DUTCH SLOUGH TIDAL MARSH RESTORATION PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT: COMMENTS AND RESPONSES

March 2010

SCH # 2006042009

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I. INTRODUCTION

This document contains a revised Summary of Impacts and Mitigation Measures, written comments received on the Draft EIR (DEIR) and the Lead Agency's responses to those comments, and an errata section containing technical and editorial corrections initiated by the Lead Agency. The DEIR was circulated for a 60-day public review period (granted by the State Clearinghouse upon consultation with responsible and trustee agencies) beginning November 20, 2008 and ending on January 19, 2009. Copies of the DEIR were distributed to state, regional, and local agencies, as well as to any requesting individuals and organizations, for their review and comment. This document is a companion document to the DEIR dated November 2008 and, together with that document, constitutes the Final Environmental Impact Report (FEIR) for the project.

Pursuant to the requirements of the California Environmental Quality Act (CEQA), and Section 15088 of the CEQA Guidelines, the California Department of Water Resources (DWR), as the Lead Agency, has evaluated the comments received on the DEIR and has prepared written responses to the comments received. Section III contains all of the comments made on the DEIR. Responses are provided for significant environmental points raised in the review and consultation process (as required in the State CEQA Guidelines Section 15132).

Because of the limited comments and minimal text revisions resulting from these comments, the DEIR has not been revised and republished in this document. Rather, a revised Summary Table of impacts and mitigations is included in this document. Revisions are shown in ~~strike through~~ (deleted text) and *italics* (new text).

This document along with the DEIR will be certified by the Department of Water Resources prior to consideration of project approval. DWR may require the mitigation measures identified in this FEIR as conditions of project approval. In order to approve any discretionary applications for the proposed project, DWR must adopt a separate document, prepared pursuant to State CEQA Guidelines Section 15091 and 15093, containing a set of required CEQA "Findings" with respect to each significant environmental effect, and a "Statement of Overriding Considerations" for any effects that are unavoidable or infeasible to mitigate. Also included in the Findings document is a Mitigation Monitoring Program that must be adopted in accordance with Public Resources Code Section 21081.6.

II. REVISED SUMMARY TABLE OF IMPACTS

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
Hydrology and Geomorphology					
3.1.1-1/2-1/3-1/4-1	Erosion in terminal sloughs due to increased tidal prisms	◑	◑	◑	○
3.1.1-5/2-7/3-7/4-2	Possible water quality degradation in Contra Costa Canal due to groundwater seepage	◑	◑	◑	○
3.1.1-6/2-8/3-8	Groundwater intrusion onto adjacent parcels	◑	◑	◑	○
3.1.1-7/2-9/3-9	Wind-wave driven levee overtopping of southern uplands into Contra Costa Canal	◑	◑	◑	○
3.1.1-8/2-10/3-10	Insufficient sedimentation in new wetland basin to keep up with Sea-level rise	?	?	?	○
3.1.1-9/2-11/3-11	Limited persistence of shallow tidal marsh channels	◑	◑	◑	○
3.1.2-3/3-3	Point bar formation in Marsh Creek	○	◑	◑	○
3.1.2-4/3-4	Sedimentation in tidal portion of relocated Marsh Creek channel	○	◑	◑	○
3.1.5-1	Cumulative Impact - Groundwater seepage into the C. C. Canal	○	○	○	○
3.1.5-2	Cumulative Impact – Groundwater seepage into Cypress Grove and Dutch Slough properties	○	○	○	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.1.5-3	Cumulative Impact – Groundwater seepage and tidal flooding east into Hotchkiss Tract	◐	◐	◐	○
3.1.5-4	Cumulative Impact – Tidal flooding south into Cypress Grove and Dutch Slough properties	◑	◑	◑	○
3.1.5-5	Cumulative Impact – Excess Scour in Emerson Slough	◐	◐	◐	○
3.1.5-6	Cumulative Impact – Excess scour in Little Dutch Slough	◐	◐	◐	○
Water Quality					
3.2.1-1/2-1/3-1/4-1	Degradation of water quality due to release of contaminants and sediment from construction activities	◑	◑	◑	◐
3.2.1-2/2-2/3-2	Degradation of water quality due to increased dissolved organic carbon (DOC) in Delta waters	◑	◑	◑	◑
3.2.1-3/2-3/3-3	Degradation of water quality due to increased erosion and turbidity after construction	◑	◑	◑	○
3.2.1-4/2-4/3-4	Degradation of water quality due to increased mercury methylation	◑	◑	◑	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.2.1-5/2-5/3-5	Degradation of drinking water quality due to alteration of salinity levels in Delta waters	◐	◐	◐	○
3.2.1-6/2-6/3-6	Degradation of water quality due to increased salinity concentrations in the Contra Costa Canal	◑	◑	◑	○
3.2.1-7/2-7/3-7	Degradation of water quality due to elevated metals, endocrine disrupting chemicals, or other pollutants	◑	◑	◑	○
3.2.1-8/2-8/3-8	Cumulative Impacts	◑	◑	◑	○
Geology and Soils					
3.3.1-1/2-1/3-1/4-1	Expose people or structures to potential substantial adverse effects (including levee failure) resulting from a surface rupture of a known earthquake fault	○	○	○	○
3.3.1-2/2-2/3-2/4-2	Expose people or structures to potential substantial adverse effects (including levee failure) resulting from strong seismic ground shaking	◑	◑	◑	◐
3.3.1-3/2-3/3-3/4-3	Expose people or structures to potential substantial adverse effects (including levee failure) resulting from ground failure, including liquefaction	◑	◑	◑	◑

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.3.1-4/2-4/3-4/4-4	Expose people or structures to potential substantial adverse effects resulting from landslides	○	○	○	○
3.3.1-5/2-5/3-5/4-5	Substantial soil erosion or loss of topsoil	◑	◑	◑	◐
3.3.1-6/2-6/3-6/4-6	Landslide, lateral spreading, subsidence, liquefaction, or collapse resulting from construction on an unstable geological unit or unstable soils	◑	◑	◑	◑
3.3.1-7/2-7/3-7/4-7	Risk to life or property resulting from construction of structures on expansive soils	◑	◑	◑	◑
3.3.1-8/2-8/3-8/4-8	Levee failure resulting from erosion	◑	◑	◑	◑
3.3.1-9/2-9/3-9/4-9	Levee failure resulting from seepage	◑	◑	◑	◑
Biological Resources: Terrestrial and Wetlands					
3.4.1-1.1/2-1.1/3-1.1	Potential impacts to wildlife in irrigated pasture and ruderal terrestrial habitats	◑	◑	◑	○
3.4.1-1.2/2-1.2/3-1.2	Potential wildlife disturbance (direct and indirect) on terrestrial habitats associated with recreation	◑	◑	◑	○
3.4.1-2.1/2-2.1/3-2.1	Potential impacts of dredging Little Dutch and Emerson sloughs	◑	◑	◑	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.4.1-2.2/2-2.2/3-2.2	Potential wildlife disturbance (direct and indirect) around the marsh edge associated with recreation	◑	◑	◑	○
3.4.1-2.3/2-2.3/3-2.3	Potential wildlife disturbance (direct and indirect) associated with maintenance of exterior levee	◑	◑	◑	○
3.4.1-3/2-3/3-3	Potential impacts to nontidal freshwater marsh and riparian woodland/scrub and associated wildlife species	◑	◑	◑	○
3.4.1-4/2-4/3-4	Potential impacts to alkali meadow and seasonal wetland flats and associated wildlife species	◑	◑	◑	○
3.4.1-5.1/2-5.1/3-5.1	Potential impacts to special-status plants	◑	◑	◑	○
3.4.1-5.2/2-5.2/3-5.2	Impacts to special-status tidal marsh plants of dredging Little Dutch and Emerson sloughs	◑	◑	◑	○
3.4.1-6/2-6/3-6	Potential loss of roosting sites for special-status bat species	◑	◑	◑	○
3.4.1-7/2-7/3-7	Potential impacts to Cooper's hawk	◑	◑	◑	○
3.4.1-8/2-8/3-8	Potential loss of Swainson's hawk foraging and nesting habitat	◑	◑	◑	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.4.1-9/2-9/3-9	Potential Impacts to burrowing owls	● (if present onsite)	● (if present onsite)	● (if present onsite)	○
3.4.1-10/2-10/3-10	Potential Impacts to white-tailed kite and northern harrier	◑	◑	◑	○
3.4.1-11/2-11/3-11	Potential impacts to nesting birds	◑	◑	◑	○
3.4.1-12/2-12/3-12	Potential impacts to tricolored blackbirds	◑	◑	◑	○
3.4.1-13/2-13/3-13	Potential impacts to California horned larks	◑	◑	◑	○
3.4.1-14/2-14/3-14	Potential impacts to loggerhead shrikes	◑	◑	◑	○
3.4.1-15/2-15/3-15	Potential impacts to yellow-breasted chats and other marsh and riparian songbirds	◑	◑	◑	○
3.4.1-16/2-16/3-16	Potential impacts to special-status wading birds	◑	◑	◑	○
3.4.1-17/2-17/3-17	Potential impacts to California black rails	◑	◑	◑	○
3.4.1-18/2-18/3-18	Potential impacts to California tiger salamanders	◑	◑	◑	○
3.4.1-19/2-19/3-19	Potential impacts to California Red-legged frogs	◑	◑	◑	○
3.4.1-20/2-20/3-20	Potential impacts to northwestern pond turtles	◑	◑	◑	○
3.4.1-21/2-21/3-21	Potential impacts to giant garter snakes	◑	◑	◑	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.4.1-22/2-22/3-22	Potential impacts to silvery legless lizards	◑	◑	◑	○
3.4.1-23/2-23/3-23	Potential impacts to vernal pool fairy shrimp and other special status vernal pool invertebrates	◑	◑	◑	○
3.4.1-24/2-24/3-24	Potential impacts to valley elderberry longhorn beetles	◑	◑	◑	○
3.4.1-25/2-25/3-25	Potential impacts to Heritage or other trees protected by local ordinance	◑	◑	◑	○
Biological Resources: Aquatic Resources					
3.5.1-1/2-1/3-1	Decreased water quality due to construction/dredging activities	◑	◑	◑	○
3.5.1-2/2-2/3-2	Release of low quality water from project area during pre-breach water management periods	◑	◑	◑	○
3.5.1-3/2-3/3-3/4-2	Entrainment of fish into areas disconnected from the Bay-Delta	◑	◑	◑	◑
3.5.1-4/2-4/3-4	Potential mercury methylation could cause bioaccumulation and toxicity to fish	◐	◐	◐	○
3.5.1-5/2-5/3-5	Disturbance of benthic habitats	◐	◐	◐	○
3.5.1-6/2-6/3-6	Creation of habitat that benefits non-native fish species	●	●	●	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.5.1-7/2-7/3-7	Endocrine disrupting chemicals and other contaminants entering the site from Marsh Creek or from fill soils could harm fish	◑	◑	◑	○
3.5.4-1	Reduced water quality due to levee repair activities	○	○	○	◑
3.5.4-2	Entrainment of fish inside the project site through unintended levee breaches or overtopping	○	○	○	◑
Air Quality					
3.6.1-1/2-1/3-1	Vehicular emissions	◔	◔	◔	○
3.6.1-2/2-2/3-2	Construction emissions	◑	◑	◑	○
3.6.1-3/2-3/3-3	Greenhouse gasses	◔	◔	◔	○
Noise					
3.7.1-1/2-1/3-1	Construction noise impacts	◔	◔	◑	○
Aesthetics					
3.8.1-1/2-1/3-1/4-1	Effect on a scenic vista	○	○	○	○
3.8.1-2/2-2/3-2/4-2	Effect on a scenic resource	○	○	○	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
3.8.1-3/2-3/3-3/4-3	Effect on visual quality of the site and its surroundings	◐	◐	◐	○
Land Use					
3.9.1-1/2-1/3-1	Physically divide an established community	○	○	○	○
3.9.1-2/2-2/3-2	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.	○	○	○	○
3.9.1-3/2-3/3-3	Conflict with any applicable habitat conservation plan or natural community conservation plan	○	○	○	○
Agricultural Resources					
3.10.1-1/2-1/3-1	Conversion of Prime/Unique Farmland or Farmland of Statewide Importance	◐	◐	◐	○
3.10.1-2/2-2/3-2	Conflict a Williamson Act contract	○	○	○	○
3.10.1.3/2.3/3.3	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use	○	○	○	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
Recreation					
3.11.1-1/2-1/3-1	Conflicts between non-motorized watercraft and motorized watercraft	◑	◑	◑	○
3.11.1-2/2-2/3-2	Temporary effects on recreational access during project construction	◍	◍	◍	○
3.11.1-3/2-3/3-3	Long-term changes in recreational opportunities	+	+	+	○
Cultural Resources					
3.12.1-1/2-1/3-1	Loss of unknown archaeological resources	◑	◑	◑	○
3.12.1-2/2-2/3-2	Cumulative effect of demolition of historic buildings and landscape features	●	●	●	◍
Transportation/Traffic					
3.13.1-1/2-1/3-1	Trip distribution and roadway capacity	◍	◍	◍	○
3.13.1-2/2-2/3-2	Parking	◍	◍	◍	○
3.13.1-3/2-3/3-3	Cumulative traffic considerations	◍	◍	◍	○

Impact Number	Impact	**Alternative 1:** Minimum Fill	**Alternative 2:** Moderate Fill/Preferred Alternative	**Alternative 3:** Maximum Fill Alternative	**Alternative 4:** No Project
Public Services, Utilities and Service Systems					
3.14.1-1/2-1/3-1	Effect on police protection	◐	◐	◐	○
3.14.1-2/2-2/3-2	Effect on fire protection	◐	◐	◐	○
3.14.1-3/2-3/3-3	Effect on water supply	◐	◐	◐	○
3.8.1-4/2-4/3-4	Effect on wastewater	◐	◐	◐	○
3.14.1-5/2-5/3-5	Effect on storm drainage	◐	◐	◐	○
3.14.1-6/2-6/3-6	Effect on electrical and gas transmission	◐	◐	◐	○
Hazards and Hazardous Materials					
3.15.1-1/2-1/3-1	Effects of Dutch Slough parcel soils contamination	◑	◑	◑	○
3.15.1-2/2-2/3-2/4-2	Health risks associated with demolition activities	◑	◑	◑	○
3.15.1-3/2-3/3-3/4-3	Health effects to workers from use of soils from Ironhouse parcel	◐	◐	◐	○
3.15.1-4/2-4/3-4/4-4	Health effects from mosquitoes	◑	◑	◑	○
3.15.4-1	Effects of existing contaminated soils	○	○	○	◐

III. WRITTEN COMMENTS AND LEAD ANGENCY RESPONSES TO COMMENTS

This section includes all written comments received by the Lead Agency regarding the Draft Supplemental EIR (DSEIR). Pursuant to CEQA requirements, each relevant comment is responded to following the letter. Comments and responses are organized by letter, and each relevant comment is numbered within each letter. Identically numbered responses follow each comment letter.

The following written comments were received on the DSEIR

1. Dutch Slough Road Landowners, November 28, 2008 Letter

2. Reclamation District No. 830 January 13, 2009 Letter

3. East Bay Regional Park District, January 15, 2009 Letter

4. State Water Resources Control Board, Division of Financial Assistance, January 16, 2009 Letter

5. East Contra Costa County Habitat Conservancy, January 20, 2009 Letter

6. Contra Costa County Flood Control and Water Conservation District, January 16, 2009 Letter

7. State of California Department of Fish and Game, January 21, 2009 Letter,

8. Contra Costa Water District, February 17, 2009 Letter

9. Ironhouse Sanitary District, February 24, 2009 Letter

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November 28, 2008

Patty Quickert
DWR Delta-Suisun Marsh Office
1416-9th Street Room 1623
Sacramento, CA 95814

Dear Ms. Quickert:

I will not be able to attend your public meeting regarding the Draft EIR, so I have Written my comments as follows:

1 At one time we were considered to be an important enough road to be included in the Draft EIR for the East Cypress Corridor Specific Plan, then we were left out of their final draft. (see enclosed document.)

We landowners along Dutch Slough Road feel there should be some mention of us, as we will be impacted at the corner of Jersey Island Road and Dutch Slough Road. Our levees are unstable and with your new project we along Dutch Slough Road could be damaged.

2 We are concerned we may be a short cut or pass through road to get to your new proposed parks and recreation areas. Our road cannot take more traffic for various reasons, yet there is no mention of Dutch Slough Road in your report.

Respectfully,

Dee Kerry
For Dutch Slough Road Landowners

Responses to Dutch Slough Road Landowners, November 28, 2008 Letter

Response to Comment 1:
A transportation study was prepared for the proposed project by Abrams Associates, Transportation Engineers. The results of that study are incorporated into the section 3.13, Transportation and Traffic, of the DEIR. Table 3.13-1 summarizes project rip generation, and traffic distribution and impacts are discussed on pp. 3.13-3 and 3.13-4 of the DEIR. The following revisions to the transportation section have been made to address Dutch Slough Road:

The following is hereby added to the end of the second paragraph on p. 3.13-1 to add mention of Dutch Slough Road:

> *"Dutch Slough Road, a local, two-lane road, connects Jersey Island Road to Bethel Island Road to the east.*

The following text has been added to the end of the first full paragraph on p. 3.13-3 to address long-term project traffic impacts on Dutch Slough Road:

> *"Minimal project traffic would be expected to use this road, as the site is more directly accessed from all populated areas except Bethel Island by East Cypress Road and Jersey Island Road. The current population of Bethel Island is small enough that any increase in use of Jersey Island Road from Bethel Island residents accessing the project site is expected to be minimal."*

The following text has been added to the end of the last paragraph on p. 3.13-3 to address potential construction-related project traffic impacts on Dutch Slough Road:

> *"Some local construction traffic associated with access to the Burroughs parcel also may occur on Jersey Island Road, but none is expected to use Dutch Slough Road due to the speed control measures in place."*

The following is added to the end of the third paragraph on p. 3.3-9 to add mention of Dutch Slough Road:

> "*Dutch Slough Road, a local, two-lane road, connects Jersey Island Road to Bethel Island Road to the east. This road lies on top of a levee that protects the Hotchkiss Tract from flooding from Dutch Slough to the north. As discussed in Section 3.13, implementation of the Project is not expected to increase traffic on Dutch Slough Road by a significant amount. Therefore, the Project will have no impact on the ability of this levee to withstand ground shaking forces. The project is not expected to result in other hydraulic changes that would negatively impact the condition of the levee along Dutch Slough Road."*

Response to Comment 2:
See response to Comment 1, above.

RECLAMATION DISTRICT NO. 830
P. O. Box 1105
Oakley, CA 94561-1105
(925) 625-2279

Patty Quickert
DWR Delta-Suisun Marsh Office
1416 9th Street Room 1623
Sacramento, CA 95814

January 13, 2009

Dear Ms. Quickert:

Reclamation District No. 830 (RD No. 830) has reviewed the Draft EIR (DEIR) for the Dutch Slough Restoration Project (Project). RD No. 830 is responsible for flood protection and drainage of Jersey Island, located north of the Project area.

(1) The DEIR does not adequately address the potential for seepage to Jersey Island (Section 3.1). The Hultgren-Tillis 2005 report noted that the potential exists for seepage to Jersey Island, although the seepage will likely be small. The Hultgren-Tillis 2005 report recommended a groundwater monitoring program be implemented on Jersey Island at least one year prior to Project flooding to provide baseline data and to provide data to evaluate if seepage is impacting neighboring properties. The seepage monitoring program is not included as a mitigation requirement in Section 3.1 of the DEIR. RD No. 830 requests the monitoring program be implemented, per the Hultgren-Tillis 2005 report, with the requirement that the Project mitigate should seepage from the Project be shown to impact Jersey Island. Also, RD No. 830 requests that mitigation measures to address possible seepage to Jersey Island be identified and included in the DEIR.

(2) The Project plan does not include rock riprap to armor the interior slope of the Dutch Slough levee. The mitigation requirements for the project do include a requirement that the Dutch Slough levees be maintained in the future to prevent breaches in the levees particularly along Dutch Slough. Erosion protection in the form of flatter slopes and vegetation will not provide adequate protection from wind generated waves interacting with the levee. Providing more active protection in the form of riprap, or other acceptable "armoring" methods, could minimize damage and the need for future repair.

RD No. 830 requests that mitigation measures be included in the DEIR to provide safeguards to protect the Jersey Island levees from wind-generated wave damage due to degradation of the Dutch Slough levee.

In summary, the two concerns of RD No.830 are 1) the lack of monitoring and identified mitigation measures for seepage onto Jersey Island and 2) the degradation of the Dutch Slough levee allowing larger waves to impact the Jersey Island levees along Dutch Slough.

Sincerely,

Dennis Nunn
Trustee / Treasurer
RECLAMATION DISTRICT No. 830

Reponses to Reclamation District No. 830 January 13, 2009 Letter

Response to Comment 1:
The 2005 Hultgren-Tillis report discussing groundwater conditions in the vicinity of the Dutch Slough site states:

> "Seepage onto Jersey Island is currently dominated by infiltration from Dutch Slough. Infiltration from the Dutch Slough tidal marsh restoration will likely only create a small increase in seepage to Jersey Island. Seepage would be through the shallow aquifer as indicated by the bold arrows on Cross-Sections 1 through 3.
>
> With the seepage impact expected to be small, the project may wish to monitor groundwater elevations to check whether, or to what extent, increased seepage is occurring. The installation of new ditches on Jersey Island, or deepening existing ditches, would likely provide control over increased seepage. Jersey Island is irrigated by Ironhouse Sanitary District effluent. Disposal of the seepage water may create an added load for Ironhouse Sanitary District on Jersey Island. We expect the added load may be very small.
>
> A seepage cut-off could be considered. The more beneficial location for a cut-off wall for Jersey Island would be in the Jersey Island levee. Such a cut-off would control the more prominent seepage from Dutch Slough as well as the much more minor seepage from the restoration project." [page 7, emphasis added]

Therefore, the second paragraph on page 3.1-19 under Impact 3.1.1-6, Groundwater Intrusion Onto Adjacent Parcels, is changed to state:

> ***North.*** *Dutch Slough to the north is a wide, deep channel with a relatively large daily flow and direct hydraulic connection via sandy soils underlying the levees for Jersey Island to the north and the Dutch Slough site to the south (Hultgren-Tillis 2005). If water surface elevations (the effective hydraulic head) on the Dutch Slough site were increased due to tidal restoration, this increase could potentially cause a small increase in seepage across and underneath Dutch Slough to Jersey Island (Hultgren-Tillis 2005). The resulting increase in groundwater elevations at Jersey Island is expected to be very small or undetectable. ~~Groundwater effects of the Dutch Slough Restoration Project to Jersey Island are likely to be insignificant, therefore, and it is doubtful whether their signal could be detected amongst all the other controls on Jersey Island groundwater, i.e., the "noise" in the groundwater signal.~~ This small increase in groundwater elevations could potentially impact groundwater pumping and farming operations on Jersey Island, though these impacts are likely to be minimal.*

On page 3.1-21, Mitigation 3.1.1-6.1 is revised as follows:

> *MITIGATION 3.1.1-6.1 GROUNDWATER INTRUSION PROTECTION: WEST AND NORTH OF DUTCH SLOUGH RESTORATION PROJECT SITE*
>
> ***WEST OF DUTCH SLOUGH SITE***
>
> *ISD is implementing treatment alternatives that will eliminate use of the parcels adjacent to the Dutch Slough Restoration Project for treated wastewater irrigation. If the Dutch Slough Restoration Project proceeds before the Ironhouse Sanitary District (ISD) discontinues irrigation of its fields near its treatment plant (immediately west of the Ironhouse Project site) and if*

irrigation is expected to continue after Dutch Slough implementation, then the following mitigation measure shall be implemented:

CONTINUED GROUNDWATER MONITORING
The ISD currently monitors the groundwater levels in its irrigation fields manually once a month using a grid of 19 wells. The water level in the Contra Costa Canal adjacent to the Oakley treatment plant is also recorded at the time of the monthly monitoring by surveying the water surface elevation from a nearby benchmark. This monitoring program shall continue after the implementation of the Dutch Slough Restoration Project. In addition to the existing monitoring plan, the water level in Marsh Creek shall be surveyed during each monitoring event. Water level monitoring at Marsh Creek shall begin at least a year before restoration activities begin. The Dutch Slough Restoration Project shall coordinate with the ISD to review pre- and post-restoration groundwater monitoring data to determine whether restoration activities at Dutch Slough are leading to increased groundwater levels and reduced groundwater storage capacity on the Ironhouse irrigation fields.

If 1) there is an increase in groundwater levels at the Ironhouse irrigation fields that can be attributed to the Dutch Slough Restoration Project following the restoration activities, and 2) the increased groundwater levels cause a significant loss of groundwater storage capacity resulting in the loss of the use of the site for treated wastewater irrigation by ISD, the following additional mitigation measure shall be implemented.

DEVELOP COMPENSATORY PROGRAM WITH THE ISD
The DWR shall coordinate with the ISD to determine the costs incurred to pump additional water to the District's Jersey Island lands as a result of restoration activities. One way in which this could be accomplished is by determining the volume of groundwater storage capacity that is lost following restoration and paying for the disposal of this volume of water. The exact formula for determining this volume, and the appropriate disposal costs shall be determined jointly by DWR and the ISD.

NORTH OF DUTCH SLOUGH SITE

GROUNDWATER MONITORING AND COMPENSATORY PROGRAM WITH ISD
DWR shall develop a groundwater monitoring program (details remain to be coordinated, including metrics that will determine impact significance) in conjunction with RD 830 that will monitor both pre and post-restoration groundwater elevations on Jersey Island. If this monitoring reveals that implementation of the Dutch Slough project is causing a significant impact to pumping and/or farming operations on Jersey Island, then DWR shall implement a compensatory program with RD 830 similar to that described above to mitigate for increased pumping of groundwater by ISD to Jersey Island.

Response to Comment 2:
Along the inboard side of the levee, levels of protection from wind-waves would vary with open water management options. The project would take an adaptive management approach to slope protection on the inboard side of the levee.

Paragraph two on page 2-18 is revised as follows:

Figure 2-8 shows a conceptual schematic for a typical cross-section of a habitat levee planted with riparian woodland. Riparian woodland plantings would extend down to 3.2 ft NGVD

(MHHW) on the outboard or slough side of the habitat levees and 5.0 ft NGVD on the inboard side. It may not be necessary to remove existing rip-rap (rock armament) on the outboard side of the levee; however, the rip-rap may be moved around to allow for interspersed planting. Retaining the existing rip-rap along Dutch Slough is expected to provide an effective and low cost method of protecting the levee from boat-wake erosion. On the inboard side of the levee, a gently sloping levee bench (5:1 horizontal: vertical or flatter) would be constructed from 5.0 ft NGVD to existing grade using fill material. Measures to protect the inboard slope of the levee from erosion due to wind-waves over the open water fetch may depend on the open water management options. In locations where habitat levees adjoin restored marsh areas, slope protection would not be necessary. The project will take an adaptive management approach to slope protection on the inboard side of the levee to ensure against levee erosion, which could potentially facilitate wind-wave propagation across Dutch Slough to Jersey Island. If the previously described gently sloping levee bench and vegetated features do not protect the inboard side of the levee from wind-wave erosion, then more aggressive measures, such as the installation of rip-rap or other "hard" engineered features may be warranted.

East Bay Regional Park District

2950 PERALTA OAKS COURT P.O. BOX 5381 OAKLAND CALIFORNIA 94605-0381 T. 510 635 0135 F. 510 569 4319 TDD. 510 633 0460 WWW.EBPARKS.ORG

January 15, 2009

Patty Quickert
DWR Delta-Suisun Marsh Office
1416 9th Street Room 1623
Sacramento, CA 95814

RE: **Dutch Slough Tidal Marsh Restoration Project**
Draft EIR

Dear Ms. Quickert:

East Bay Regional Park District appreciates the opportunity to comment on the Draft EIR for the Dutch Slough Tidal Marsh Restoration Project. The District is pleased to note the Draft EIR's inclusion of the District's Regional Trails and Shorelines as significant recreational features in the vicinity of Dutch Slough.

(1) Under section 3.11 Recreation in the "Trails" section, please make the following corrections. The Marsh Creek Regional Trail is currently 9.2 miles in length, not 6.5 miles as stated in the Draft EIR. The Delta DeAnza Regional Trail currently extends a total of 18.4 miles through the communities of Concord, Bay Point, Pittsburg, Antioch and Oakley. And while not yet complete, nearly two miles of the Big Break Regional Trail has been constructed, and the "proposed" notation on page 3.11-3 should be removed.

The Park District looks forward to continuing to work cooperatively with DWR and other project stakeholders to incorporate quality recreational features into this interesting and complex restoration project.

Yours truly,

Jim Townsend
Trails Development Program Manager
510-544-2602

cc: Larry Tong, EBRPD Advanced Planning Manager

Responses to East Bay Regional Park District, January 15, 2009 Letter

Response to Comment 1:
The length of the Marsh Creek trail on the first line of the fourth paragraph on p. 3.11-3 is hereby changed to "9.2 miles". The length of the completed portion of the Delta De Anza trail on the first line of the fifth paragraph on p. 3.11-13 has been revised to "18.4 miles". "Proposed" is deleted from the Big Break Regional Trail title on p. 3.11-3 of the EIR.

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Financial Assistance
1001 I Street, Sacramento, California 95814• (916) 341-5700
Mailing Address: P.O. Box 944212 • Sacramento, California 94244-2120
FAX (916) 341-5707 • http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

JAN 16 2009

Ms. Patty Quickert
California Department of Water Resources
1416 Ninth Street, Room 1623
Sacramento, CA 95814

Dear Ms. Quickert:

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CALIFORNIA DEPARTMENT OF WATER RESOURCES (DWR); DUTCH SLOUGH TIDAL MARSH RESTORATION PROJECT (PROJECT); CONTRA COSTA COUNTY; EAST CONTRA COSTA COUNTY INTEGRATED REGIONAL WATER MANAGEMENT (IRWM) IMPLEMENTATION GRANT PROGRAM; GRANT AGREEMENT NO. 07-505-550, COMPONENT 7; STATE CLEARINGHOUSE NO. 2006042009

We understand the DWR is not pursuing funds from the Clean Water State Revolving Fund (CWSRF) Program to finance this Project; however, the Contra Costa Water District is receiving grant funds under the East Contra Costa IRWM Implementation Grant Program for distributing to the Ironhouse Sanitary District (ISD) to fund the excavation and transportation of soils, and restoration activities on ISD lands located west of Marsh Creek. These activities are covered under DWR's draft EIR. As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information for the environmental document prepared for the Project.

Following the public review period, please provide us with the following documents applicable to the Project: (1) Two copies of the draft and final EIR, (2) the resolution certifying the EIR making California Environmental Quality Act (CEQA) findings and adopting the Mitigation Monitoring and Reporting Program (MMRP), (3) all comments received during the review period and DWR's response to those comments, (4) the adopted MMRP, and (5) the Notice of Determination filed with the Governor's Office of Planning and Research, State Clearinghouse. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board.

The State Water Board, Division of Financial Assistance (Division), is also responsible for administering CWSRF funds. The primary purpose for the CWSRF Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, and provide for estuary enhancement, and thereby protect and promote health, safety and welfare of the inhabitants of the state. The CWSRF Program provides low-interest funding equal to one-half the most recent State General Obligation Bond Rates with a 20-year term. Applications are accepted and processed continuously. Please refer to the State Water Board's CWSRF website at www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml.

The CWSRF Program is partially funded by the U.S. Environmental Protection Agency (USEPA) and requires additional "CEQA-Plus" environmental documentation and review. Three enclosures are included that further explain the environmental review process and some additional federal requirements in the CWSRF Program. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF funding commitment for the proposed Project. For further information on the CWSRF Program, please contact Ms. Michelle L. Jones at (916) 341-6983.

It is important to note that prior to a CWSRF funding commitment, projects are subject to provisions of the Federal Endangered Species Act, and must obtain Section 7 clearance from the U.S. Fish and Wildlife Service (USFWS), and/or National Marine Fisheries Service (NMFS) for any potential effects to special status species. Please be advised that the State Water Board will consult with USFWS, and/or NMFS regarding all federal special status species the Project has the potential to impact if the Project is to be funded under the CWSRF Program.

DWR will need to identify whether the Project will involve any direct effects from construction activities or indirect effects, such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur on-site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act. The State Water Board has responsibility for ensuring compliance with Section 106 and the State Water Board's Cultural Resources Officer (CRO) must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant. Please contact the CRO, Ms. Cookie Hirn, at (916) 341-5690, to find out more about the requirements, and to initiate the Section 106 process if the DWR decides to pursue CWSRF financing. Note that the DWR will need to identify the Area of potential Effects (APE), including construction and staging areas and the depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Other federal requirements pertinent to the Project under the CWSRF Program include the following:

1. Compliance with the federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.
2. Protection of Wetlands: Identify any portion of the proposed Project area that may contain areas that should be evaluated for wetlands or U.S. waters delineation by the U.S. Army Corps of Engineers (USACE), or require a permit from the USACE, and identify the status of coordination with the USACE.
3. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.
4. Compliance with the Migratory Bird Treaty Act: List any birds protected under this Act that may be impacted by the Project and identify conservation measures to minimize impacts.
5. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and a copy of the Federal Emergency Management Agency flood zone maps for the area.
6. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

(1)

DWR may want to consider the Clean Water Act Section 319(h) funding program. Section 319(h) authorizes the USEPA to award grants to state agencies with approved Nonpoint Source Assessment Reports and Nonpoint Source Management Programs. A state agency may award funds through subawards (contracts or subgrants) to other entities in accordance with the State's Nonpoint Source Management Program and procurement requirements. The State Water Board's Division is now accepting applications from those applicants who were invited to submit a Full Proposal for the 2008 319(h) NPS Grant Program to support projects throughout the state to restore impaired surface waters through the control of nonpoint source pollution. Applications are due at 5:00 pm on Tuesday February 17, 2009.

If DWR decides to pursue Proposition 84 funding for the Project, then compliance with Public Resources Code (PRC) Section 75102 is required. PRC Section 75102 requires that before the adoption of a negative declaration or EIR required for any project to be financed with Proposition 84 funds, the lead agency shall notify the proposed action to a California Native American tribe, which is on the contact list maintained by the Native American Heritage Commission (NAHC), if that tribe has traditional lands located within the area of the proposed Project.

Following are specific comments on the EIR:

(2) 1. Page 3.1-15, Impact 3.1.1-2 mentions that there is a potential for decreased flood flow conveyance of Marsh Creek due to increased tailwater elevations. Mitigation 3.1.1-2 would reduce impacts to less than significant and states that "prior to implementing restoration of the Ironhouse parcel a hydrodynamic analysis of the creek and the proposed Ironhouse restoration shall be performed, as applicable." The State Water Board is aware that a separate CEQA document will be prepared to address the restoration activities occurring on ISD lands. The hydrodynamic analysis should be incorporated into that document to substantiate whether or not the restoration activities will impact water quality of Marsh Creek.

(3) 2. Page 3.1-16, Mitigation 3.1.1-4 proposes to construct a flood control levee around ISD lands to reduce any potential flooding impacts. Please discuss whether there would be any potential environmental impacts from constructing a flood control levee, and provide substantial evidence to support your findings.

(4) 3. Page 3.1-17, Mitigation 3.1.1-5 proposes conducting a Groundwater Intrusion Study after the Project has been constructed to determine salt loading into the Contra Costa Canal and reduce potential groundwater seepage impacts to a less than significant level. Please elaborate further how conducting the Groundwater Intrusion Study will reduce potential water quality degradation of the Contra Costa Canal to a less than significant level, and identify any mitigation measures that would reduce salt loading into the Contra Costa Canal. Note that mitigation measures include specific, feasible actions that will minimize or avoid potential impacts. Substantiate the effectiveness of Mitigation 3.1.1-5 and other proposed mitigation measures, and show how these measures will be enforceable.

(5) 4. Page 3.5-12, Mitigation 3.5.1-1.3 proposes to install coffer dams around areas where the levees would be breached. Please determine if there would be any potential short-term environmental impacts from installing the coffer dams, and if the coffer dams would be in place for a longer period of time, discuss if there would be any potential long-term environmental impacts. Include any mitigation measures to reduce these short-term and long-term impacts.

5. Page 3.5-13, Impact 3.5.1-2 mentions that the open water management options of the Project would involve releasing low quality water from the Project area prior to breaching the levees. Page 3.5-14, Mitigation 3.5.1-2.1, 3.5.1-2.2 and 3.5.1-2.3 are proposed to reduce impacts to water quality and aquatic species impacts to a less than significant level. Specially, Mitigation 3.5.1-2.1 states that water would be released from the Project area gradually into surrounding waters, Mitigation 3.5.1-2.2 would limit water management activities during migration periods of sensitive fish species, and Mitigation 3.5.1-2.3 would maintain a short residence time for water exchange between the Project area and the adjacent tidal waters by using appropriate water control structures. Discuss any potential water quality impacts from gradually releasing low quality water into adjacent waters and determine how the Project would help preserve the beneficial uses of Marsh Creek and the Sacramento-San Joaquin Delta as set forth under the Water Quality Control Plans (Basin Plans) adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and the San Francisco Bay Regional Water Quality Control Board. Revise Mitigation 3.5.1-2.2 to include the appropriate migration period for sensitive fish species, and identify the types of water control structures and measures that would be taken to reduce impacts to water quality and other aquatic species. (6)

6. Page 3.5-15, under Impact 3.5.1-4, the Project and the adjacent project on ISD lands could cause bioaccumulation of methylmercury (MeHg) in fish. Impact 3.5.1-4 states that "total mercury should not change as a result of the Dutch Slough Restoration Project and Ironhouse Project; however, there could be an increase in MeHg loads to water in Dutch Slough or Big Break, as well as localized increased concentrations of mercury in sediment. A localized increase in MeHg in the immediate vicinity of the Dutch Slough Restoration Project could be a hazard to aquatic organisms regularly inhabiting the area." Page 3.5-15 also states that "Alternative 1 is likely to yield lower MeHg concentrations than Alternatives 2 and 3. Since the amount of high marsh and mudflat habitat being created would be minimal, the amount of MeHg exported from the Dutch Slough Restoration Project site may be negligible." According to the Central Valley Water Board's Basin Plan, mercury is prevalent region-wide and the problem of mercury bioaccumulation in aquatic species is serious. Please discuss how the Project and the results of the studies to be conducted as part of the Project would contribute to efforts to remedy the mercury problem in the Sacramento-San Joaquin Delta. (7)

7. Page 3.12-9 states that "One telephone response was received from one of the Native American community members contacted." The State Water Board recommends that DWR conduct follow-up phone calls to the Native American community members that have not responded to DWR's letter. (8)

9

8. Mitigation measure 3.12.1-1 states that "Should archeological materials (including, but not limited to, flaked stone tools and chipping debris, ground stone tools, human skeletal remains, historic bottles, structure foundations, etc.) be uncovered while conducting activities associated with the proposed Project sites, all work should temporarily cease in the vicinity of the finds." To be consistent with CEQA terminology, please change "should," "would" and "could" to "shall," and "will," respectively, since these words are defined in the CEQA Guidelines (Article 1, §15005) as a mandatory element, whereas "should," "would," and "could" identify an advisory element that does not guarantee the success of the mitigation.

Thank you again for the opportunity to review the draft EIR. If you have any questions or concerns, please feel free to contact me at (916) 327-9401, or by email at LDLEE@waterboards.ca.gov , or contact Duran Fiack by email at DFiack@waterboards.ca.gov.

Sincerely,

Lisa Lee
Environmental Scientist

Enclosures

cc: State Clearinghouse
(Re: SCH# 2006042009)
P. O. Box 3044
Sacramento, CA 95812-3044

Responses to State Water Resources Control Board, Division of Financial Assistance, January 16, 2009 Letter

Response to Comment 1:
Comment noted. The EIR includes discussions of the federal Clean Air Act (but not a formal Conformity assessment), wetlands loss and creation, farmland conversion, the Migratory Bird Treaty Act, and flood hazard issues. The project is not on or near a federal Wild and Scenic River. If the project were to pursue Clean Water State Revolving Fund funding, minor additions to these analyses would be required as noted in the comment letter.

Response to Comment 2:
Please see response to Contra Costa County Flood Control and Water Conservation District Comment #3. As part of final design, DWR will implement collection of sediment transport data and/or hydrodynamic and sediment transport modeling of the various potential post-restoration Marsh Creek configurations. Such modeling could also incorporate an assessment of impacts to water quality in Marsh Creek from restoration activities on the Ironhouse parcel. The environmental impacts of the Ironhouse restoration project will be described in a separate environmental document.

Response to Comment 3:
Please see response to Ironhouse Sanitary District Comment #1. The environmental impacts of the Ironhouse restoration project will be described in a separate environmental document.

Response to Comment 4:
The project site will not be breached until Canal encasement is complete, resulting in no impacts to water quality within the Canal from groundwater seepage. The groundwater study will begin at least one year prior to breaching. See response to CCWD Comment #2.

Response to Comment 5:
The installation and removal of coffer dams around breach locations will cause a temporary, localized increase in suspended sediments due to disturbance of the substrate. The impact of this increase on water quality will be less than significant since such minor short-term increases in suspended sediment in the Delta are quite common. The coffer dams would only be in place during the breach activities, so they should not cause any adverse impacts to the Dutch Slough aquatic ecosystem. It is also possible that these structures will not be needed. Most levee breaches performed for tidal marsh restoration projects in the Bay-Delta area have not needed coffer dams. If excavation of the breach occurs only at low tides, the amount of sediment released to the surrounding system can be minimized. The decision to install coffer-dams at the breaches for the Dutch Slough restoration project will be made on a case-by-case basis during construction. Such decisions will be based upon tide levels, site conditions such as substrate, and depth and width of excavation.

Response to Comment 6:
During pre-breach open water management periods, water control structures (flashboard risers, canal gates, flapgates, etc.) would be installed at the site to allow for the control of water levels within the impounded areas and regulate exchange with the surrounding open water tidal environment. The goal of pre-breach water management activities is to establish tules in the intertidal zone. Water management activities would involve flooding open water areas to specific elevations, or elevation ranges, for certain periods of time depending on the management objective. While water is being held at a specific elevation, water control structures would be set to provide a slow circulation (taking in and releasing a small amount of water during each tidal cycle) to prevent the buildup of high temperature - low dissolved oxygen sinks within the project area. During water level drawdown events water levels would be reduced gradually

over a period of several days to prevent the release of low-quality water plumes into the surrounding systems. The water control structures would be located along Dutch Slough to prevent the release of impounded water to dead-end sloughs or Marsh Creek where reduced circulation could lead to water quality impairment. If necessary, water quality monitoring instruments could be installed both inside the restoration area and in Dutch Slough to monitor water quality impacts due to water releases. The data collected in this effort could help refine water management schedules and draw-down durations to minimize impacts to the surrounding system. These measures should maintain all beneficial uses of Marsh Creek and the Delta.

The water quality impacts to the surrounding system due to these drawdown events could include minor, localized increases in temperature and decreases in DO in the immediate vicinity of the water control structures (depending on the quality of the water within the restoration area). These impacts would not be significant as the discharge water volume would be relatively small and will rapidly mix with the water of the surrounding system.

Mitigation 3.5.1-2.2, Limit Operation During Migration Periods of Sensitive Species, on p. 3.5-13 is revised as follows:

Water level management activities shall be limited during *peak* migration periods for sensitive fish species, *such as Chinook salmon and steelhead*, to reduce the potential impacts upon these species. *The limitation of operations and associated time periods will be defined during ESA consultation with NOAA Fisheries, as described in Mitigation 3.5.1-3 below. Potential modifications to operations during these migration periods could include eliminating any major flood-up or draw-down events requiring the exchange of large volumes of water over a short period of time. Time windows when these events may be restricted may be as follows:*

Chinook salmon: October-December (spawning); April-May (smolt emigration) (Baker and Morhardt, 2001)
Steelhead: September – October (spawning)(Moyle 2002)

Response to Comment 7:
The comment requested information at to how the Project and the results of studies to be conducted as part of the Project would contribute to efforts to remedy the mercury problem in the Sacramento-San Joaquin Delta.

Proposed Studies:
As Proposed in DEIR, the project would include the following studies:

- The Dutch Slough Project includes monitoring for mercury and MeHg levels in water and sediments in the Project vicinity both before and after restoration activities take place. This monitoring will provide baseline conditions at the site and will allow for comparisons between pre and post restoration MeHg levels. The information will aid in determining potential site management changes (e.g. changes in open water management regimes) in the future, as well as advance the general body of knowledge on the subject of MeHg creation and export in restored tidal marshes. It is likely that these monitoring activities will be coordinated with the creation of the Delta Mercury TMDL. (DEIR, p. 3.5-16). Details of the monitoring program are contained in DEIR Section 3.2, p.3.2-16 and p.3.2-31.
- The water-quality monitoring plan also includes monitoring for mercury and MeHg levels in Marsh Creek. Should the study find that mercury levels are outside the acceptable range, diverting Marsh Creek onto the Ironhouse Parcel as part of that project may not occur. (DEIR p.3.5-16) This decision will be made by Ironhouse Sanitary District.

The project also would include the following elements to Address MeHg

- Not routing Marsh Creek into Emerson Parcel (DEIR p.3.2-30)
- Total of about 3 acres of high marsh in project (DEIR p.3.2-30)

Project Contribution to Understanding and Addressing Delta Mercury Issues:
As part of the adaptive management approach for conducting tidal restoration, Dutch Slough can provide scientific insight that can reduce the fairly high levels of uncertainty about MeHg potential in tidal restoration efforts. See the DRERIP MeHg Conceptual Model (Alpers, 2008). Such a science-based monitoring effort can examine relationships between restoration design features (especially elevations, inundation regimes, geomorphology, tidal exchange and transport) and biogeochemistry of mercury methylation, landscape position relative to potential mercury source areas and to sensitive receptors.

Dutch Slough offers the potential to help address a number of uncertainties identified in the DRERIP methyl mercury conceptual model (Alpers 2008). Addressing these questions generally requires more intensive field investigations and analyses than accomplished through monitoring alone. Thus, DWR would need to determine the appropriate amount of funds to expend to support these investigations.

Currently there are a number of actions being taken in the Delta to understand and address the issues around mercury methylation in the Delta. These actions include:

- The SWRCB efforts to establish a TMDL for mercury
- Ongoing mercury investigations
- Critical research needs identified by DRERIP

Specific research questions to be addressed at Dutch Slough, or other mitigation actions, will be determined in consultation with SWRCB as part of the permitting process, and will take all of the above into consideration.

Response to Comment 8:
In August 2009, follow-up calls were made to the Native American community members that did not respond to DWR's earlier letter about Native American resources. One could not be contacted, one did not return a phone message, and the third had no comment to make and informed DWR that she was not aware of any Native American resources in the project area.

Response to Comment 9:
Mitigation Measure 3.12.1-1 has been revised as suggested by the comment, as follows:

> *~~Should~~ If archaeological materials (including, but not limited to, flaked stone tools and chipping debris, ground stone tools, human skeletal remains, historic bottles, structure foundations, etc.) be uncovered while conducting activities associated with the proposed project sites, all work ~~should~~ shall temporarily cease in the vicinity of the finds until they can be assessed by a qualified archaeologist and an appropriate course of action can be determined in consultation with the State Historic Preservation Officer. Furthermore, ~~should~~ if human remains ~~be~~ are discovered during project-related activities, the requirements of section 7050.5 of California's Health and Safety Code shall be followed. This includes stopping work within proximity of the finds and contacting the County coroner for an evaluation of the remains. If the remains are determined to be ancestral Native American, the coroner ~~must~~ is required to contact the Native American Heritage Commission within 24 hours.*

EAST CONTRA COSTA COUNTY HABITAT CONSERVANCY

City of Brentwood
City of Clayton
City of Oakley
City of Pittsburg
Contra Costa County

January 20, 2009

Ms. Patty Quickert
DWR Delta-Suisun Marsh Office
1416 9th Street Room 1623
Sacramento, Ca 95814

Re: Dutch Slough Restoration Project, Draft Environmental Impact Report

Dear Ms. Quickert:

The East Contra Costa County Habitat Conservancy (ECCHC) appreciates the opportunity to respond to the Draft Environmental Impact Report (DEIR) for the proposed Dutch Slough Restoration Project. The ECCHC is a Joint Exercise of Powers Authority formed by the Cities of Brentwood, Clayton, Oakley and Pittsburg and Contra Costa County to implement key conservation measures of the East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP or Plan). The HCP/NCCP is intended to provide an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species. The Plan will allow for local control of endangered species permitting under strict processing guidelines. Further, the Plan provides for comprehensive species, wetlands, and ecosystem conservation and goes beyond mitigation requirements to contribute to the recovery of endangered species. The HCP/NCCP inventory area is located in the eastern portion of Contra Costa County and includes the Dutch Slough tidal marsh restoration area. The Plan covers 28 listed and non-listed species and provides a conservation strategy that will mitigate the impacts of covered species and ultimately contribute to the recovery of these species in the inventory area. At least ten species that are covered by the HCP/NCCP are or may be present in the proposed project area, including the following:

- Townsend's western big-eared bat
- Golden eagle
- Swainson's hawk
- Tricolored blackbird
- Western burrowing owl
- Giant garter snake
- Silvery legless lizard
- California red-legged frog
- California tiger salamander
- Western pond turtle

1

According to Appendix E of the DEIR, many of the above-species are target species for the Dutch Slough Restoration Project and habitat for these species will be

651 Pine Street, North Wing, 4th Floor, Martinez, CA 94553 • 925-335-1227 • www.cocohcp.org

maintained or enhanced. However, for certain of these species, including Swainson's hawk, Western burrowing owl and Tricolored blackbird, the project will need to find offsite mitigation opportunities. The ECCCHC would welcome discussion with the proponents of the Dutch Slough Restoration Project on potential partnership opportunities. The ECCCHC could be interested in participating in funding activities at Dutch Slough that restore habitats for covered species, in particular for giant garter snake or for silvery legless lizard. In terms of the HCP/NCCP inventory area, the Dutch Slough area provides one of the better locations for protection and restoration of giant garter snake habitat. The Dutch Slough area also support substantial sandy soils that are the preferred habitat for silvery legless lizard and are not common in undeveloped areas of HCP/NCCP. Participation in the HCP/NCCP is also a potential mechanism for the Dutch Slough restoration Project to mitigate for impacts to species like Swainson's hawk, western burrowing owl and golden eagle. We would welcome a conversation to explore potential partnership opportunities.

1 *(cont.)*

We would also like to offer a specific comment on the document. The discussion on impact 3.9.1-3 on page 390 ("Conflict with any applicable habitat conservation plan or natural community conservation plan") is inaccurate and should be expanded. The HCP/NCCP does apply to the project area as the entire area is within the HCP/NCCP inventory area. Further, though it is true that the HCP/NCCP is intended to provide a regional approach to species mitigation, the potential impacts to the HCP/NCCP from projects in the Plan area should be disclosed an analyzed. This analysis is quite simple in cases where a project is intended to participate in the HCP/NCCP as there would be no conflict. However, if a project will not be participating in the HCP/NCCP any impacts on successful implementation of the HCP/NCCP should be disclosed. We generally recommend such analysis focus on potential location-specific and species-specific conflicts with the HCP/NCCP conservation strategy, for instance impacts to habitat corridors proposed for conservation under the HCP/NCCP or elimination of suitable restoration sites. Given the location of the Dutch Slough restoration project and the fact that is a restoration project, the analysis should be simple and straightforward. The Dutch Slough area is not located within highest priority acquisition areas for the HCP/NCCP but is located within and near high priority restoration areas (see Figure 5-3 of the HCP/NCCP and Chapter 5). The restoration goals of the Dutch Slough Project have much in common with the goals of the HCP/NCCP, but I would suggest developing a simple list or table to disclose and evaluate consistency with and potential conflicts to restoration of habitat for species covered by the HCP/NCCP.

2

Thank you for you consideration of these comments.

Sincerely,

John Kopchik
Executive Director

Responses to East Contra Costa County Habitat Conservancy, January 20, 2009 Letter

Response to Comment 1:
Department of Water Resources staff attended a meeting with the Executive Director of the East Contra Costa County Habitat Conservancy on February 19, 2009 to discuss possibilities for partnership between the Dutch Slough Project and the East Contra Costa Habitat Conservation Plan. The results of that meeting indicated that although there may be few productive opportunities to coordinate the two actions, the actions are working towards the same goal and will therefore continue to communicate and offer mutual support wherever possible.

Response to Comment 2:
Although the Project is located within both the inventory and permit areas for the HCP/NCCP, it will not be participating in the HCP/NCCP. This means that the HCP/NCCP has no responsibility to mitigate any environmental effects of the Project, and habitats created by the Project cannot be used to mitigate effects of the HCP/NCCP. The Project is not expected to conflict with either the goals or the implementation of the HCP/NCCP. The Project shares many broad objectives with the HCP, including the following:

- enhance hydrogeomorphic and ecological function of wetlands
- restore wetlands
- enhance and create terrestrial and aquatic habitat for sensitive species
- promote diversity of native species and habitat heterogeneity

In addition, the Project does not conflict with any of the natural community or species-level goals listed in Chapter 5 of the HCP/NCCP.

There are no known location-specific or species-specific conflicts with the HCP conservation strategy (such as impacts to habitat corridors proposed for conservation or elimination of suitable restoration sites). A summary of species in common between the Project and HCP, species-specific goals of the HCP, and expected effects of the Project are listed below. Two species, Townsend's big eared bat and burrowing owl, have not been found at the Project site, but if future surveys locate the species, the restoration project may have impacts that are in conflict with the HCP.

Species	HCP goal	HCP Conservation Measure	Dutch Slough potential impacts or conflicts with HCP
Townsend's big eared bat	Maintain or increase populations	Protect and enhance roosting habitat	If the species is found to be roosting in buildings on Burroughs parcel, demolition of those buildings would negatively impact the species. This could be avoided in the "no Burroughs" option, or mitigated by maintaining occupied structure(s), or by creating artificial habitat.
Tricolored blackbird	Enhance habitat	Minimize predation by locating nesting habitat away from black crowned night heron rookeries	After tidal restoration, it is likely that tricolored blackbird nesting habitat will be created. It is not known if there are night heron rookeries within one mile of the project site.
Burrowing owl	Maintain or increase populations	Temporarily create artificial burrows and	If burrowing owls are found on site, creation of artificial burrows may be considered.

		roosting sites	
Swainson's hawk	Maintain or increase populations	N/A	Annual bird surveys have located single pairs of nesting Swainson's hawks in 2006 and 2008. Efforts will be made to preserve recently occupied nest trees. Tidal restoration would result in a decrease in foraging habitat.
Silvery legless lizard	N/A	N/A	Surveys in 2009 did not find any legless lizards. Some sandy substrates will be preserved as uplands, but if not already occupied by the species, it is unlikely that these areas will be colonized.
Giant garter snake	Compensate for temporary and permanent loss of habitat	Compensate for loss of habitat	It is highly unlikely that giant garter snakes currently occupy the site. There are no known nearby populations, so it is unlikely that the species will colonize the site after habitat is enhanced after restoration.
Western pond turtle	Maintain or increase populations	Enhance habitat	Restoration may have temporary effects to the species, but habitat will be increased and enhanced by restoration.
California tiger salamander	N/A	N/A	The species does not occupy the site, and is unlikely to colonize after restoration, as the habitat will not be appropriate.
Red-legged frog	N/A	N/A	The species does not occupy the site, and is unlikely to colonize after restoration, as the habitat will not be appropriate.
Listed fairy shrimp	Compensate for loss of habitats occupied by covered shrimp species	Compensate for loss of habitat	If listed species are found on-site, appropriate compensation will be performed after consultation with regulatory agencies.

Contra Costa County
Flood Control
& Water Conservation District

Julia R. Bueren,
ex officio Chief Engineer
R. Mitch Avalon,
Deputy Chief Engineer

January 16, 2009

Patty Quickert
DWR Delta-Suisun Marsh Office
1416 9th Street Room 1623
Sacramento, CA 95814

Our Files: 3074-06 037-191-036, 97-74, & 4001-00

Dear Ms. Quickert:

We have reviewed the Draft Environmental Impact Report (DEIR) for the Dutch Slough Tidal Marsh Restoration Project, which we received on November 24, 2008. This project is in the City Oakley and bounded by the Contra Costa County Flood Control and Water Conservation District's (FC District's) Marsh Creek flood control channel to the west, the Contra Costa Water District's canal to the south, Jersey Island Road to the east and Dutch Slough to the north.

Marsh Creek is the principal waterway and flood control facility for both the City of Oakley and the eastern portion of Contra Costa County as a whole. As Such, the District's primary interest and task with regard to Marsh Creek is improving and maintaining it to provide flood protection for the citizens in East County. While we are open to the concept of the Dutch Slough Restoration Project, we will require that any aspects of the project that impact Marsh Creek will continue to be looked at carefully to ensure the creek's ability to provide an appropriate level of flood control over the long-term. This summary is the basis behind most of the FC District's comments on the DEIR:

Project Description and Alternatives Chapter 2

Ironhouse Sanitary District Pipeline (page 2-26)

1. Should Marsh Creek continue to properly function as a flood control facility, the FC District is concerned with the proposed relocation of the Ironhouse Sanitary District's pipeline to the top of the Marsh Creek levee, as illustrated in Figure 2-8 and described in this section of the DEIR. Trenching or even longitudinal drilling of the creek levee would compromise its integrity and could lead to unwanted flooding. ①

2. This section of the DEIR states that the eastern Marsh Creek levee would no longer serve as a flood control levee after restoration of the Dutch Slough site. This statement would only be true if the water quality of Marsh Creek is found to be suitable for use in the restoration of the Dutch Slough site. If the water quality is not found to be suitable, the eastern Marsh Creek levee will continue serving as a flood control facility and would require installation of slope protection on the newly created waterside of the levee to prevent scouring of the levee bank. ②

Marsh Creek Delta Relocation Options (page 2-38)

③ 3. This section states that the diversion of Marsh Creek is contingent on the results of a water quality monitoring plan. The FC District recommends that the diversion (not only the location of the diversion) also be contingent on the results of hydraulic modeling analysis considering sediment dynamics and flood control risks.

Hydrology and Geomorphology Chapter 3.1

Regulatory Setting – Natural Resource Conservation Service (page 3.1-12)

④ 4. This section states that modifications to and right-of-way transfers of portions of the Marsh Creek channel/levees *may* need to be approved by the Natural Resource Conservation Service (NRCS). It is more accurate to state that such actions *will* require approval of the NRCS.

Impact 3.1.1-2 Decreased Flood Flow Conveyance of Marsh Creek Due to Increased Tailwater Elevations-Ironhouse Project (page 3.1-15)

⑤ 5. This section states that the Mean Higher High Water (MHHW) elevation upstream in Marsh Creek (at the Contra Costa Canal) is lower than the downstream (at the mouth of Marsh Creek) MHHW elevation. This seems counterintuitive. We recommend that this statement be re-examined to make sure it is correct.

Impact 3.1.1-2 Decreased Flood Flow Conveyance of Marsh Creek Due to Increased Tailwater Elevations Dutch Slough Project (page 3.1-26)

⑥ 6. Option 3 states that no change in Marsh Creek conveyance is anticipated. The FC District recommends that hydraulic modeling analysis still be conducted, as is recommended for Options 1 and 2, to confirm this assumption.

⑦ 7. The FC District is currently finalizing a Marsh Creek watershed hydraulic model (using Corps of Engineers HEC-RAS computer program). The FC District would be willing to conduct some of the Marsh Creek analysis for this project under our fee for service program. As this is a model we have constructed and approved "in-house," this may expedite the FC District's review process.

Impact 3.1.2-3 Point Bar Formation in Marsh Creek (page 3.1-27)

⑧ 8. This section states that Marsh Creek will be monitored by the Project for at least 10 years, post-restoration, to allow for possible dredging and other maintenance activities associated with the possible formation of point bars caused by the angular turn in Marsh Creek necessary to divert the creek flows onto the restoration site. The statement "monitored by the Project" is rather vague. Will a long-term maintenance and funding entity be created to conduct necessary monitoring and maintenance of impacted portions of Marsh Creek? A perpetual funding source should be identified. The FC District has no funds for increased maintenance of the Marsh Creek Channel. Therefore impacts to the Marsh Creek channel as a result of this project that lead to increased maintenance cannot be funded by the FC District. The DEIR should identify such a long-term maintenance entity.

Impact 3.1.2-5 Peak Fluvial-Tidal Deposition

⑨ 9. This section states that the FC District may have to shift the location, extent, and frequency of channel bed dredging as a consequence of this project. As previously stated the FC District does not have the funds for increased maintenance of the Marsh Creek Channel. The FC District recommends the creation of a maintenance entity (with funding source) to conduct necessary maintenance of the restoration site and any increases in maintenance of the Marsh Creek channel. Additionally, an agreement should be prepared between the FC District and maintenance entity, which outlines the flow capacity and water surface elevation that needs to be maintained through the project to ensure the proper flood control function of the Marsh Creek channel. Provisions should be made for the maintaining agency to make periodic checks on accumulation of sediment and debris in the restoration area as well as in the Marsh Creek channel. Provisions should be made for reporting to and coordinating with the FC District on certain monitoring and maintenance activities.

We appreciate the opportunity to comment on the DEIR and welcome continued coordination. If you should have any questions, please contact me at (925) 313-2304 or via e-mail at jhern@pw.cccounty.us; alternately, you can contact Teri Rie at (925) 313-2363 or trie@pw.cccounty.us.

Sincerely,

Jorge Hernandez
Staff Engineer
Contra Costa County Flood Control
& Water Conservation District

JH:
G:\FldCtl\CurDev\CITIES\Oakley\Dutch Slough Restoration\Slough Restoration DEIR Comments.doc
Enclosure:

c: Greg Connaughton, Flood Control
Tim Jensen, Flood Control
Paul Detjens, Flood Control
Teri E. Rie, Flood Control
Jason Vogan, City of Oakley

Responses to Contra Costa County Flood Control and Water Conservation District, January 16, 2009 Letter

Response to Comment 1:
Relocation of the Ironhouse pipeline into the levee along Marsh Creek will be implemented with full cooperation of CCCFCWCD (District). If this portion of the levee is to remain under the District's ownership and control, designs will be subject to their approval, and District personnel will be asked to participate in the construction process. One likely scenario is that the levee would be widened so that the pipeline would be contained outside of the existing levee prism. If the District prefers, the section of District levee adjacent to the Dutch Slough project (on the east side of the creek only) will be acquired by DWR, which will assume flood liability along that portion of levee.

Response to Comment 2:
The third paragraph of page 2-26 states, *"the slope of the Marsh Creek levee on the Emerson parcel would be protected to prevent levee scour and to protect the Ironhouse pipeline."* This protection would be maintained whether or not the levee was a flood control feature. DWR will work with CCWCFCD and ISD to ensure that appropriate levels of slope protection are maintained on the Emerson side of the east Marsh Creek levee. If Marsh Creek is not re-routed onto the Dutch Slough property, and the Marsh Creek levee must maintain its flood control capacity, the Reclamation District's engineers will design suitable interior levee bank slope protection that incorporates the objectives of flood control and ecosystem enhancement.

Response to Comment 3:
The decision whether to re-route Marsh Creek through the Emerson parcel would be based upon a number of ecological and physical factors, foremost among them being the effect on flood capacity of the creek. Preliminary data analysis did not indicate that the re-route would increase flood risk, but it is acknowledged that additional investigations are required to verify this hypothesis prior to making a final decision.

Currently, a number of other factors are being considered. If those analyses yield positive results, and we advance into the final design process, DWR will conduct hydraulic modeling, including flood capacity and sediment dynamics.for the various Marsh Creek diversion options. If none of these diversion options demonstrate acceptable results for flooding and sediment dynamics, then Marsh Creek will not be diverted onto the project site.

Response to Comment 4:
The fourth paragraph on page 3.1-12 is revised to state:

> *The Marsh Creek channel/levees were originally constructed by the Soil Conservation Service (SCS), now the Natural Resource Conservation Service (NRCS). Major modifications to the Marsh Creek channel/levees ~~may~~ will need to be approved by NRCS. The NRCS also may need to release right-of-way transfers of portions of Marsh Creek to other agencies.*

Response to Comment 5:
The fourth line under Impact 3.1.1-2 on page 3.1-15 states, *"While the elevations of MLW and MLLW in the creek are controlled partially by bed elevations, MHHW in the creek near the Contra Costa Canal is only 0.2 ft lower than MHHW at the mouth of Marsh Creek."* The small decrease in MHHW at the Canal relative to the mouth is due to tidal dampening over the mile-long distance from the mouth to the Canal.

Response to Comment 6:

If it is decided to re-route Marsh Creek, as part of the final design process, DWR will conduct additional hydraulic modeling of Marsh Creek to ensure that its flood conveyance capacity is not compromised by the relocation of Marsh Creek. Such modeling may be conducted for each option, including option 3.

Response to Comment 7:
DWR understands that CCCFCD already has a hydraulic model for Marsh Creek, and would work with CCCFCD to develop a mutually satisfactory use for this model.

Response to Comment 8:

DWR is committed to the long-term operations and maintenance of the Dutch Slough Project, including preventing or mitigating impacts to the flood capacity of Marsh Creek. If it is decided to re-route Marsh Creek, modeling results (see responses to comments 3 and 6, above) would be used to estimate the likelihood that the re-route would result in formation of point bars or other unacceptable levels of sedimentation. DWR will coordinate the re-route design, assess the potential need for post-construction monitoring, and determine the type and location of monitoring and subsequent maintenance with the District. An Agreement between DWR and the District, such as a Memorandum of Understanding, may be drawn up to ensure that the necessary long-term monitoring, maintenance, and mitigation is completed.

Response to Comment 9:
See response to Comment 8.

State of California
Department of Fish and Game

Flex your POWER

Memorandum

Date: January 21, 2009

To: Ms. Patty Quickert
Department of Water Resources
Delta-Suisun Marsh Office
1416 9th Street, Room 1623
Sacramento, CA 95814

Scott Wilson FOR

From: Charles Armor, Regional Manager
Department of Fish and Game – Bay Delta Region, Post Office Box 47, Yountville, California 94599

Subject: Dutch Slough Tidal Marsh Restoration Project, Draft Environmental Impact Report, SCH #2006042009, City of Oakley, Contra Costa County

Department of Fish and Game (DFG) personnel have reviewed the above Dutch Slough Tidal Marsh Restoration Project (Project) draft Environmental Impact Report (EIR). The Project is located in the City of Oakley in northeast Contra Costa County. The site is located on the historic delta of Marsh Creek, which drains a large area on the east side of Mount Diablo and enters the Sacramento-San Joaquin Delta (Delta) on the northwest corner of the Dutch Slough site. The 1,166-acre Project site is bounded on the south corner by the Contra Costa Canal, on the west by Marsh Creek, on the north by Dutch Slough, and on the east by Jersey Island Road. The site encompasses three adjacent parcels: the 438-acre Emerson, the 292-acre Gilbert, and the 436-acre Burroughs properties. The property is bordered on the west by Marsh Creek, and includes two dead-end sloughs, Emerson Slough and Little Dutch Slough. Separate levee systems protect each parcel from flooding.

The Project proposes to restore wetland and upland habitat as well as provide public access to the Dutch Slough property owned by the Department of Water Resources (DWR). The Project seeks to restore habitat for native fishes and other aquatic and wetland species, improve understanding of restoration science in tidal marsh wetland ecosystems in the region, and provide public access to the restored area. Two neighboring projects include the City of Oakley's Community Park and Public Access Conceptual Master Plan for 55 acres adjacent to the wetland restoration Project and 4 miles of levee trails on the perimeter of the DWR lands; and the Ironhouse Project, restoration of a portion of the Marsh Creek delta on an adjacent 100-acre parcel, owned by the Ironhouse Sanitary District (ISD). 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. DFG considers the draft EIR as a means to understand and appreciate the need for tidal marsh restoration, while also developing adequate conservation and protection measures to conserve some of the County's biological natural resources.

Specific Comments

Page 2-13, "No Burroughs Option"

(1) How would the "No Burroughs Option" benefit neighboring Reclamation Districts including Jersey Island? Will the "No Burroughs Option" lessen seepage issues, risk of flooding, or lessen impacts to exterior levees due to fewer hydrologic changes?

Page 2-40, Subtidal Areas with Native Submerged Aquatic Vegetation (SAV) Planting

How will you control non-native floating aquatic vegetation (FAV)? FAV, such as water hyacinth, will be an on-going problem requiring management in perpetuity.

(2) Due to the proximity to Big Break and Franks Tract, non-native SAV, such as *Egeria densa*, will be an on-going problem, will compete with native plantings, and will require management in perpetuity. The draft EIR describes a process for planting native SAV to out-compete non-native SAV, but if non-native SAV becomes dominant, how will it be controlled?

Table 3.4.1, Page 3.4-27, Species List for Dutch Slough Area

(3) It is unclear why short-eared owl is not evaluated in the draft EIR. It is a State Species of Special Concern and is known to be present on site. This species should be included in the biological evaluation along with white-tailed kites and northern harriers. Northern harriers and short-eared owls are both ground nesting birds and utilize grassland habitats for nesting and foraging. The focus for northern harrier seems to be on freshwater marsh only, although they often ground nest in grasslands.

Page 3.4-56, Impact 3.4.1-2.2: Wildlife Disturbance Around the Marsh Edge Associated with Recreation

(4) Human impacts will include garbage and leftover bait around trails and fishing access areas attracting wildlife such as skunks, raccoons, and opossums to the marsh areas, as well as discarded hooks and fishing line, which may cause injury or death to animals in the marsh. How will these impacts be managed?

Page 3.4-58, Mitigation 3.4.1-2.3: Minimize Disturbance Associated with Maintenance of Exterior Levee

(5) Participation in the AB 360 Program will include mitigation for loss of habitat associated with the waterside and landside of levees. Under this Program (SB 34 and AB 360), DFG regulates habitat impacts for levee improvement work implemented by participating Reclamation Districts. DFG requires no net loss of habitat and net long-term habitat improvement for four habitat types: riparian forest (RF), scrub-shrub (SS), freshwater marsh (FM), and Shaded Riverine Aquatic (SRA). Dutch Slough is currently a participating District in the Program, as well as Reclamation District 799, which may continue to be responsible for the maintenance of levees as part of the Project. If Project levee improvements will be funded through the Delta Levee Subvention Program or Special Projects Program, full mitigation for the four habitat types will be required. The draft EIR has provided some descriptions of how the Project will assist the Delta Levee Subvention Program by increasing enhancement opportunities by creating waterside habitat benches. DFG suggests the extent of AB 360 impacts be identified and described. This should include the

loss of habitat, due to Project related activities such as reshaping of levees and/or loss of habitat due to inundation by levee breaching, for example. The EIR should also describe indirect impacts of the Project on the four habitat types on adjacent islands from changes in hydrology. (5 (cont.))

Page 3.4-60, Mitigation 3.4.1-3: Design Restoration Plans to Minimize Impacts to Nontidal Freshwater Marsh and Riparian Woodland/Scrub and Associated Wildlife Species

DFG would encourage retention of nesting trees, windbreaks, and buffers, which may be achieved through a reduction in the amount of tidal restoration, or include additional mitigation for what is removed or dies due to inundation. While we recognize the value of tidal wetlands and the species they benefit, the suite of species and benefits may change significantly which would result in additional impacts that require compensation (6)

Page 3.4-67 through Page 3.4-82, Impacts and Mitigation to Terrestrial Biological Resources

The draft EIR references biological surveys to be completed for various terrestrial species. The importance and timing of species appropriate surveys should be considered so that the survey findings may be incorporated into the design alternatives. This will better define the Project's impacts to terrestrial resources and required mitigation measures. (7)

A timeline documenting the biological surveys to be completed should be provided by species as well as a timeline documenting the phasing of the proposed Project activities.

Page 3.4-70, Mitigation 3.4.1-8.1: Mitigation for Loss of Swainson's Hawk Foraging and Nesting Habitat

DFG would suggest including the nesting observations in 2005 of Swainson's hawk on the Emerson and Gilbert parcels in the assessment of loss of nesting habitat. Although not inclusive, typically Swainson's hawks have shown nest fidelity, returning to the same nest on an annual basis. The nest trees have been used within the last five years and should be included. How many additional years of Swainson's hawk nesting surveys will be conducted to determine the number of nests on-site? (8)

General Comments-No Burroughs Option

The "No Burroughs Option" includes preservation of the following habitats: 20 acres of non-tidal freshwater marsh and 7 acres of riparian woodland; 6 acres alkali meadow and season wetland (acreage varies by year); most of the buildings and large trees exist on the Burroughs property thus preserving habitat for bats; the majority of large trees suitable for nesting raptors are located on the Burroughs property; Swainson's hawk nesting site located in 2008; suitable burrowing owl habitat; 350 acres of foraging habitat for Swainson's hawk, northern harrier, white-tailed kite, burrowing owl, loggerhead shrike, yellow-breasted chat, horned lark, short-eared owl, and tri-colored blackbirds; existing freshwater marsh and riparian habitats for chats and other songbirds; potential habitat for California tiger salamander and red-legged frog; western pond turtles regularly seen on the Burroughs property in water bodies, would preserve existing upland and wetland habitats including nesting habitat; preserve existing ditches, freshwater marsh and basking sites on the Burroughs property for giant garter snake; and heritage and other trees protected by (9)

local ordinances would be preserved on the Burroughs property. Additional species that may benefit from retention of the Burroughs parcel as upland habitat include long-eared owl, sharp-shinned hawk, Ferruginous hawk, rough-legged hawk, and potentially sandhill cranes.

The proposed conversion of uplands to wetlands will reduce the prey base for many species listed above, including several Tier 2 and 3 species listed in Appendix D. Development has subsumed much of the available foraging habitat in surrounding areas. The Project site supports extensive cattle-grazed or hay-farmed pastures and weedy habitats. These habitats support mammalian species including ground squirrels, pocket gophers, mice, and voles. Multiple hawk and owl species as well as many perching birds forage in the pastures on the Project site. The goals and objectives on Page 2-10 include creating food supply for target species as well as focusing restoration design to benefit Tier 1 species, and adjust restoration to benefit Tier 2 species and maintain opportunities to benefit Tier 3 species consistent with restoration of Tier 1 species. Tier 2 and 3 species include giant garter snake, western pond turtle, tri-colored blackbird, yellow-breasted chat, western burrowing owl, white-tailed kite, northern harrier, and potentially valley elderberry longhorn beetle, silvery legless lizard, Cooper's hawk, and Swainson's hawk. These species depend on upland habitat for foraging, nesting, basking, and hibernation.

(9) (cont.)

With a large diversity of terrestrial species observations on-site and considering the goals and objectives of the Project, the impacts to terrestrial species could potentially outweigh the benefits of a project that may only have minimal benefits to native fish species as described under Impact 3.5.1-6: Creation of Habitat That Benefits Non-Native Fish Species on page 3.5-16.

(10) Serious consideration to all Project alternatives should take into account the existing large amounts of non-native fish use documented adjacent to the Project location in the open water expanses of Big Break and Franks Tract. Big Break has also been stocked with non-native fish and is often used for various bass tournaments.

(11) Based on the current design alternatives, minimizing impacts to terrestrial resources, and given the current aquatic non-native aquatic resources, DFG would encourage DWR to proceed with Alternative 1 with the "No Burroughs Option" and strongly recommend adjusting Alternative 1 to include more tidal marsh to the north with less open water and more upland transition. Alternative 1 with a "No Burroughs Option" will create open water and tidal marsh habitat for fish species while maintaining the greatest amount of upland habitat and will have the fewest impacts on the many sensitive species that currently use the three parcels.

Additional mitigation may be required based on species surveys and potential impacts to AB 360 assessed habitat types.

If you have any questions, please contact Ms. Anna Holmes, Environmental Scientist, at (916) 358-2355; or Mr. Bob Orcutt, Delta Levee Improvement Program Supervisor, at (916) 358-2924; or Mr. Brad Burkholder, Delta Planning Supervisor, at (209) 948-7068.

cc: State Clearinghouse

Responses to State of California Department of Fish and Game, January 21, 2009 Letter

Response to Comment 1:
The "No Burroughs Option" would significantly decrease hydrologic and hydraulic impacts to adjacent levees and Reclamation Districts since it would maintain the existing hydrology on the Burroughs parcel. CDFG's comment focuses on how this option would affect seepage issues, flooding risks, and impacts to exterior levees at adjacent Reclamation Districts.

Groundwater seepage. Regarding groundwater seepage to the east onto RD 799 (Hotchkiss Tract), Paragraph two on page 3.1-21 states that *"If this option were exercised, there would be no tidal marsh on the easternmost project parcel (Burroughs), so the risk of groundwater flux to the east would be negligible. This would eliminate a potentially significant impact, and Mitigation 3.1.1-6.2 would not be necessary."* Regarding groundwater seepage to the north onto RD 830 (Jersey Island), implementation of the Burroughs parcel would result in an up to one-half reduction in restored tidal marsh acreage, resulting in a significant decrease in tidal prism across the Dutch Slough site. This reduction in the tidal prism may result in reduced impacts to hydrogeology across Dutch Slough and at Jersey Island. Additional discussion about impacts to hydrogeology at Jersey Island is described in Response to RD 830's Comment #1.

Flooding risks. As discussed on page 2-13, implementation of the "No Burroughs Option" would remove the need for a new levee along Jersey Island Road. The flooding risks to RD 799 and RD 830 would remain unchanged from existing conditions.

Impacts to exterior levees. Implementation of the "No Burroughs Option" would maintain the existing exterior levees around the Burroughs parcel along Dutch Slough and Little Dutch Slough. Since there would be no water along the inboard side of the exterior levee at Dutch Slough, there would be no opportunities for erosion of the inboard side of the levee, and therefore no opportunities for this erosion to pose a threat to the wind-wave integrity of the levees across Dutch Slough on Jersey Island (see Response to RD 830's Comment #2 on page 8 of this document).

Response to Comment 2:
Currently, floating aquatic vegetation (FAV), such as water hyacinth, is only an occasional problem in the waterways adjacent to the project site. If FAV becomes a problem within the restoration area, it would be controlled either coincident with control efforts in the local area, or as part of more specific maintenance of the restoration project.

Response to Comment 3:
Short-eared owl was not evaluated in the EIR because it considered a State Species of Special Concern only in the species' breeding range. The species has been observed on the project site only in the winter months. It is not known to nest at the Dutch Slough site or anywhere in Contra Costa County. Impact to grassland nesting habitat for northern harriers is addressed in Impact 3.4.1-10 on page 3.4-72.

Response to Comment 4:
Maintenance of the trails, including litter collection, would be the responsibility of the City of Oakley, as part of the maintenance of the City Community Park. The City has plans to pay for maintenance using assessment fees on future residential developments adjacent to the project site.

Response to Comment 5:
The extent of current AB 360 Habitat Types, as listed in the DFG Habitat Assessments, for the three Dutch Slough parcels is as follows:

Freshwater Marsh (FM), 7.8 acres;
Scrub Shrub (SS), 5.5 acres;
Riparian Forest (RF), 2.3 acres;
Shaded Riverine Aquatic, 6,414 linear feet.

The acreages of AB 360 habitats by parcel, RD, and for the entire project area are as follows:

Emerson parcel	Land side (sq. feet)	Water side (sq. feet)	Area (sq. ft.)	Acres (sq. Ft./43560)
FM	0	70475	70475	1.6
SS	20440	61442	81882	1.9
RF	57389	6150	63539	1.5
SRA		642 linear feet		
Gilbert parcel				
FM	145895	23515	169410	3.9
SS	22380	130585	152965	3.5
RF	0	17267	17267	0.4
SRA		5772 feet		
Totals RD 2137				
FM	145895	93990	239885	5.5
SS	42820	192027	234847	5.4
RF	57389	23417	80806	1.9
SRA		6414 feet		
Burroughs parcel (RD 799)				
FM	76390	23035	99425	2.3
SS	5185		5185	0.1
RF	18840		18840	0.4
SRA		0		0
Totals for Dutch Slough project				
FM	222285	117025	339310	7.8
SS	48005	192027	240032	5.5
RF	76229	23417	99646	2.3
SRA		6414 feet		

The project is expected to temporarily remove all existing vegetation on the interior of all levees in order to place fill material to create new 4:1 levee slopes. If all three parcels are restored, this would affect 5.1 acres of FM, 1.1 acres of SS, and 1.8 acres of RF habitat. After construction of the new levee slopes, they would be re-vegetated, and all three habitat types (FM, SS, RF) will be created. Acreages cannot be accurately estimated at this time, but it is certain that the three habitat types would be more than doubled.

To create the public trail around the Emerson parcel, it is expected that the levee would have to be improved significantly, including moving the levee crown toward the land side to improve the water side slopes; there is also the possibility that the levee may be set back to allow for a band of freshwater marsh to develop on the slough side. In addition, all of the existing revetment would need to be removed and replaced with more appropriate rip-rap. It is expected that these activities would require removal of all vegetation on the exterior of the levees on the Emerson parcel. This would remove 1.6 acres of

freshwater marsh, 1.4 acres of scrub shrub, 1.5 acres of riparian forest, and 642 linear feet of shaded riverine aquatic. Although all of these impacts may not be replaced on the Emerson parcel, they would be replaced (and increased significantly) by the restoration project. It is expected that most of the interior levee slopes (approximately 40,000 feet), and much of the exterior levee slopes (at least 20,000 feet) would become riparian forest and scrub shrub habitats, and at least 200 acres of freshwater marsh would be created.

Project biologists do not expect the restoration project to have noticeable effects on the habitats present on neighboring levees.

Response to Comment 6:
Comment noted. In developing final designs for the project, the value of existing trees would be taken into account. When possible, given site elevations, existing trees, especially large mature trees, would be retained.

Response to Comment 7:
Earth-moving project activities are expected to start in 2010. First would be placing material on the interior slopes to change the slopes to 4:1. The material may be either imported or excavated on-site. This activity may continue for three years. The next activity would be placement of imported fill throughout the interior of the parcels. This may start as early as 2011, and proceed for two or three years. The final large-scale activity would be the interior grading, which would begin with placement and would probably proceed for one year beyond the time of placement.

Biological surveys would be conducted for birds, vernal pool invertebrates, and bats. During the avian surveys, all birds would be recorded, with special emphasis on the species listed in the DEIR. These surveys would be conducted from spring to summer each year, of all available habitat, until breaching. After breaching, surveys would continue, but may change in frequency or focus. Vernal pool invertebrate surveys began in fall 2009, and would continue for at least one wet season. Bat surveys would be conducted during the summer and/or fall of 2010.

In addition, prior to construction activities such as earth-moving, tree removal, or structure demolition, surveys would be conducted for species that may be impacted (nesting birds, bats, burrowing owls).

Rare plant surveys were conducted during spring and summer 2005, and spring and summer 2008. We do not expect to conduct more plant surveys, except to survey for rare plants prior to any disturbance of the water-side of the levees.

Bird surveys were conducted from January to June 2005, April to June 2008, and March to May 2009. Surveys focused on relative abundance and location of breeding birds. Winter and breeding bird surveys would continue for at least two more years.

Silvery legless lizards have been surveyed by searching under cover boards and hand-digging shallow pits. Surveys were conducted around the vineyard on Emerson parcel, where there is a large extent of sandy soils, twice per month from March to May 2009. Surveys would continue for at least two more years.

A single seasonal pool invertebrate survey was conducted March 12, 2009. The short duration of water ponding did not allow for subsequent surveys during 2009. During this day and night survey, a second crew surveyed for red-legged frogs. Invertebrate surveys would be conducted for at least two more years (if sufficient ponding occurs). Project biologists do not expect to conduct additional red-legged frog surveys.

No bat surveys have yet been done, but would be conducted during 2010 or 2011.

Response to Comment 8:
Breeding bird surveys were done during 2005, 2008, and 2009, and would continue for at least two more years. During the three surveys, the locations of Swainson's hawks nests have been recorded, and no nest or nest tree has been used more than once. Mitigation for impacts to Swainson's hawks would be provided in consultation with DFG, and results of all surveys would be part of that assessment. Survey results for sensitive bird species are listed below in Section IV Errata and Staff Initiated Text Changes, Table 3.4.1.

Response to Comment 9:
CDFG's preference for Alternative 1 with the No Burroughs Option is noted.

Response to Comment 10:
A description of invasive fish issues in the Delta along with impacts and mitigations for the Dutch Slough project are addressed in Impact 3.5.1-6. In summary, the open water management options would have the greatest effect on the fish population. In general, non-native SAF and FAV, including Brazilian water weed and water hyacinth, tend to support fish assemblages dominated by invasive species. The early establishment of native vegetation is crucial to providing habitat that favors native fish. This is why the project includes a pre-breach vegetation management period to establish native vegetation.

In developing the final project design, which will be completed by fall 2011, one important aspect to be examined is how to maximize benefits for native fish and minimize those for nonnative invasive species. Project biologists also will be examining Big Break and its potential effects on the Dutch Slough restoration.

Response to Comment 11:
CDFG's preference for Alternative 1 with the No Burroughs Option is noted.

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February 17, 2009

Patty Quickert
Department of Water Resources
Delta-Suisun Marsh Office
1416 9th Street, Room 1623
Sacramento, CA 95814

Subject: Contra Costa Water District comments on Public Draft Environmental Impact Report for the Dutch Slough Tidal Restoration Project

Dear Ms. ~~Quickert~~ Patty:

Contra Costa Water District (CCWD) appreciates the opportunity to provide comments on the Public Draft Environmental Impact Report (DEIR) for the Dutch Slough Tidal Restoration Project (Project). CCWD thanks the Department of Water Resources (DWR) staff for its willingness to work openly and collaboratively with CCWD to address likely impacts. However, please note that there are some important impact areas that CCWD expressed concerns on in comments provided to the Administrative Draft EIR (ADEIR) that were not incorporated into the DEIR. We hope to see these comments fully addressed in the Final EIR (FEIR). Our comments on the DEIR are summarized below.

Level of Detail of Proposed Alternatives and Additional Environmental Review

A general concern of CCWD is the lack of detail available on the proposed Project Alternatives (Alternatives). A number of Alternatives are being proposed at the conceptual level, which hinders a detailed evaluation of impacts. CCWD would appreciate the opportunity to participate in the final design for the selected alternative to ensure that all issues related to the Contra Costa Canal (Canal) are addressed. (1)

In Section 1.3, the FEIR should acknowledge that the Alternatives are not fully developed, and that if additional potential impacts are identified by DWR, CCWD or other stakeholders in the process of final Alternative selection and design, then additional environmental review at the appropriate level will be conducted before the Project proceeds.

Mitigation 3.1.1-5 Groundwater Intrusion Study and Remediation

A major impact from the Project on CCWD is that water quality will worsen due to increased groundwater seepage into the unlined Canal. This is discussed in the DEIR as *Impact 3.1.1-5 Possible Water Quality Degradation in Contra Costa Canal due to Groundwater Seepage*. If the CCWD Canal Encasement project is implemented prior (2)

to the Project, then these concerns are eliminated. CCWD recommends that DWR condition construction of the Project to occur only after the Canal Encasement Project is completed. This condition should be waived only if it can be conclusively demonstrated to CCWD's satisfaction that no water quality impacts will occur to the unencased Canal from the Project.

In order for the Project to be implemented prior to completion of the Canal Encasement Project, a Groundwater Intrusion Study (Study) is currently proposed in the DEIR as Mitigation 3.1.1-5 for Impact 3.1.1-5. Although this Study moves in the right direction towards addressing water quality impacts, CCWD has two primary concerns about the Study. The first is that Mitigation 3.1.1-5 in the DEIR allows decisions for additional mitigation to be made after the Project is open to tidal action, based on the results of a monitoring study. This means that impacts may already be occurring before any mitigation can be implemented. The second is that the threshold of significant impact that would be used to evaluate the monitoring results is much too high, and would permit significant water quality degradation to occur to an extent that it would preclude use of the Contra Costa Canal intake (thereby significantly impacting CCWD's 550,000 customers) before any additional mitigation would be required (Note: CCWD has previously commented on this second issue, however the comments have not been addressed in the DEIR).

(2) *(cont.)*

To address these concerns, conditions are needed regarding the timing of the mitigation and water quality thresholds that would trigger the mitigation. The Study described in the DEIR calls for evaluation of water quality impacts through monitoring and subsequent mitigation (if required) only after the levees have been breached to restore tidal action. Because levee breaching is not easily reversed, and because of the time and possible delays involved in implementing mitigation measures, CCWD operations would be subjected to a high risk of sustained water quality impacts under the current Study. Because of this, the FEIR should include a condition that the Study also include a groundwater field and modeling analysis (Groundwater Field and Modeling Analysis) of potential impacts that would be completed prior to construction of the project. If increased salinity impacts are found to be likely (defined as an increase of the greater of either 5 mg/L chlorides or 5% over a no project scenario salinity level), then necessary physical mitigations (e.g. groundwater slurry wall, dewatering wells or tide gate in the intake to maintain a positive gradient away from the canal, etc.) should be included in the FEIR as either mitigation measures or as integral parts of the proposed project, and implemented before opening of the Project to tidal action. The Groundwater Field and Modeling Analysis should rely on the most current data available on groundwater elevations and water quality and use reasonable assumptions on the effect of the Project on water levels once the Project is open to tidal action. Note that the Luhdorff & Scalmanini 2006 Memorandum[1](Memorandum) already concludes that by restoring

[1] Luhdorff and Scalmanini Consulting Engineers. 2006. Groundwater Investigation and Monitoring Program Dutch Slough Restoration Area. Prepared for the Department of Water Resources and the Contra Costa Water District. Woodland, CA.

tidal action, the Project will increase the magnitude and persistence of groundwater seepage into the Canal, and thus raise the potential for intrusion of brackish groundwater. In the absence of further analysis, it should be assumed based on the Memorandum, that water quality impacts to the Canal will occur, and that necessary physical mitigation measures should be planned in the FEIR and implemented prior to any opening of the Project to tidal action.

In addition to the Groundwater Field and Modeling Analysis, the monitoring plan currently contained in the Study (consisting of monitoring one year prior to and one year after opening of the Project to tidal action) should still be implemented to allow evaluation of actual Project impacts, however the threshold of significance for impacts needs to be changed. The Study currently proposes to use the performance standard for salinity set forth in the Bay-Delta plan (i.e. the D-1641 salinity standard for Rock Slough of 250 mg/L maximum average daily concentration and less than 150 mg/L for a minimum number of days depending on water year type) as the threshold for significance. As noted by CCWD in the previous ADEIR comment letter (See Attachment A), the courts have explicitly ruled out using water quality standards as the sole measure of significance. CCWD has indicated that the level of significance should instead be determined by the effect on CCWD operations. This is a very critical issue as using the D-1641 standard as a level of significance would essentially mean that very large and unacceptable deteriorations in Canal water quality beyond present conditions would be allowed before any mitigation would be required. CCWD earlier suggested that an increase in chlorides of the greater of either 5 mg/L chlorides or 5% of baseline salinity (baseline established by the monitoring prior to opening to tidal action) should be used as the appropriate threshold. In addition to salinity, CCWD had also provided a list of other water quality constituents and associated thresholds (Attachment B) that should be used to properly assess the impact of the Project on CCWD operations. There is no reference to these in the DEIR and they should be included in the FEIR. If monitoring reveals that the Project causes water quality impacts beyond the acceptable thresholds for the compounds listed by CCWD, then additional mitigation should be required to reduce the impacts below the indicated level of significance.

② *(cont.)*

The following bullets summarize the requested conditions to the Groundwater Intrusion Study that should be incorporated into the FEIR:

- Add the following to the beginning of the first paragraph (page 3.1-17) under Mitigation 3.1.1-5 Groundwater Intrusion Study and Remediation.
  "Construction of the Project will only occur after the Canal Encasement Project is completed. This condition will be waived only if it can be conclusively demonstrated to CCWD's satisfaction that no water quality impacts will occur to the unencased Canal from the Project".
- In addition to the proposed monitoring plan, add a Groundwater Field and Modeling Analysis to the Groundwater Intrusion Study to be completed prior to certification of the FEIR that will evaluate the potential impacts of the Project in

terms of increased groundwater flux and salt transport. This Draft Groundwater Field and Modeling Analysis will be completed before the FEIR is certified and subject to review and approval by CCWD. If salinity impacts that exceed the thresholds provided by CCWD (increase of chlorides of the greater of 5 mg/L chlorides or 5% over a no Project scenario salinity) are estimated to occur, then mitigation such as a groundwater slurry cutoff wall, dewatering wells, or intake barriers to maintain Canal water levels, should be described in the FEIR and implemented prior to the opening of the Project to tidal action. If the Groundwater Field and Modeling Analysis has not been completed prior to certification of the FEIR, then CCWD requests that a Memorandum of Understanding (MOU) be signed between DWR and CCWD ensuring that the Project will not proceed until the Groundwater Field and Modeling Analysis has been completed and approved by CCWD, and that the Project will not be opened to tidal action until mitigation measures necessary to address impacts identified by the field and modeling analysis have been implemented.

(2) (cont.)

- Maintain the current proposed monitoring plan, but add an additional threshold of significance for salinity impacts that is an increase of either the greater of 5 mg/L chlorides or 5% of baseline salinity. (Baseline to be established by pre-tidal opening monitoring conditions.) Include other compounds and associated thresholds provided by CCWD as water quality constituents (See Attachment B) to be evaluated in the monitoring study.

Appropriate Buffer between Project and Canal

Another important project condition is that appropriate setbacks be incorporated into the final design of the Project for purposes of Canal maintenance access (both in the present condition and after encasement), levee stability, and to avoid overtopping and/or flooding. The figures provided in the DEIR show that low- and mid- marsh areas would be constructed in close proximity to the Canal. In addition to the higher potential for increased groundwater intrusion, these marsh areas may create issues with access to the Canal in terms of soil stability, may affect levee stability for the canal, and cause flooding issues once the canal is encased. CCWD prefers a 1000' minimum buffer area between the Canal and any marsh areas specified in the EIR, but the key requirement is that the Canal right-of-way not be flooded or otherwise impaired and that access be unimpeded. The buffer area would consist of upland habitat only. Additionally, the height of the upland habitat areas should be sufficient to provide assurance that no instances of inundation of the United States Bureau of Reclamation (Reclamation) 300' Canal Right of Way (ROW) will occur (under a 100 year flood frequency), or a levee should be constructed to provide the same protection. Although the figures in the DEIR do show that there is generally upland habitat next to the canal, the minimum buffer zone distance should be specified in the FEIR. The elevations of the upland habitat areas should also be specified. In the event that the Canal Encasement Project is not complete, these buffer zones will also provide necessary areas for equipment and materials to facilitate the construction of the Canal Encasement Project. DWR should consult with Reclamation to ensure that the design meets their requirements and that

(3)

they approve of the engineering analyses regarding the measures to ensure their right of way is not flooded or otherwise impaired and that access remains unimpeded.

The following bullets summarize the requested conditions regarding buffer zones that should be incorporated into the FEIR:

- State that a default minimum of 1,000' buffer consisting of upland habitat will be maintained in all Alternatives between any marsh or open water areas and the ROW to ensure that the ROW will not be flooded or otherwise impaired and that access will be unimpeded. CCWD can work with DWR during the final design phase to determine if exceptions to this buffer requirement can be made while still providing adequate access, levee stability and flood protection.

  Add an additional impact to Section 3.1: Impact 3.3.1-X Potential Flooding over the Contra Costa Canal Right of Way. Under mitigation for this impact, state that the final design of the selected Alternative will ensure that no flooding of the ROW will occur under a 100 year flood frequency. Provide data on the magnitude of the 100 year flood and the elevation of the upland habitat areas.

- Complete the Levee Overtopping Study described under Mitigation 3.1.1-7 prior to certification of the FEIR and include any mitigation to prevent overtopping or flooding over the encased canal or the ROW in the FEIR.

③ *(cont.)*

Ironhouse Project

The Ironhouse Project should be considered an integral part of the Project since there is a dependence on fill from the Ironhouse parcel in order to implement Alternatives 2 and 3. If the fill from the Ironhouse Project is considered necessary for implementation of the Project, then the environmental impacts of the Ironhouse Project should be fully evaluated within the FEIR, or the FEIR should clearly state that the Project shall not proceed until a Supplemental EIR for the Ironhouse Project has been completed and certified. The FEIR should include a description and evaluation of impacts of how fill will be transported from the Ironhouse parcel across the Canal to the Project. If fill for implementation of the Project will be obtained from sources other than the Ironhouse parcel, then those sources should be described in detail and the environmental impacts of obtaining that fill should be fully evaluated in the FEIR.

④

CCWD appreciates the response in the DEIR text to our earlier comment that an Arizona crossing or box culvert should be included in the Iron House project. Figure 2-14 should be modified to indicate the presence of an Arizona crossing or box culvert on the area where the ROW crosses through the proposed restoration area. A close up depiction of the proposed conveyance structure should be included as an additional figure. Reclamation (owner of the Canal and ROW) and CCWD (responsible for operation and maintenance) must retain continuous access to and through the area, including access to work in, operate and maintain facilities in the right-of-way. The proposed conveyance structure should allow enough buffer area to ensure such access. CCWD will also need to work with Reclamation once adequate information on the

⑤

Ironhouse Project wetland is understood to obtain needed land rights for any crossings. To provide such rights will require detailed Engineering plans as well as National Environmental Policy Act review of any Reclamation actions.

The following bullets summarize the requested conditions regarding the Ironhouse Project that should be incorporated into the FEIR:

(6)

- Include a complete evaluation of the environmental impacts of the Ironhouse Project within the FEIR, or include a statement that the Project will not proceed if fill from the Ironhouse Project is required for Project implementation until a Supplemental EIR has been completed for the Ironhouse Project. The issues of groundwater intrusion, buffer requirements, levee overtopping and flooding of the ROW as discussed herein for the Project are all ones that should be addressed in the environmental documentation for the Ironhouse Project as well.
- Include an analysis of the environmental impacts of transporting fill from the Ironhouse Project across the Canal.

  If fill for the Project will come from other sources, describe these sources in detail and evaluate their impacts within the FEIR.
- Correct Figure 2-14 to indicate a conveyance structure across the Canal ROW, and provide an additional close up depiction of the proposed conveyance structure and how it will allow for access to the Canal.

CCWD has provided extensive comments on the DEIR. We appreciate the opportunity for administrative review of the FEIR prior to its publication to ensure that our concerns have been adequately addressed. We look forward to continued cooperation with DWR on the Project.

Sincerely,

Brett J. Hamelmann for

Leah Orloff
Water Resources Manager

LSO/BK:wec

Attachments

Attachment A
Selected CCWD ADEIR Comments

Water Quality Standards

Note: These comments were provided previously as comments on the ADEIR. The ADEIR uses State Water Resources Control Board D-1641 chloride standards at the Rock Slough Intake as the threshold for evaluating DSR Project impacts on CCWD water quality. Courts have rejected using only violation of a water quality standard as a measure of significance (126 Cal. Rptr. 2d. 441, Cal.App.3 Dist., 2002. *Communities for a Better Environment et al., v. California Resources Agency*). The proper criterion for evaluating water quality impacts of the Project on CCWD should be the effect on CCWD operations (e.g. filling of Los Vaqueros Reservoir, seawater intrusion), which is far more sensitive than whether or not a water quality standard is met. CCWD has made significant investments in infrastructure to maintain delivery of high quality water to its customers that exceeds the minimum standards set forth in D-1641. Any increase in salinity from the DSR Project could affect CCWD operations and could be considered significant. The operational and financial consequences to degradation of water quality from the DSR Project should be considered in evaluation of impacts. CCWD would be happy to provide the information needed to set a correct level of significance to trigger mitigation.

⑦

Other Potential Mitigation Measures for Groundwater Intrusion

Note: These comments were provided previously as comments on the ADEIR. Some additional options to the slurry wall alternative described in the ADEIR for mitigation of groundwater intrusion to the CCC (assuming the Canal Encasement Project is not built by the time of Project implementation) are:

- An intake barrier to maintain canal water level to maintain hydraulic gradient against groundwater intrusion (this could be a temporary rock barrier with culverts fitted with flap gates or similar gates fitted on existing siphons to maintain a minimum level of water in the canal, thus preventing intrusion of groundwater).
- Groundwater dewatering wells along the unlined Canal. In the event that the Encasement Project does precede the DSR Project, it might be possible to install these wells in coordination with the Encasement Project construction as a prudent measure to prevent groundwater impact on the encased canal.

⑧

CCWD suggests that these alternatives be added to the list of potential mitigation measures. The best solution, of course, is to have the Canal Encasement Project precede the DSR Project. CCWD requests that DWR and CCWD continue to work together to fund the Canal Encasement Project together with the Project, and work to avoid as many potential conflicts in schedule as possible. If other cost effective, possible mitigation alternatives arise, CCWD will bring them to DWR's attention and will continue to work with DWR to find the best solutions.

Attachment B
Additional Water Quality Monitoring Constituents for Groundwater Intrusion Study

Compounds to be included in evaluation of water quality impacts of Dutch Slough Tidal Restoration Project to uncased Contra Costa Canal by increased groundwater intrusion.

Suggested monitoring protocol:

Organics and Pesticides: For compounds not initially present in groundwater or canal, monitor every three months for 1 year after opening of the Project to tidal action. If significant impacts are found during the monitoring, then continue monitoring for those compounds with significant impacts every 6 months.

TDS and Chlorides: Monitor monthly for 1 year after opening of the Project to tidal action. If significant impacts are found, continue monthly monitoring.

Compounds of Concern with Primary MCLs from CA Department of Public Health (DPH) and/or United States Environmental Protection Agency	Threshold of Significant Impact
Alachlor	0
Aluminum	0
Antimony	0
Arsenic	0
Asbestos	0
Atrazine	0
Barium	0
Bentazon	0
Benzene	0
Benzo(a)pyrene	0
Beryllium	0
gamma-BHC (Lindane)	0
Bromate	0
Bromoacetic acid	7.3 ug/L *
Bromodichloromethane	0
Bromoform	0
Cadmium	0
Carbofuran	0
Carbon tetrachloride	0
Chlordane	0
Chloride	Increase of greater of either 5 mg/L or 5% above baseline Chlorides**
Chloroacetic acid	7.3 ug/L *
Chlorobenzene	0
Chloroform	0
Chromium (total)	0
Copper	0
Cyanide	0
2,4-D	0
Dalapon	0
Dibromoacetic acid	7.3 ug/L *
Dibromochloromethane	0
1,2-Dibromo-3-chloropropane	0
1,2-Dibromoethane	0
Dichloroacetic acid	7.3 ug/L *
1,2-Dichlorobenzene	0
1,4-Dichlorobenzene	0
1,1-Dichloroethane	0
1,2-Dichloroethane	0
1,1-Dichloroethylene	0
cis-1,2-Dichloroethylene	0
trans-1,2-Dichloroethylene	0
Dichloromethane	0
1,2-Dichloropropane	0
1,3-Dichloropropene	0
Di(2-ethylhexyl)adipate	0
Di(2-ethylhexyl)phthalate	0

Pesticides without MCLs	Threshold of Significant Impact
Aldrin	0
Dieldrin	0
DDT	0

*(Bromoacetic, Chloroacetic, Dibromoacetic, Dichloroacetic and Trichloroacetic acids combined)

**Baseline levels are those established in the Study described in the EIR

Attachment B
Additional Water Quality Monitoring Constituents for Groundwater Intrusion Study

Compounds of Concern with Primary MCLs from CA Department of Public Health (DPH) and/or United States Environmental Protection Agency	Threshold of Significant Impact
Dinoseb	0
Diquat	0
Endothal	0
Endrin	0
Ethylbenzene	0
Glyphosate	0
Halomethanes	0
Heptachlor	0
Heptachlor epoxide	0
Hexachlorobenzene	0
Hexachlorocyclopentadiene	0
Lead	0
Mercury (inorganic)	0
Methoxychlor	0
Methyl t-butyl ether (MtBE)	0
Molinate	0
Nickel	0
Nitrate	0
Nitrite	0
Oxamyl	0
Pentachlorophenol	0
Perchlorate	0
Picloram	0
Polychlorinated biphenyls	0
Radioactivity, Gross Alpha	0
Radioactivity, Gross Beta	0
Radium-226 + Radium-228	0
Selenium	0
Simazine	0
Strontium-90	0
Styrene	0
TDS	Increase of greater of either 10 mg/L or 5% above baseline TDS**
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0
1,1,2,2-Tetrachloroethane	0
Tetrachloroethylene (PCE)	0
Thallium	0
Thiobencarb	0
Toluene	0
Toxaphene	0
2,4,5-TP (Silvex)	0
Trichloroacetic acid	7.3 ug/L*
1,2,4-Trichlorobenzene	0
1,1,1-Trichloroethane	0
1,1,2-Trichloroethane	0
Trichloroethylene (TCE)	0
Trichlorofluoromethane	0
1,1,2-Trichloro-1,2,2-trifluoro-ethane	0
Tritium	0
Turbidity	0.2 NTU
Uranium	0
Vinyl chloride	0
Xylene(s)	0

Pesticides without MCLs	Threshold of Significant Impact

*(Bromoacetic, Chloroacetic, Dibromoacetic, Dichloroacetic and Trichloroacetic acids combined)

**Baseline levels are those established in the Study described in the EIR

Responses to Contra Costa Water District, February 17, 2009 Letter

Response to Comment 1:
The EIR Project Description notes that this document assesses the alternatives as described in the "Dutch Slough Tidal Marsh Restoration Conceptual Plan and Feasibility Report". As such, the alternatives are conceptual at this stage. Knowing this, the impacts were assessed at the maximum level in the Draft EIR, to increase the probability that all impacts of the final project would be covered. When DWR selects an alternative for further development, it will prepare detailed development plans. In the unlikely event that the environmental effects of those plans vary substantively from those of the conceptual plans evaluated in this EIR, applicable subsequent CEQA analysis (Addendum or Supplement) would be prepared before the development can proceed. DWR will coordinate with CCWD in preparation of detailed development plans for the selected alternative.

Response to Comment 2:
DWR has decided to not breach the proposed project until after the portion of CCWD's Contra Costa Canal adjacent to the project site has been encased. Therefore, the following revisions have been made to the impacts and mitigations section of Chapter 3.1:

The third paragraph of page 3.1-17 under Impact 3.1.1-5, Possible Water Quality Degradation in Contra Costa Canal due to Groundwater Seepage, is revised to state:

> *The ~~planned~~ encasement of the CCWD Canal, which is addressed further under Cumulative Impacts, would remove the risk of changes in groundwater levels on the project site affecting the water supply quality. That project also would protect the water supply from other potential sources of contamination such as agricultural runoff, municipal runoff, treated wastewater, and salt leaching from soils throughout the region. The CCWD project commenced implementation in 2008 and received additional funding for implementation in 2009.*

On page 3.1-17, Mitigation 3.1.1-5 is revised as follows:

> MITIGATION 3.1.1-5 BREACH PROJECT UPON COMPLETION OF CANAL ENCASEMENT PROJECT
>
> *To avoid potential negative impacts to water quality within the Contra Costa Canal from groundwater intrusion, breaching of the Dutch Slough project site will not commence until encasement of the Canal south of the site is complete.*
>
> IMPACT SIGNIFICANCE AFTER MITIGATION
>
> *Less than significant with mitigation.*

The fourth paragraph of page 3.1-19 under Impact 3.1.1-6, Groundwater Intrusion Onto Adjacent Parcels, is revised to state:

> *Connectivity of the shallow aquifer suggests that permanently raised Dutch Slough Restoration site groundwater levels may increase groundwater intrusion in all directions. This effect is expected to be small because the tidal sloughs to the north, west, and south of the project site exert a far stronger hydraulic signal on the groundwater on the adjacent parcels (Hultgren-Tillis 2005). Groundwater pumping on these adjacent properties steepens the hydraulic gradient, which would increase flow from the Dutch Slough site. Adjacent parcels to the east and to the south (after the Contra Costa Canal is encased) may have to pump more groundwater. This*

pumping need would be most likely (and greatest) outside of the wet season, when other contributing sources to groundwater diminish relative to the possible Dutch Slough contribution.

The sixth and seventh paragraphs of page 3.1-19 are revised to state:

> ***South.*** *The Contra Costa Canal to the south has tides nearly identical to those at Emerson slough, and recent data demonstrate the tidal connectivity to groundwater on both sides of the Canal (LSCE 2006). Two external changes are expected in the near future, either before or after Dutch Slough implementation. First, a proposed residential development south of the Canal that is partially below sea level intends to install and permanently operate a groundwater management infrastructure system. Though groundwater on that property is currently pumped, the new system would be operated to maintain a lower and consistent groundwater level that will act to steepen the hydraulic gradient to its north, towards the Canal and Dutch Slough site. Under the current Canal configuration, increased groundwater levels at the Dutch Slough site would be dampened by the Canal such that the restoration site's groundwater signal to this property would be reduced to the level of insignificance.*
>
> *Second, the Contra Costa Water District ~~has proposed to fill~~ is currently in the process of encasing the Canal, thereby eliminating the Canal's influence on groundwater levels south of the Dutch Slough site. ~~Under this scenario,~~ After the Dutch Slough site is breached and the Canal is encased, the tidal action within the Dutch Slough site would influence the groundwater south of the Canal. Because of the greater horizontal distance between Dutch Slough and the property to the south and because backfill soils in the Canal reduce hydraulic conductivity relative to open water of the Canal, there would be lower hydraulic gradients relative to the existing condition and thus this impact would be less than significant.*

The second paragraph of page 3.1-22, under Impact 3.1.1-7, Wind-wave Drive Levee Overtopping Into Contra Costa Canal, is revised as follows:

> *There are two conditions when overtopping might occur. Both conditions are associated with extreme high tide events, which can occur in winter (Dec-Jan) and summer (Jun-Jul). In addition, Delta water levels can be much higher in the winter during major storm runoff events, a condition that does not occur in the summer. Significant wind events tend to come from the south during winter storms, away from the Canal, and from the west to northwest in the summer, somewhat aligned with the southern boundary. Were overtopping to occur in the winter, no significant impact is presumed to occur due to ambient salinity within the Dutch Slough site being very similar to that of the Canal water. Were overtopping to occur in the summer, a potentially significant effect on salinity in the Canal water could occur if the Canal were being used for water supply conveyance.*
>
> *<u>The Contra Costa Water District is in the process of encasing the Canal within an underground pipe to protect degredation of its water supply from a variety of surface and sub-surface pollutant sources. Once this encasement is complete, the Canal will be filled, and wind-wave overtopping will have no effect on water quality within the Canal's water supply.</u>*

On page 3.1-23, Mitigation 3.1.1-7 is revised as follows:

> MITIGATION 3.1.1-7 BREACH PROJECT UPON COMPLETION OF CANAL ENCASEMENT PROJECT
>
> *To avoid potential negative impacts to water quality within the Contra Costa Canal from overtopping, breaching of the Dutch Slough project site will not commence until encasement of*

the Canal south of the site is complete. As part of the encasement project, the height of the berm along the Canal's north side will be reduced in some locations to elevations below the 100-year flood elevation. As part of the final design process, DWR will coordinate with CCWD to design a berm or a levee along the southern boundary of the Dutch Slough project site that will protect the Canal right-of-way from 100-year tidal flooding once the Dutch Slough site is breached.

IMPACT SIGNIFICANCE AFTER MITIGATION

Less than significant with mitigation.

On page 3.1-29, Mitigation 3.1.2-7 is revised as follows:

MITIGATION 3.1.2-7 BREACH PROJECT UPON COMPLETION OF CANAL ENCASEMENT PROJECT

Same as Alternative 1.

On page 3.1-32, Mitigation 3.1.3-7 is revised as follows:

MITIGATION 3.1.3-7 BREACH PROJECT UPON COMPLETION OF CANAL ENCASEMENT PROJECT

Same as Alternative 1.

Response to Comment 3:
As discussed in the DEIR, CCWD plans on filling the Contra Costa Canal as part of the Canal encasement project. According to preliminary design documents for Phase 2 of the encasement (the portion of the Canal south of the Dutch Slough project site) provided by CCWD, much of the Canal fill material will come from the levees that currently exist on either side of the Canal. The preliminary design proposes that the existing levee on the north side of the Canal (between the Canal and the Dutch Slough project site) be shaved down to top elevations of between roughly +7 and +11 ft NAVD88, or +4.6 and +7.6 ft NGVD29[1]. This means that portions of the Canal ROW could potentially be tidally inundated during extreme storm events, as the 100-year-flood elevation for the site is +6.6 ft NGVD29 (+9 ft NAVD88)[2]. In order to ensure that the Canal ROW will not be flooded, Mitigation 3.1.1-7 is revised as described above, ensuring that the final design of the project will include a levee or berm along the project's southern boundary to protect the Canal ROW from tidal flooding. This levee/berm will eliminate the need for a 1,000-ft buffer between tidal areas on the Dutch Slough site and the Canal ROW. In addition, since the Dutch Slough project would not be breached until after the Canal is encased, it eliminates the need to conduct the levee overtopping study.

Response to Comment 4:
Impacts of soil removal from the Ironhouse site and subsequent restoration of that site are generally assessed in the DEIR technical analyses. If Alternative 2 or 3 is selected and if the Dutch Slough project fill is derived from the Ironhouse Project site, then the removal of 500,000 to 600,000 cubic yards of soil from the Ironhouse Project site (lowering that site to an elevation of 1.5 feet), as described on p. 2-44 of the EIR, would be considered part of the Dutch Slough Project. An environmental assessment, including wetland delineation and sensitive species surveys, was conducted during summer 2009; no sensitive species. The wetland delineation has not yet been submitted to USACE for certification. Environmental

[1] The conversion between NAVD88 and NGVD29 at the site is -2.362 ft, according to the VERTCON program developed by the US Army Corps of Engineers.
[2] This elevation is 0.1 ft higher than the 100-year-flood elevation described in the DEIR due to the release of an updated FEMA FIRM (flood) map effective June 16, 2009.

impacts of transporting fill from ISD to the Dutch Slough site are expected to be limited to greenhouse gas emissions, which are incorporated in the analysis in Impact 3.6.1-3.

The development of tidal wetlands on the Ironhouse Project site is a separate project from the Dutch Slough Project and may require subsequent CEQA review, depending on whether the project design or on-the-ground conditions vary substantively from those considered in this EIR. That determination and review would be at the discretion of the ISD, as the CEQA lead agency for the Ironhouse Project.

Response to Comment 5:
Design for the ISD restoration is only conceptual at this time. Two general alternatives are being considered: a single breach with a channel or culvert over the encased CCWD canal, and two breaches with no connection across the canal. Final design, including any channels or culverts, will be coordinated with CCWD.

Response to Comment 6:
See responses to CCWD Comments 3, 4 and 5, above.

Response to Comment 7:
The project site levees would not be breached until the Canal encasement is complete. Therefore, there should be no impact to water quality in the canal attributable to the DSR Project. See the responses to Comment #2 above, which revises Impact 3.1.1-5, Possible Water Quality Degradation in Contra Costa Canal due to Groundwater Seepage, based on the fact that the canal will be encased before breaching. This change in the project will eliminate the need to perform the groundwater intrusion study, and therefore no need to change the salinity standards presented in it.

Impact 3.2.1-5, Degradation of Drinking Water Quality Due to Alteration to Salinity Levels in Delta Waters, deals with the impacts of the project to salinity levels in Delta Surface waters. The magnitude of the salinity change to Delta waters will be small. The Rock Slough intake for the Contra Costa Canal is more than 5.5 miles upstream from the DSR site; the small potential increases in salinity will be dissipated long before reaching the intake. Therefore, the potential impact of increases in salinity in Delta surface waters from the DSR Project on drinking water quality is assumed to be insignificant. It is therefore appropriate to base the threshold of significance for salinity impacts to Delta waters on the standards outlined in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (“Basin Plan”) (CVRWQCB 2006).

Response to Comment 8:
The project site levees would not be breached until Canal encasement is complete, resulting in no impacts to water quality within the Canal from groundwater seepage. See responses to Comment #2 above.

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February 24, 2009

Patty Quickert
DWR Delta-Suisun Marsh Office
1416 9th Street Room 1623
Sacramento, Ca. 95814

Subject: Draft Environmental Impact Report for the Dutch Slough Tidal Restoration Project

Dear Miss Quickert:

Thank you for the opportunity to review and provide comments on the Draft Environmental Impact Report (DEIR) for the Dutch Slough Tidal Restoration Project (Project). As you are aware, Ironhouse Sanitary District (ISD) has been cooperatively participating with the Department of Water Resources (DWR), the Natural Heritage Institute (NHI) and other stakeholders through the development of this proposed Project. The primary purpose of ISD's cooperation has been to offer the use (for compensation) of approximately 100 acres of land owned by ISD to possibly enhance DWR's Project.

The enhancement opportunities include DWR securing and using up to approximately 600,000 cubic yards (cyds) of economically available fill material, and, once this material was excavated and moved to the Project, the development of approximately 100 acres of created tidal wetlands on ISD property. In fact, ISD, in participation with several other stakeholder agencies, successfully acquired State grant monies to help DWR implement some of the benefits discussed above. (1)

However, prior to ISD receiving any grant monies to help DWR implement portions of its Project, an environmental analysis must be completed in accordance with the California Environmental Quality Act (CEQA). To comply with this mandate, ISD worked with DWR to include the ISD property in the DEIR as it is an integral component of at least two of DWR's Project Alternatives (Alternatives 2 and 3). In reading the DEIR, the ISD property is included but is only analyzed for environmental effects on a conceptual-level, not at a project-level. Also, the DEIR refers to the work (moving up to 600,000 cyds of fill onto DWR's land and creating up to 100 acres of tidal

wetlands) on ISD property as a separate ISD project, and not as an integral part of the DWR project.

ISD believes the DEIR should address the environmental effects of any work necessary to fully implement any of the DEIR Project Alternatives at a project-level, including use of fill material from property owned by ISD. Otherwise, the DEIR runs the risk of piece mealing and cannot fully evaluate the effects of all of its Project Alternatives. Based on its review of the DEIR thus far, ISD believes that it would not be over reaching for the DEIR to consider the ISD component at a project-level in the DEIR.

(1) (cont.)

In addition, section 5.0 of the DEIR mistakenly analyzes and interprets the ISD Expansion project (both from a process and regulatory standpoint) and needs significant revision.

(2)

Comments related to Chapter 5 are as follows:

Chapter 5.0 CEQA Topical Analyses

Section 5.3; Page 5-5;

- The first full paragraph, Ironhouse Sanitary District Expansion, incorrectly describes the ISD project and needs to be deleted and replaced with the following:

  Ironhouse Sanitary District (ISD) is in the process of a capital improvement project to increase its treatment capacity and construct a state of the art treatment facility which meets today's strict regulatory and environmental requirements. ISD's new facility is fully permitted and is scheduled to begin construction in May of 2009. The new facility will, in its first phase, expand ISD's treatment capacity from 2.7 million gallons per day (MGD) to 4.3 MGD and, in its second phase, will serve ISD's build-out capacity needs of 8.6 MGD. The project includes a new membrane bio-reactor (MBR) treatment process with ultra violet light disinfection and a new river discharge option into the San Joaquin River near Jersey Point, off the north-westerly shore of Jersey Island. The new river discharge provides a new alternative for discharge of ISD's highly treated wastewater and will allow ISD maximum flexibility in managing how it disposes, or allocates, this future valuable resource. When complete, ISD'S new treatment facility will provide ISD with the ability to discharge its recycled water to irrigate fields on Jersey Island, to supply local industry with cooling or process water, to on-site

(3)

③ (cont.) storage ponds (up to 80 million gallons) or to the San Joaquin River.

④
- Cumulative Impacts: It is unclear to ISD where the DEIR author received their information on ISD's expansion project and why the author approached this section in the manner he/she did. What is clear to ISD is the DEIR author did not speak to ISD, did not understand ISD's project, and completely misstated/misinterpreted ISD's project.

- Water Quality – ISD disagrees with the DEIR's analysis of Cumulative Water Quality Impacts. The DEIR discusses "increased development," and "increased pollution" from development runoff and increased volume of municipal sewage, yet the Dutch Slough Project (DSP) actually results in decreased development and, therefore, decreases in development storm water runoff and municipal wastewater. Effectively, because of the DSP, 4,500-6,100 housing units will not be constructed (see page 1-1; section 1.2.1 – Dutch Slough Restoration Project) and development related storm water runoff and municipal wastewater flows will decrease from levels of development planned prior to the DSP. Therefore, the cumulative effect of the DSP, when considered with other projects such as ISD's expansion, will be to decrease pollution, not increase it.

Section 5.3; Page 5-6;

⑤ In addition, at the top of page 5-6, the DEIR discusses the cumulative impacts of "increased volume of municipal sewage..." resulting in "...more pollutants to the waters", and how "more pollutants will be introduced if the effluent is discharged to surface waters as opposed to being used for irrigation on Jersey Island." While the discussion above indicates the DSP will actually decrease pollutants; another important clarification needs to be made regarding recycled water being applied to fields on Jersey Island vs. discharge to the San Joaquin River.

ISD's current use of the Jersey Island irrigation fields serves as the final step in a "treatment process". Once the water has been placed on the fields, absorbed by the ground and plants, any excess water, or any constituents not absorbed by the plants, will eventually enter the island ground water and make its way to an island drainage ditch. Once in an island drainage ditch, the water drains to the island dewatering pump station and is discharged into the San Joaquin River. So to say, less "pollutants" will enter the river by irrigating on Jersey Island (vs.

a direct river discharge) is not necessarily correct. Also, as ISD's future MBR treatment facility will be highly advanced, the recycled water quality produced will be significantly cleaner (unrestricted, Title 22) than the existing recycled water produced. And, because the recycled water from the new MBR plant will be unrestricted reuse, more options will be available to ISD for disposal or reuse of its water. In essence, even though a new river discharge will be available to ISD in the future, cumulatively, ISD should actually decrease the "pollutants" that enter the river because of its higher quality recycled water and greater flexibility (irrigation, industrial reuse, and storage) for disposal. Lastly, because ISD's future unrestricted reuse water can be used by industry (where its current water cannot), less surface water is used by industry which, cumulatively, can reduce impacts to surface waters, habitat and the environment.

(5) (cont.)

Based on the above discussion, ISD requests the text in the DEIR be revised to properly reflect the net positive cumulative impact the DSP and ISD projects will have.

- Biological Resources – Aquatic Resources; 4th sentence through the 6th sentence need to be deleted and rewritten to reflect the cumulative benefits of the DSP and ISD projects as discussed above. Also, the last sentence of the first paragraph needs to be rewritten to reflect ISD's option to discharge into the San Joaquin River off the north-west shore of Jersey Island near Jersey Point.

(6)

Section 5.3; Page 5-7;

- Continuing onto page 5-7; the last two sentences of the first paragraph need to be deleted and rewritten to reflect the positive impacts the ISD project can have to protect water quality, habitat and the environment as discussed above. The DEIR should also reflect that ISD's environmental document, permitting, biological opinions, and anti-degradation analysis, in the course of studying its project, all indicate minimal impact to water quality, habitat and the environment. ISD's project has been carefully planned and designed to protect all designated beneficial uses and the environment, while providing maximum flexibility for ISD to operate its new facility such that even further benefits can be achieved. To say "The aquatic resources in Gallagher Slough and potentially Big Break and Franks Tract would be more severely impacted..." by ISD's project is a great exaggeration, and a misstatement.

(7)

⑦ *(cont.)* The DEIR seems to have taken the approach of "loosely" investigating cumulative impacts of different projects and then making bad assumptions to develop exaggerations which do not belong in this document.

Additional comments on other section/pages are as follows:

Page S-1; 4th sentence:

Starting with "Ironhouse Sanitary District..."

⑧
- This sentence states ISD is proposing the west Marsh Creek Delta Restoration project. This is not entirely correct. ISD is simply offering its property for use by the Dutch Slough project as a close and, therefore, economical source of fill material to enhance the Dutch Slough project. Without the fill material from the ISD property, alternatives 2 & 3 in the DEIR may not be feasible.

⑨ The DEIR seems to rely on the ISD fill material for alternatives 2 & 3 and, therefore, should investigate at a project level of analysis, the impacts and mitigation measures of removing the fill material from the ISD property. Also, in the March 24, 2006 NOP, page 16, alternatives, the third bullet indicates the DEIR will "describe different operational scenarios and inclusion of the Marsh Creek Delta Restoration on the ISD parcel for each of the "build" alternatives, yet the DEIR has failed to do this at a project level analyses.

Page S-2;

⑩
- The 100 acres of ISD land is irrigated agricultural land, not irrigated pasture used for grazing livestock.

Page 3.1-16;

(11) • Impact 3.1.1-4 Construction on the ISD parcel may include breaching the west Marsh Creek levee. Construction of wetland restoration on the ISD parcel could occur without breaching the west Marsh Creek levee.

Page 3.1–21; last paragraph;

(12) • The discussion in this paragraph also needs to include land purchase compensation if ISD's lands are impacted by the Dutch slough project (DSP) to the extent that possible uses (uses other than irrigation) by ISD are lost.

Page 3.11–3; Jersey Island;

(13) • Add the words "select areas of" between the words "hunting on" and "their Jersey Island..."

Page 3.11–4; Figure 3.11 – 1;

(14) • The north east corner of the figure incorrectly shows the Delta Science Center on ISD property.

Again, thank you for the opportunity to review and comment on the Dutch Slough Restoration Project (DEIR). Should you have any questions or concerns, please feel free to contact me at (925) 625-2279.

Sincerely,

Tom Williams

Thomas Williams
General Manger
Ironhouse Sanitary District

Cc: Fret Etzel
John Cain, NHI

Responses to Ironhouse Sanitary District, February 24, 2009 Letter

Response to Comment 1:
Impacts of soil removal from the Ironhouse site and subsequent restoration of that site are generally assessed in the DEIR technical analyses. If Alternative 2 or 3 is selected and if the Dutch Slough project fill is derived from the Ironhouse Project site, then the removal of 500 to 600 thousand cubic yards soil from the Ironhouse Project site (lowering that site to an elevation of 1.5 feet), as described on p. 2-44 of the EIR, would be considered part of the Dutch Slough Project.

The development of tidal wetlands on the Ironhouse Project site is a separate project from the Dutch Slough Project and may require subsequent CEQA review, depending on whether the project design or on-the-ground conditions vary substantively from those considered in this EIR. That determination and review would be at the discretion of the ISD, as the CEQA lead agency for the Ironhouse Project.

An environmental assessment, including wetland delineation and sensitive species surveys, was conducted during summer 2009. No sensitive species (plant or animal) were found. The wetland delineation has not yet been submitted to USACE for certification.

Response to Comment 2:
Please see detailed responses to specific comments (3 – 7) on Chapter 5.0, below.

Response to Comment 3:
The first full paragraph on p. 5-5 has been deleted and replaced with the requested text as follows:

> *Ironhouse Sanitary District (ISD) is in the process of a capital improvement project to increase its treatment capacity and construct a state-of-the-art treatment facility that meets current regulatory and environmental requirements. ISD's new facility is fully permitted and began construction in May of 2009. The new facility will, in its first phase, expand ISD's treatment capacity from 2.7 million gallons/day (mgd) to 4.3 mgd. The second phase of the ISD expansion will serve the District's ultimate build-out capacity needs of 8.6 mgd.*
>
> *The ISD expansion project includes a new membrane bio-reactor (MBR) treatment process with ultra-violet light disinfection and a new discharge option into the San Joaquin River near Jersey Point, off the north-westerly shore of Jersey Island. The new river discharge will provide a new alternative for discharging ISD's highly treated wastewater and allow ISD maximum flexibility in managing how it disposes or allocates its treated wastewater. When complete, ISD's new treatment facility will provide ISD with the ability to discharge its recycled water to irrigate fields on Jersey Island, to supply local industry with process or cooling water, to onsite storage ponds (up to 80 mg), or to the San Joaquin River.*

Response to Comment 4:
ISD staff were contacted to identify its proposed treatment plant expansion plans, and available ISD CEQA documents were reviewed by the authors of this EIR. Specific comments regarding the cumulative impacts of the ISD Treatment Plant Expansion project and the proposed Dutch Slough Tidal Marsh Restoration Project are discussed below.

Response to Comment 5:
The comment compares cumulative water quality impacts of the Dutch Slough project and other regional projects with the level of development planned prior to the Dutch Slough Project. However, CEQA requires that impacts be compared to existing conditions on the ground (CEQA Guidelines Section 15125(a). However, it is likely that, upon completion of construction, the Dutch Slough Project would

reduce the discharge of urban and agricultural contaminants to adjacent waters compared with existing condition, and would not generate any sewage discharge. Therefore, the first paragraph of the Water Quality discussion on pp. 5-5 and 5-6 of the EIR has been deleted and replaced with the following text:

> *During construction of the various projects, including the Dutch Slough Project, there could be increased pollution of surrounding waterways associated with erosion and sedimentation. Although planned residential developments, once completed, would contribute to increased urban runoff pollutants, the Dutch Slough Tidal Marsh Restoration Project, when operational, would not contribute to increased urban or agricultural runoff pollutants, therefore it would not contribute to those cumulative impacts. The Dutch Slough Restoration Project would not contribute to increased sewage generation and therefore would not contribute to any cumulative wastewater discharge impacts. Additionally, in the long term, the Dutch Slough project and the upgraded ISD treatment could reduce some water pollutant concentrations.*

Response to Comment 6:
The Biological Resources –Aquatic Resources discussion on pp. 5-6 and 5-7 is deleted and replaced with the following

> *The Dutch Slough Restoration Project, with mitigation identified in this EIR, would have a generally beneficial effect on native fisheries. The cumulative projects would not affect potential for mercury methylation, fisheries entrainment, disturbance of benthic habitats, or creation of non-native fish habitat. The project's individual impacts would therefore not contribute to any cumulative impacts to these resources.*

In addition, for consistency, Impact 3.5.1-8, Cumulative Impacts, on p. 3.5-20 is deleted.

Response to Comment 7:
Please see response to Comment 6, above.

Response to Comment 8:
The fourth sentence on the third paragraph on p. S-1 has been revised/augmented as follows:

> *The Ironhouse Sanitary District (ISD) is ~~proposing~~ considering a proposal by the Natural Heritage Institute (NHI) for the West Marsh Creek Delta Restoration Project (hereinafter called the Ironhouse Project), a restoration of a portion of the Marsh Creek delta on an adjacent 100-acre parcel to the west of Marsh Creek, owned by ISD (see Figure 2-14). The ISD also is offering its property for use by the Dutch Slough Project as a close, and therefore economical, source of fill material for several of the Dutch Slough Restoration Project alternatives.*

Response to Comment 9:
Please see response to Contra Costa Water District Comment 4 for a discussion of the analysis of impacts of use of ISD fill material.

Different Dutch Slough Restoration Project operational scenarios are described on pp 2-37 through 2-42 of the EIR. The different impacts of operational options are described in each impact assessment, where applicable.

Response to Comment 10:
The last sentence on p. S-2 has been revised to read as follows:

The Ironhouse Project would be located on 100 acres of irrigated ~~pasture~~ agricultural land owned by the Ironhouse Sanitary District and approximately 10 acres of flood control channel owned by the Contra Costa County Flood Control District.

Response to Comment 11:
The first line of Impact 3.1.1-4 on p. 3.1-16 of the EIR has been corrected as follows:

Wetland restoration at the Ironhouse parcel ~~would~~ may involve the breaching of a Marsh Creek levee…

Response to Comment 12:
The following is added as a first paragraph under "Develop Compensatory Program with the ISD":
"DWR shall develop a groundwater monitoring program (including metrics that will determine impact significance) in conjunction with ISD that will monitor both pre and post-restoration groundwater elevations on ISD lands west of Marsh Creek. If this monitoring reveals that implementation of the Dutch Slough project is causing a significant impact to pumping and/or farming operations, then DWR shall implement a compensatory program with ISD similar to that described above to mitigate for increased pumping of groundwater off of Jersey Island."

And the following is added at the end of the existing paragraph under "Develop Compensatory Program with ISD":
"If groundwater levels increase to the extent that current land uses are no longer possible, and groundwater monitoring shows that such increases are due to the Dutch Slough restoration, DWR shall negotiate with ISD to compensate ISD for such loss, with land purchase as one possible option."

Response to Comment 13:
The sentence under "Jersey Island" on p. 3.11-1 has been corrected to read as follows:

The Ironhouse Sanitary District allows fishing, hiking, and pheasant hunting by permit only on select areas of their Jersey Island property north of the project site, across Dutch Slough ~~by permit only~~.

Response to Comment 14:
Locations of items shown on Figure 3.11-1 are general, and the figure is not to scale. It is hereby noted that the Delta Science Center is not on ISD property.

IV. ERRATA AND STAFF-INITIATED TEXT CHANGES

The following minor changes have been made in the FEIR to correct errors, and update and clarify information presented in the DEIR.

Chapter 2, Project Description

Page 2-17, Dune Scrub, first paragraph: The first sentence is revised as follows *(italics denotes new text)*: "*If feasible,* native dune habitat would be restored…." In addition, the final sentence of the paragraph is deleted.

Page 2-17, Habitat Levees, 2nd paragraph: The following sentence is deleted: "~~The public trails on the Burroughs and Gilbert parcels would be on the levee along Dutch Slough, not the levee segments that may be lowered~~." (The trail on Gilbert and Burroughs will be along the canal, not along Dutch Slough.)

Page 2-26: The following paragraph is added either to the end of the "Flood Protection/Levees" section on for clarification:

"Levee-Top Trails
A paved access road and hiking trail would be constructed on the crown of the levee around the Emerson parcel. The paved portion will be 16-20 feet wide, and the levee crown would be approximately four feet wider than the paved portion. The levee height would be raised one to two feet above HMP to accommodate sea level rise. Existing bank protection on the Emerson levee is mostly inappropriate materials (primarily large concrete slabs) placed by past landowners, and would be replaced by clean rock rip-rap, or other acceptable bank protection. On the Gilbert and Burroughs parcels, bank protection on the Dutch Slough levees is similar, and also would be replaced."

Page 2-28, next-to-last paragraph, 4th sentence. The phrase "…and dune scrub vegetation.." is eliminated from the sentence.

Chapter 3. Environmental Setting, Impacts, and Mitigation Measures

Chapter 3.1 Hydrology and Geomorphology

The following sentence is added at the end of the last paragraph on page 3.1-26, under Marsh Creek Delta Relocation, Option 3:

"Although no effects to tailwater elevations are expected, modeling the effects is recommended."

Chapter 3.2 Water Quality.

The following additional information from the Stellar Environmental Services Marsh Creek baseline water quality monitoring report is added to the section on Mercury in the Marsh Creek Watershed on p. 3.2-3:

*"Stellar Environmental Services (SES) conducted baseline water and sediment quality monitoring in Marsh Creek from 2006-2007 in support of the restoration project. They collected surface water samples at five sites on lower Marsh Creek during five sampling events throughout the year. One sediment sample was also collected from each site during the February 2007 sampling session. Among other constituents (**described in further detail below**) they analyzed the surface water samples for total Hg, dissolved Hg, and MeHg. The soil samples were analyzed for total Hg and MeHg.*

Total Hg in the surface water samples was detected only once at one sampling location in August, 2007 (0.018 ug/l). All other samples had concentrations below the detection limit of 0.012 ug/l. Dissolved Hg was detected only once at one sampling location in January 2007 (0.018 ug/l). All other samples had concentrations below the detection limit of 0.012 ug/l.. The levels of total Hg in Marsh Creek are lower than those found by other investigators (Slotton et al. 1998), while the dissolved Hg values are slightly higher. There are currently no established environmental screening levels (ESLs) for Hg in surface waters.

Levels of MeHg in the surface water samples ranged from 0 to 1.41 ng/l, which are all below the established ESL for surface waters of 3 ng/l MeHg. Methyl mercury concentrations in the Sacramento-San Joaquin Delta typically range from 0.02 to 0.3 ng/L (Water Board, 2006a). The maximum observed concentration in the Delta between the Water Board's March 2000 and April 2004 investigation was 0.70 ng/L in Prospect Slough in March 2000 (Water Board, 2006b). The highest concentration observed during this investigation was 1.41 ng/L, during the November sampling event at CL-1, indicating that Marsh Creek does experience higher MeHg levels than most studied areas in the Delta. These levels of MeHg are also above the Water Boards proposed TMDL level for point source pollution areas of 0.06 ng/l (Water Board 2006c).

Levels of total Hg in the soil ranged from below the detection limit of 0.05 mg/kg to 0.072 mg/kg, which aresignificantly lower than those found by Slotten et al. (1998). Levels of MeHg in the soil ranged from below the detection limit of 0.02 ng/g to 0.13 ng/g. While there is no established ESL for MeHg in soils, these values are well below the ESL of 3 ng/l for surface waters."

Chapter 3.2 Water Quality. The following additional background data is added at the end of the first paragraph on p. 3.2-17 to update the water quality and sediment sampling data developed in additional baseline water quality and sediment sampling:

> "The Marsh Creek water quality monitoring was designed to capture seasonal variations in hydrochemistry over a baseline duration of 1 year (*Marsh Creek Sediment and Water Quality Baseline Monitoring Y2006-Y2007*, Stellar Environmental Solutions, Inc. (SES) for Natural Heritage Institute). The principal objectives of the study were to:
>
> - Measure mercury loads in sediment and water in lower Marsh Creek
> - Determine if other constituents (primarily metals) exist that could accumulate in or pollute wetlands created at the Dutch Slough Tidal Marsh Restoration site
> - Document levels of dissolved organic carbon
> - Characterize baseline conditions in lower Marsh Creek
>
> Water samples were collected from five sites on lower Marsh Creek during five sampling events from November 2006 to September 2007. One creek bed sediment sample was collected from each site during the February 2007 sampling. All five sites are upstream of the Dutch Slough site; the closest (CL-5) is located where East Cypress road crosses Marsh Creek, approximately 0.5 mile to the south of the project's SW corner. The sampling site located furthest upstream (CL-1) is approximately 5 river miles from CL-5.
>
> Surface water samples were analyzed for the following constituents:
>
> - Ammonia as nitrogen, Nitrate, and Total Kjeldahl Nitrogen (TKN)
> - Bromide

- Chloride
- DOC (dissolved organic carbon) and TOC (total organic carbon)
- DO (dissolved oxygen)
- E. coli, fecal coliform, and total coliform
- Mercury (total, dissolved, methyl)
- Metals (cadmium, chromium, lead, arsenic, nickel, zinc, iron, aluminum, copper, arsenic)
- Orthophosphate
- TDS (total dissolved solids) and TSS (total suspended solids)
- Total phosphorus
- Turbidity, conductivity, pH, and flow

Sediment samples were analyzed for total mercury and methyl mercury.

The California Water Resources Control Board has established Environmental Screening Levels (ESLs) for surface water, which were designed to evaluate the likelihood of environmental impact. There are several categories of ESLs; the appropriate category for this study is Freshwater Aquatic Habitat Goals. The ESLs do not carry any regulatory requirement; exceedance of the ESLs suggest that additional investigation or remediation is warranted. For most of the constituents analyzed in this study there are no established ESLs; methyl mercury and some pollutant metals (cadmium, chromium, lead, arsenic, nickel, zinc, and copper) are the exceptions. Selected contaminants (coliform bacteria and chloride) were compared to EPA drinking water standards (Maximum Contaminant Levels; MCL) where applicable. These MCLs are meant only for comparative measurements; the water in Marsh Creek is not subject to drinking water standards.

Results of Analysis of Surface Water Samples
Five constituents were either not detected (above the detection limit) in any of the surface water samples, or were detected only once. Cadmium and ammonia as nitrogen were not detected in any samples. Total mercury, dissolved mercury, and orthophosphate were each detected only once and only in low concentrations, very close to their respective detection limits.

The following metals were detected, but only at levels below the ESL: chromium, arsenic, nickel, and zinc. Lead and copper exceeded the ESL on a few occasions, primarily coincident with a sediment plume present during the August 2007 sampling. Methyl mercury was always below the ESL of 3 nanograms per liter; its highest recorded level was 1.4 nanograms per liter, and 80% of the samples were at or below 0.25 nanograms per liter. (Note: the ESL for methyl mercury was incorrectly recorded in the report at 0.003 nanograms per liter; it is actually 0.003 *micrograms* per liter. This was corrected by Teal Glass of SES via email, 10/14/09.)

Coliform bacteria were always detected, and levels tended to increase downstream of point sources from urban, agricultural, or wastewater inflows. The presence of coliform exceeded the drinking water quality Maximum Contaminant Levels. Urban, agricultural, and wastewater point sources also tended to increase levels of chloride, nitrate, and TKN. In about 1/3 of the samples, chloride levels exceeded the Maximum Contaminant Levels.

Dissolved oxygen levels at 6-13 mg/l were all in the range considered good for aquatic life. Levels of dissolved organic carbon, which tend to be inversely related to those of dissolved oxygen, were low at 3-12 mg/l.

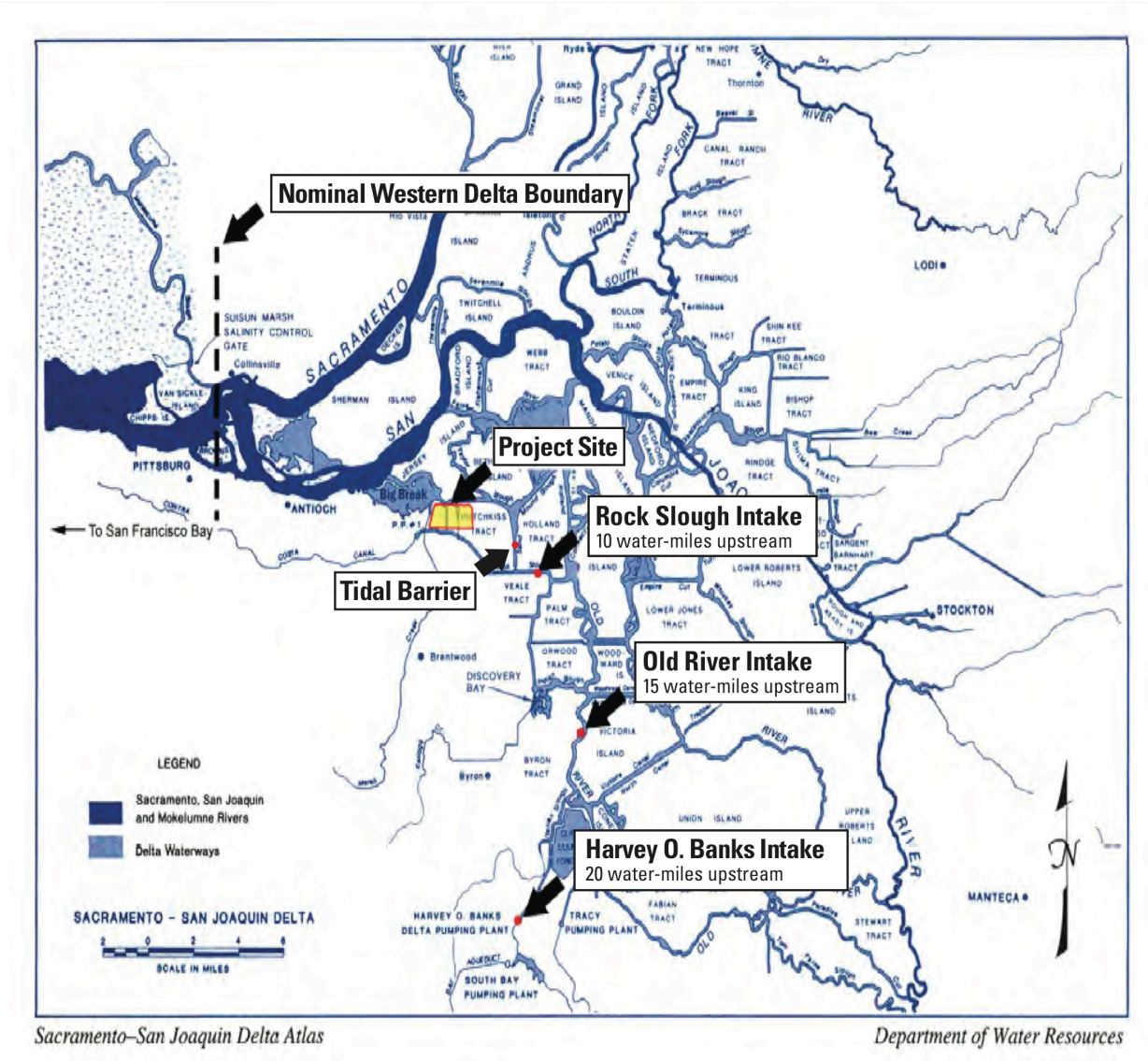
Results of Analysis of Soil (Stream Bed) Samples

Total mercury was detected only at the two downstream sampling sites (0.054 mg/kg and 0.072 mg/kg). Methylmercury varied among the sites from 0.039 nanograms/l to 0.13 nanograms/liter.

Conclusion

Except for coliform bacteria, none of the analyzed constituents were found at levels that would cause concern for the Dutch Slough Project. As part of the Project, additional pre- and post-project water quality monitoring will be done in Marsh Creek and other adjacent water bodies. The preliminary findings from the SES report will be used to establish a baseline for Marsh Creek and to inform future monitoring efforts. Mercury is of special concern throughout the Delta, and will be of particular focus of those efforts.

Page 3.2-13: Figure 3.2-2 is replaced with the following figure to correct typographical errors in the captions:



Section 3.4 Terrestrial and Wetland Biological Resources

The following updates are made to the Likelihood of Occurrence column of the Birds portion of Table 3.4.1, Species List for Dutch Slough Area to account for bird surveys made after preparation of that table (*italics indicates new text*):

BIRDS					
Species	**Status (State/ Federal/ Other*)**	**Distribution**	**Habitat**	**Likelihood of occurrence in project area**	**Evaluated in EIR?**
Accipiter cooperi Cooper's hawk	SC/	Occurs throughout CA except in high altitudes. Winters in Central Valley.	Nests in riparian woodlands, gray pine-oak woodlands, mixed conifer forests.	Present. Observed using project site *in 2005/6 and 2008*, and known to nest nearby *No birds observed in 2009 survey.*.	Yes
Accipiter striatus Sharp-shinned hawk	SC/	Throughout CA except in highest altitudes. Only winters in the Central Valley.	Forages in woodland openings, brushy pastures, shorelines where bird prey are found.	Possible. Not observed using project site, but it is likely that they do. Known to nest nearby.	No
Agelaius tricolor Tricolored blackbird	SC/	Permanent resident in Central Valley from Butte to Kern county.	Colonial nester near fresh water, in emergent wetland plants but also thickets of willow, blackberry, and wild rose. Feeds in grassland and cropland habitats.	Present. Use project site for foraging; not known to nest on site. *Abundant on site in 2005/6 surveys; not observed in 2008 or 2009 surveys.*	Yes
Ardea herodias Great blue heron	SC/	Common throughout lower elevations of California.	Shallow estuaries, fresh and saline wetlands, ponds and other slow moving waterways. Nests in colonies in large snags or trees.	Present. Forage and roost on project site. No known nesting, although appropriate trees exist on site. Project not expected to negatively impact foraging.	No
Asio flammeus Short-eared owl	SC/	Resident in isolated populations throughout lower elevations of CA. Widespread winter migrant primarily in Central Valley.	Usually found in open areas with few trees such as grasslands, prairies, dunes, meadows, irrigated lands, and wetlands. Needs dense tules or tall grass for nesting.	Present. Observed intermittently during winter; not known to nest in project area, and unlikely that they do despite on site habitat.	No
Athene cunicularia Burrowing owl	SC/BCC	Lowlands throughout CA, including Central Valley.	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available rodent burrows.	Present. Have been observed on project site, though not during 2005, *2008, or 2009* surveys. Appropriate habitat with ground squirrel burrows is present on project site.	Yes
Buteo regalis Ferruginous hawk	SC/BCC	Does not nest in CA; winters in CA at lower elevations and open grasslands in the Central Valley and Coast Ranges.	Open grasslands, scrub, low foothills surrounding valleys.	Low. Primary concern for the species is loss of nesting sites, but the species does not nest in California.	No
Buteo swainsoni Swainson's hawk	T/BCC	Once found throughout lowland CA, now restricted to portions of the Central Valley and Great Basin regions.	Agricultural areas, (particularly alfalfa fields), juniper-sage flats, riparian areas, and oak savannas.	Present. Nest and forage on and near project site. *Nests observed in 2005/6 and 2008 surveys. No nesting observed in 2009 survey.*	Yes
Casmerodius albus Great egret	SC/	Resident throughout CA except for high mountains and deserts.	Fresh and saline emergent wetlands; along the margins of estuaries, lakes, slow moving streams and ditches; and in irrigated croplands and pastures. Nests and roosts in large trees.	Present. Forage and roost on project site. No known nesting, although appropriate trees exist on site. Project not expected to negatively impact foraging.	No

Species	Status (State/ Federal/ Other*)	Distribution	Habitat	Likelihood of occurrence in project area	Evaluated in EIR?
Charadrius montanus Mountain plover	SC/	Does not nest in CA. Winters in Central Valley south of Yuba County and along the central and southern coast.	Occupies open plains or rolling hills with short grasses or sparse vegetation, including agricultural fields.	Low. Not observed at project site, although habitat is suitable. Winter usage likely to be minor and intermittent.	No.
Circus cyaneus Northern harrier	SC/	Occurs throughout lowland CA.	Grasslands, meadows, marshes, and seasonal wetlands and agricultural lands.	Present. Nest and forage on and near project site. *Nesting observed in 2005/6, 2008, and 2009 surveys.* May benefit from the project.	Yes
Egretta thula Snowy egret	SC/	Occurs in the Central Valley, coastal lowlands, NE plateau and Imperial Valley.	Shallow estuaries and fresh and saline wetlands, ponds and slow moving waterways. Nests in colonies in large snags or trees.	Present. Forage and roost on project site. No known nesting, although appropriate trees exist on site. *Few birds were observed regularly on the site in 2005/6, 2008, and 2009 surveys. No nesting observed.* Project not expected to negatively impact foraging.	No
Elanus caeruleus White-tailed kite	FPS/	Resident in low elevation areas west of Sierras throughout CA; rarely found away from agricultural areas.	Forages in open grasslands, meadows, farmlands and emergent wetlands. Nests in dense oak, willow, or other tree stands.	Present. Nest and forage on and near project site. *Nesting observed in 2005/6 surveys; no nesting observed in 2008 and 2009 surveys*.	Yes
Eremophila alpestris actia California horned lark	SC/	Found throughout California	Occupies a variety of open habitats, usually where large trees and shrubs are absent.	Present. Observed on site in winter but not in summer. *Abundant on site in 2005/6 surveys; not observed in 2008 or 2009 surveys.* Not known to nest on site, though there is appropriate habitat and the species nests nearby.	Yes
Falco peregrinus anatum American peregrine falcon	E/BCC, (delisted)	Found throughout California. Permanent resident of Coast Ranges. Winters in the Central Valley.	Nests and roosts on protected ledges in high cliffs, usually adjacent to water bodies.	Present. Known to forage on site during the winter; unlikely to nest on or near project site. May benefit from project.	No
Geothlypis trichas sinuosa Saltmarsh common yellowthroat	SC/BCC	Found only in SF Bay Area.	Freshwater marshes in summer and salt or brackish marshes in fall and winter; requires tall grasses, tules, and willow thickets for nesting and cover.	Unlikely. Yellowthroats occur on site throughout the year, but are unlikely to be the subspecies of concern, which is not known from Contra Costa County.	No
Grus canadensis tabida Greater sandhill crane	T, FPS/	In CA, breeds in NE CA, winters in Central Valley.	Winter habitats include annual and perennial grasslands, moist croplands with rice or corn stubble, and open, emergent wetlands.	Possible. Not observed on site in the winter, but known to occur in east Contra Costa County. Does not nest in project area.	No
Icteria virens Yellow-breasted chat	SC/	Throughout North America. Formerly bred throughout CA except in higher mountains and coastal islands. Now, an uncommon summer resident and migrant in coastal CA and in Sierra Nevada foothills.	Uses several habitats, especially riparian thickets and brush.	Present. Species observed and expected to nest on site. *One bird observed on the site in 2005/6 surveys (no nests). No birds or nest observed in 2008 and 2009 surveys.*	Yes

Species	Status (State/ Federal/ Other*)	Distribution	Habitat	Likelihood of occurrence in project area	Evaluated in EIR?
Lanius ludovicianus Loggerhead shrike	SC/	Resident and winter visitor in lowlands and foothills of California.	Prefers open habitats with scattered shrubs, trees, fences, posts, utility lines, or other perches.	Present. Occur on project site in winter and summer, and nest on site. *Nesting observed in 2005/6; no nesting but some foraging observed in 2008 survey; no birds observed in 2009 survey*.	Yes
Larus californicus California gull	SC/	Western US and Canada. In CA primarily in winter where it frequents coastal areas and interior lowlands.	Inland, frequents lacustrine, riverine, and cropland habitats, landfill dumps, and open lawns in cities. Often abundant in CA in winter.	Possible. Not observed on site, but likely to forage there at times. Does not nest in project area. May benefit from project.	No
Laterallus jamaicensis californicus California black rail	T, FPS/ BCC	Permanent resident in the SF Bay/Delta region and in isolated areas of the Sierra foothills and S CA. Winter resident in central and southern coastal areas.	Fresh, brackish or tidal marshes with emergent vegetation.	~~Possible.~~ *Present* Has been observed or heard on site *in 2009 surveys*. *Not observed in 2005/6 and 2008 surveys.*	Yes
Melospiza melodia maxillaries Suisun song sparrow	SC/BCC	Restricted to western edge of Delta between the cities of Vallejo and Pittsburg near Suisun Bay.	Brackish and tidal marshes with tall emergent plants.	Unlikely. Song sparrows occur on site throughout the year, but are unlikely to be the subspecies of concern. Not known to occur in project area.	No
Numenius americanus Long-billed curlew	SC/BCC (breeding)	Nests in NE CA. Winters along the coast and interior valleys west of the Sierras.	In winter frequents coastal beaches and mudflats and interior grasslands and ag fields.	Known to forage on site in winter. Does not nest in project area.	No
Pandion haliaetus Osprey	SC/	Worldwide distribution. In CA, breeds near lakes from Cascades to Lake Tahoe and along the coast S to Marin County. Winters along coast and slightly inland south from Sonoma County.	Associated strictly with large, fish-bearing waters, primarily in mixed conifer habitats.	Possible. Observed flying over and perched on site, but not known to forage or nest on or near the project site.	No
Pelecanus erythrorhynchos American white pelican	SC/	Present in much of W and Central N America. Throughout SF Bay Area and Delta after breeding.	Coastal areas, large lakes and other water bodies.	Possible. Are known to fly over the project site, but no current use due to limited open water habitat.	No
Phalacrocorax auritus Double-crested cormorant	SC/	Coastal areas of North America, and inland breeding. In Ca, primarily coastal areas, NE part of state, and Central Valley.	Inland lakes, in fresh, salt, and estuarine waters.	Present. Roost in large riparian trees and snags on site, and forage in adjacent sloughs. No known nesting on project site.	No
Plegadis chihi White-faced ibis	SC/	Uncommon summer resident in sections of S CA, rare visitor in the Central Valley, and more common and widespread during winter migration.	Prefers freshwater marshes with emergent vegetation. Commonly forages in winter in flooded ag fields such as rice.	Possible. Have been observed on site. *No birds observed in 2005/6 surveys. Abundant, intermittent observations in 2008 surveys. Not observed in 2009 surveys.* Primary concern is loss of nesting sites, but it is not known to nest in or near project site.	No
Rallus longirostris obsoletus CA clapper rail	E, FPS/E	Salt and brackish marshes of SF Bay to Suisun.	Restricted to salt marshes and tidal sloughs.	Unlikely. No habitat at or near project site.	No

Species	Status (State/ Federal/ Other*)	Distribution	Habitat	Likelihood of occurrence in project area	Evaluated in EIR?
Riparia riparia Bank swallow	T/	Primarily occurs along Sacramento River from Tehama Co. to Sacramento Co., Feather and lower American rivers.	Nests in bluffs or banks, usually adjacent to water, where the soil is sand or sandy loam.	Low. Not observed on site, but may use it in transit between nesting and wintering areas. No nesting habitat on or near site.	No
Sterna antillarum browni California least tern	E, FPS/E	Nests on beaches along SF Bay and along S CA coast.	Nests on beaches, mudflats; forages on adjacent surf line, estuaries, or the open ocean.	Low. Do not occur in area in significant numbers; not observed on site. May benefit from project.	No
Sterna caspia Caspian tern	/BCC	Breeds in scattered locations across North America, and winters along the Pacific Coast from southern California southward to Guatemala, and along the Atlantic and Gulf coasts.	Breeds in wide variety of habitats along water, During migration and winter found along coastlines, large rivers and lakes. Roosts on islands and isolated spits.	Low. Observed flying over site, but not using open water. Do not nest in project area. May benefit from project.	No

These updated survey results are incorporated in the text as follows:

Impact 3.4.1-7, Impacts to Cooper's hawks. 1st paragraph, 1st sentence: "…on-site nesting was not observed during any of the bird surveys in 2005, 2008, or 2009." the last two sentences are deleted and and replace with: "*Surveys have not found any nesting Cooper's hawks on site, so tree removal is unlikely to have any impact on the species*." Under "No Burroughs Option", the second sentence is revised to "*Exercising this option could result in preservation of potential nesting habitat for Cooper's hawks*."

Impact 3.4.1-8, Impacts to Swainson's hawks. 2nd paragraph, 1st sentence: text is changed to "*Avian surveys were conducted in 2005, 2008, and 2009*."
2nd sentence: text is changed to "*During ~~both~~ the 2005 and 2008 surveys…*"
The following sentence is added to end of paragraph: "*During the 2009 surveys, two birds were seen only once on the Burroughs parcel; there was no nesting on site.*"

Impact 3.4.1-9, Impacts to burrowing owls. 1st paragraph, 1st line, is changed to: "*Avian surveys…in 2005, 2008, and 2009…*
In addition, on Mitigation 3.4.1-9. the 2nd sentence is deleted: "~~Surveys shall comply with standard protocol survey methods approved by DFG.~~"

Impact 3.4.1-12, Impacts to tricolored blackbird. 1st paragraph, text is changed to: "Dutch Slough Restoration Project construction activities and tidal habitat conversion would eliminate *potentially* suitable foraging habitat of tricolored blackbird, primarily in seasonal wetland within grazed irrigated pastures. Although the restored tidal marsh may provide nesting habitat for the species, long-term restoration of tidal marsh and terrestrial grassland would not compensate for the loss of foraging habitat. *If the species commonly used the project site for foraging*, this would be a potentially significant short-term and long-term impact. This impact would be cumulatively significant because of widespread conversion of similar extensive habitat to residential development in all adjacent ranches. Annual bird surveys will continue to be conducted (these began in 2008), which will assess use of the site by tricolored blackbirds. *Surveys in 2008 and 2009 did not observe any tricolored blackbirds on site, so this impact is unlikely to occur, and mitigation is unlikely to be necessary*"

Impact 3.4.1-13, Impacts to horned larks. 2nd sentence, is change to: "*If surveys find that horned larks are regularly using the site,* this would be a potentially significant impact." In addition, the following sentence is added to the end of the paragraph: *"No horned larks were documented using the site during the 2008 or 2009 surveys, so this impact is unlikely, and mitigation is unlikely to be necessary."*

Impact 3.4.1-14 Impacts to loggerhead shrikes. The following sentence is added to the end of the paragraph: *"Avian surveys in 2005, 2008 and 2009 have found few shrikes on the project site, so this impact is likely to be minimal, and mitigation is unlikely to be necessary."*

Impact 3.4.1-17, Impacts to black rails. The following paragraph is added to the end of the impacts discussion: "*During 2009, black rails were found to be inhabiting the permanent marsh at the north end of the Gilbert parcel. Seven individuals were heard, but it is not known if nesting occurred. This habitat will be lost when the restoration project is implemented. This is a potentially significant impact.*"

Mitigation 3.4.1-17, for impacts to black rails. The following paragraph is added to the end of the mitigation discussion: "*If black rails continue to inhabit the project site, at least a year prior to construction activities that would disturb the habitat, water management will be used to create conditions that would discourage use of the area by black rails. These actions will be taken outside of the nesting period. Prior to construction, surveys will be conducted to assure that black rails are not using the site. No construction will be allowed until rails are no longer present."*

Mitigation 3.4.1-22, Mitigation for silvery legless lizard. The mitigation is revised to read: "Because potential habitat…are not proposed. *However, a number of cover boards were placed around the vineyard on Emerson parcel in spring 2009. These were lifted and examined approximately every three weeks from March through May, 2009, during each visit a number of areas were also excavated by hand; these informal surveys will continue in 2010. No legless lizards were detected in 2009.* To mitigate for potential impacts, where feasible, the restoration plan….to benefit silvery legless lizard. ~~as well as other special status dune species~~."

Impact 3.4.1-24, Impacts to VELB. 1st paragraph is updated to read: "*A single elderberry shrub is located on the Emerson parcel near the boundary of the Dutch Slough project and the City Park. It is almost certain that this shrub will be lost to project construction."*

Mitigation 3.4.1-24, VELB. 1st sentence, is revised to read: "A stem count and measurement of the ~~two~~ elderberry shrub~~s~~…" The 3rd sentence of the mitigation is updated to read: "If feasible, the *shrub* will be salvaged…"

The "Impact Significance After Mitigation" of Mitigation 3.4.1-1.1 (pg 3.4-54) is changed to "With or without mitigation the impact is less than significant".

The title of Impact 3.4.1-2.3 is changed to "*Wildlife Disturbance Associated with Rehabilitation and Maintenance of Exterior Levee."*

The following sentence is inserted after the first complete sentence on page 3.4-58:

"*The existing armoring on the Emerson levee and the Gilbert and Burroughs levels along Dutch Slough will likely be replaced with rock rip-rap."*

The text for "Impact 3.4.1-4 Potential Impacts to Alkali Meadow and Seasonal Wetland Flats" is changed as follows:

> The Dutch Slough project site includes approximately 2.2 acres of alkali meadow vegetation, and 17 acres of seasonal ponds. Populations of native invertebrates and amphibians typically associated with alkali meadow and seasonal wetlands, including uncommon or sensitive species, may be eliminated by project construction and tidal restoration. In addition to sensitive invertebrates, these habitats may be used by dabbling ducks, shorebirds, reptiles, and amphibians. Surveys of these areas began in 2008 to determine if uncommon to rare species of aquatic invertebrates, such as branchiopod species [see impact 3.4.1-22], are present on site. If these species are present, loss of these habitats would be a significant impact.

Change to Mitigation 3.4.1-4:

Recent rare plant surveys and new wetland delineation located only 2.2 acres of the "alkali flat" vegetation type at the project site. This term had previously been applied erroneously due to incomplete information and unsubstantiated assumptions. Seasonal wetlands exist throughout the Gilbert and Burroughs parcels. Because this habitat is widespread throughout these two parcels, it is considered unnecessary to line newly created depressions with clay, because it is apparent that most of the area is poorly drained and will remain so in undisturbed areas. In addition, a full year of surveys (2008-2009) for sensitive pond invertebrates has found no sensitive species; therefore, salvage of topsoil to act as inoculum is not needed to preserve these species.
Therefore, Mitigation 3.4.1-4: Recreate Habitat Features To Reduce Potential Impacts To Wildlife Of Seasonal Wetland Flats has been revised to read as follows:

> *"Seasonal wetland flats shall be recreated in upland areas of undisturbed suitable soils by creating shallow depressions, which shall be compacted when wet to minimize permeability."*

Mitigation 3.4.1-5.1 Minimize, Avoid and Compensate for Impacts Common to All Sensitive Plants, is mis-numbered; it is corrected to Mitigation 3.4.1-5.3.

Section 3.5 Biological Resources: Aquatic
The following changes are made to account for newly added levee rehabilitation measures.

Impact 3.5.1-1, Decreased water quality due to construction.

The first paragraph on p. 3.5-12 is now changed to read as follows:
"Implementation of this alternative would require re-grading, lowering, and potentially disking the existing levees surrounding the Dutch Slough Restoration Project site. *Bank protection materials along the site perimeter levees (broken concrete slabs) would need to be replaced with clean rip-rap.* Unintentional levee breaches surrounding open water management areas would have to be repaired. Also, creating the final levee breaches to allow full tidal exchange between the Dutch Slough Restoration Project area and the Bay-Delta would require excavation adjacent to and inside the waters of the Delta. The construction activities have the potential to increase suspended sediments and introduce contaminants (fuel oils, grease) in the vicinity. This impact would apply to all portions of the Dutch Slough Restoration Project. It also would apply to the Ironhouse Project because it involves grading and lowering levees adjacent to Marsh Creek. Since this disturbance could be continuous throughout the levee construction/ maintenance period, and could therefore impact special status species in the immediate vicinity, the impact is considered potentially significant.

Impact 3.5.1-5, Disturbance of Benthic Habitats

The fourth paragraph on p. 3.5-16 is revised to read as follows:

As previously mentioned, it is possible that the upstream reach of Little Dutch Slough may need to be dredged to allow full tidal drainage in marshes adjacent to it. This action would disrupt the substrate, thus removing the benthic habitat and associated macroinvertebrate community. *Levee rehabilitation activities would include replacing existing bank protection materials (broken concrete slabs) with clean rip-rap in intertidal areas, which will cause disturbance to substrate and associated floral and faunal communities.* These actions would occur over a short time period, and therefore the impacts should be only temporary. The substrate that would be disturbed would be rapidly recolonized by benthic macroinvertebrates, plants, and fish. Therefore, this impact is not expected to be significant.

Mitigation 3.5.1-7.2

Mitigation 3.2.1-7.2 is mis-numbered and is corrected to read 3.5.1-7.2.