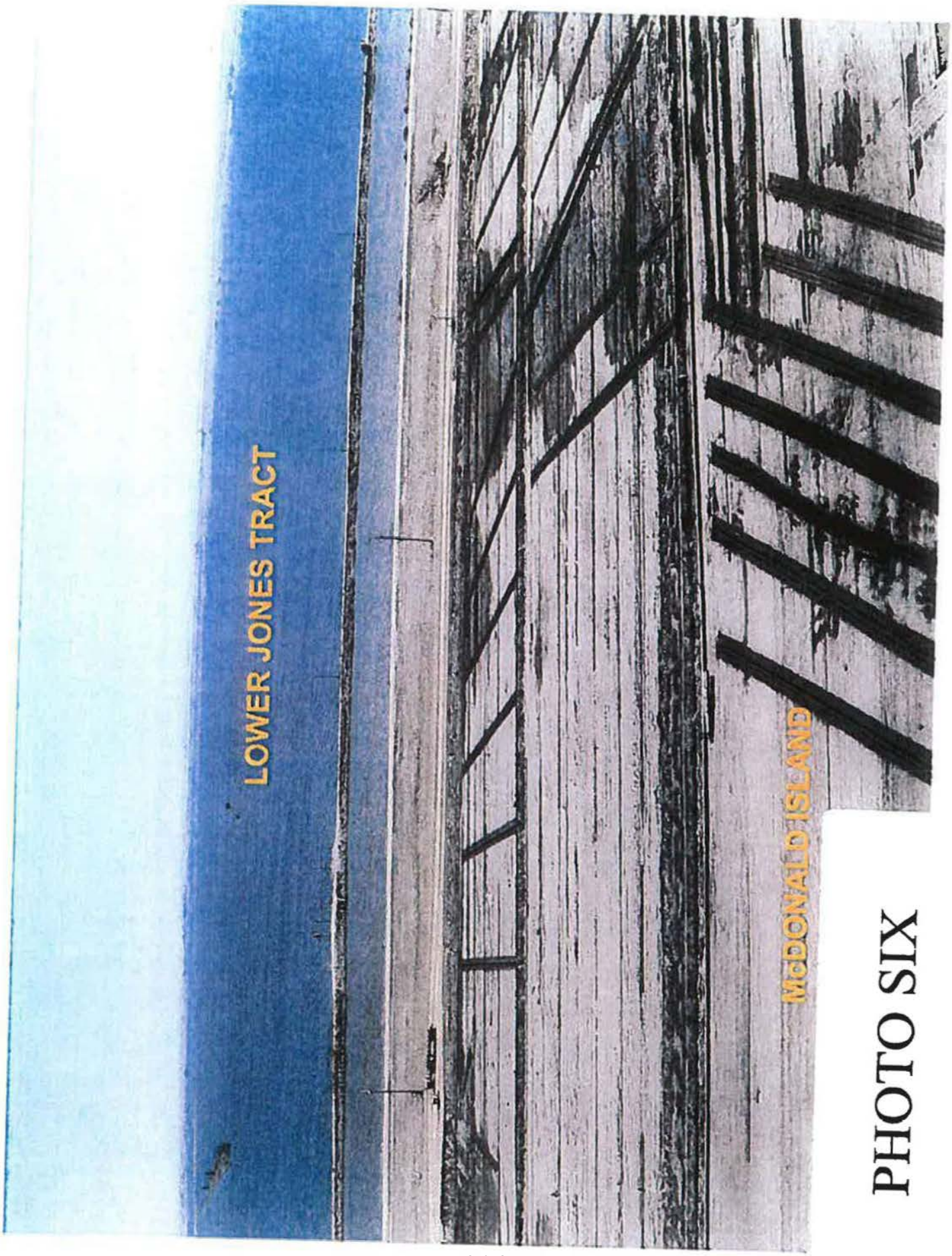


PHOTO SIX