LFG

Mr. Les Grober, SWRCB, Division of Water Rights

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

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791

January 30, 2009

2009 FEB -2 PM 1:56

Ms. Debra Man
Assistant General Manager/
Chief Operating Officer
The Metropolitan Water District of
Southern California
Post Office Box 54153
Los Angeles, California 90054-0153

Mr. Jim James
Western Development and Storage, LLC
2773 25th Street
Sacramento, California 95818

Dear Ms. Man and Mr. James:

This is in reply to Western Development and Storage's November 24, 2008 letter and to Metropolitan Water District of Southern California's (MWD) December 12, 2008 letter to the Department of Water Resources (DWR) concerning a proposed transfer from the Delta Wetlands property on Bouldin Island and Webb Tract to MWD. Delta Wetlands proposes to idle up to 5,426 acres on Bouldin Island and up to 4,189 acres on Webb Tract in the Sacramento-San Joaquin Delta, and transfer up to a total of 17,941 acre-feet of water for export to MWD.

DWR strongly supports water transfers as a means to efficiently and effectively manage California's limited water resources, particularly in critically dry years such as we are currently facing. Water transfers can provide crucial supplemental supplies for water short areas. However, it is essential that any transfer be limited to the amount of new water resources made available to assure that the transfer can be implemented without adversely affecting other legal users of water, including DWR, and without unreasonably impacting fish, wildlife, other instream beneficial uses, or the economy of the area from which the water will be transferred. To protect other legal users of water, the transfer quantity from a crop idling program must be limited to the reduction in consumptive use during the transfer period. Due to the location, and the conditions existing on the islands in the Delta, DWR has grave concerns regarding the Delta Wetlands transfer proposal.

The Delta Wetlands islands included in the transfer proposal are located in the western Delta and land surface elevations are well below sea level. Major portions of the islands are greater than 15 feet below sea level. Water is diverted from the adjacent channels onto the islands through unmetered siphons.

Unmetered drainage pumps discharge intercepted groundwater and irrigation return water back into the Delta channels. Because of the low elevation of the islands and the organic soils, there is significant lateral movement of water through the soil onto the islands which causes a high water table. This lateral movement may satisfy a significant portion of the crop water demand. DWR staff is not currently aware of a method to determine the quantity or timing of the channel depletions attributable to this lateral movement. In addition, recent studies performed on Bouldin Island indicate there may be substantial evaporation from bare soil in the Delta lowlands which would affect the calculation of conserved water.

The high water table and significant lateral movement of water also create a substantial problem maintaining the idled fields free of weeds and native vegetation. Water consumed by weeds or native vegetation on the idled fields reduces the amount of water made available for transfer. Delta Wetlands has proposed plowing the idled fields to prevent weed growth. In 1991, DWR operated the Emergency Drought Water Bank. It was the first program of its kind in California. As part of the program, a substantial amount of acreage within the Delta was idled, including land within the Delta lowlands. Detailed tests were conducted in subsequent years to quantify any water savings from crop idling programs in the Delta. These studies demonstrated that water savings from such programs in the Delta is extremely limited.

The high groundwater in the Delta lowlands causes evaporation from idled moist soils and excessive weed growth on the idled land which proved very difficult to manage. The high groundwater and significant lateral movement on the islands provided vegetation in the idled fields with continual access to a water supply supporting substantial weed growth. In some cases, evapotranspiration from excessive weed growth may have equaled production crop evapotranspiration. Efforts to control weed growth on the lowland areas proved problematic. Initial proposals anticipated plowing, the primary method used for weed control, once or twice during the growing season. This proved to be inadequate to control weed growth and the required frequency of plowing increased significantly. Some areas required nearly continual plowing. The Department of Fish and Game (DFG) expressed concern over the plowing of acreage during the growing season due to potential impacts to ground nesting birds and required a modification of the weed abatement programs to prohibit plowing during the nesting season. This resulted in additional evapotranspiration losses associated with the resultant weed growth. The contracted quantities of water available for transfer were substantially reduced as a result of the inability to prohibit weed growth. It is for these reasons that in our water transfer paper related to crop idling transfers (updated in 2008 for use in 2009 and can be found at http://www.watertransfers.water.ca.gov/geninfo/geninfo_index.cfm) on page 13

states that lands with groundwater within 5 feet of the surface need to be avoided due to probable injury issues.

Another concern related to frequent plowing in this location is the potential impact to Delta soils and air quality. The organic soils on both Bouldin Island and Webb Tract are subject to wind erosion and oxidation causing subsidence of the Delta islands. Frequent plowing on idle fields for weed control has the potential to exacerbate erosion and subsidence concerns. Subsidence of Delta islands is of major concern for the sustainability of the Delta. DWR is currently involved in efforts to investigate the mechanisms that contribute to Delta island subsidence and in developing methods to help reverse subsidence. Frequent plowing combined with typical spring and summer wind patterns in the Delta also create a potential for impacts to air quality resulting from increased particulate emissions due to diesel emissions and dust.

In addition to the issues discussed above, the total quantity of water available for transfer would be reduced by the quantities made available at times when SWP pumping capacity is restricted. DWR would not be able to back any transfer water into upstream storage due to the location of Bouldin Island and Webb Tract, hydrologic conditions and operational constraints. SWP pumping capacity at Banks Pumping Plant for water transfers in 2009 is not expected to be available until July. This is much different than was the case in the 1991 water Bank due to new pumping restrictions related to Delta Smelt imposed by the U.S. Fish and Wildlife Service.

Due to the noted high degree of uncertainty as to how much water would ultimately be conserved for transfer from the Delta Wetlands proposal, DWR approval of a transfer would be contingent on a number of assurances from the water transfer proponents. Delta Wetlands would be required to work with DWR staff as necessary to calculate the anticipated reduction in consumptive use from fallowing the acreage on the two islands, and develop a specific plan for maintaining the idled fields free of weed growth and to monitor real time net water savings during the year. Subject to DWR approval, the plan must address potential adverse impacts to the organic soils, including potential subsidence, local air quality, and to provide assurances that the proposed weed control methods would not adversely affect fish, wildlife, or other beneficial uses. A monitoring program to be conducted by DWR staff, would be required to include frequent on-site verification. The costs of the verification program and all the needed monitoring would be the responsibility of the project proponents. Any evapotranspiration losses throughout the transfer period attributable to weed growth or other factors would be deducted from the quantity of water available for transfer at the sole discretion of DWR. Upon final verification, if the final determination of actual water savings is less than the quantity transferred, adjustments would be made to MWD's SWP Table A deliveries in 2009.

Last, approval of the transfer would require the concurrence of the U.S. Department of Interior's Bureau of Reclamation (Reclamation). DWR staff has forwarded the information submitted by Delta Wetlands to Reclamation for review. We will further discuss your proposal with Reclamation. Without the above information and assurances, the proposed transfer has the potential to result in adverse impacts to the State Water Project and the Central Valley Project as well as Delta resources.

If you have any questions or would like to discuss the issue further, please contact me at (916) 653-4313 or Mark Andersen at (916) 653-5945 in the State Water Project Analysis Office.

Sincerely,

ORIGINAL SIGNED BY
Robert B. Cooke, Chief

Robert B. Cooke, Chief
State Water Project Analysis Office

cc: Mr. David Forkel
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Summary Report for the Determination of Conserved Water Associated with the 2009 Webb Tract Water Transfer Pilot Study

Delta Wetlands Properties (DW), the Metropolitan Water District of Southern California (MWD), and the Department of Water Resources (DWR) executed an agreement providing for the conveyance of water made available by idling land on Webb Tract in the Sacramento-San Joaquin Delta in 2009. Due to the significant amount of uncertainty in the quantity of conserved water generated through crop idling in the Delta, the transfer parties agreed to conduct a pilot study. The goal of the Webb Tract pilot study was to determine the amount of water conserved by idling 4,064 acres of land on Webb Tract in 2009. For this pilot study, conserved water is the amount of evapotranspiration (ET) of corn on Webb Tract, based on measured ET of corn on adjacent Twitchell Island, less soil evaporation and weed ET on the pre-determined Webb Tract acreage.

DW contracted with the University of California, Davis (UCD), to conduct the Webb Tract pilot study. ET estimates on Webb Tract were developed using the Surface Renewal (SR) method. Installation of instrumentation and data collection began on May 14 and ended on September 30. Two stations collected ET data on Webb Tract: a base station on Field 23 set up for the duration of the study period and a roving station that moved to different fields throughout the period, including fields that were primarily bare soil, and fields of significant vegetation.

The results of this data collection effort were daily ET values for the area upwind of the instrumentation, approximately 120 meters by 120 meters. DWR used satellite imagery and image processing techniques to correlate the SR station measured ET with the vegetation grown in the same area upwind of the instrumentation. Landsat 5 and Landsat 7 satellite imagery of Webb Tract were available for 16 dates during the study period. DWR used the satellite data to develop a Normalized Difference Vegetation Index (NDVI). NDVI is a common remote sensing index used to help estimate vegetation characteristics, such as leaf area index and canopy cover. DWR staff developed a regression equation for the Landsat 5 and Landsat 7 datasets using the NDVI and ET data. We used the NDVI/ET regression equations to estimate daily ET for each field. From this data set, we calculated monthly ET depths and volumes for the entire 4,064 acres in the Webb Tract pilot study. See the comparison tables below.

During the same period, DWR collected SR derived ET estimates from corn growing on Twitchell Island as part of an ongoing DWR project that is collecting SR and California Irrigation Management Information System (CIMIS) data throughout California. On Twitchell Island, the SR station is located in a cornfield toward the western side of the island and the CIMIS station is located on pasture approximately 0.6 miles to the east. The Twitchell Island cornfield is approximately 4-5 miles to the northwest of Webb Tract. Due to the close proximity, and the analogous topographic and climatic conditions, we used the measured 2009 ET of corn on Twitchell Island to represent the ET of corn had it been planted on Webb Tract in 2009.

It is important to note that conserved water, or "real water", for transfer is normally based on the Evapotranspiration of Applied Water (ETAW), the amount of crop ET provided by applied irrigation water. ETAW is the total ET minus the amount of irrigation water provided by

precipitation (effective precipitation) and seepage. The goal of the Webb Tract pilot study was to evaluate the difference in total ET between corn grown on Webb Tract and that of the idle fields irrespective of the source of the water consistent with the agreement between DW, MWD, and DWR. The agreement defined the calculation of conserved water for transfer as the difference between crop ET and the evaporation and transpiration from idled land. Effective precipitation and seepage rates are not included in these calculations. There is significant seepage from the surrounding waterways that satisfies a portion of the consumptive use, however, the effective precipitation and seepage estimations are beyond the scope of this pilot study. For this pilot study, we assumed both effective precipitation and seepage were the same for the corn and idled land. The SR measurements of ET account for these assumptions on both Webb Tract and Twitchell Islands. However, this assumption may not be correct, as effective precipitation and seepage rates vary throughout the Delta. The seepage component of crop water use in the Delta lowlands is uncertain, resulting in a limitation for using ETAW to calculate real water savings from future crop idling transfer proposals in this region. We recommend that future transfers from property within the Delta lowlands would then necessarily rely on accepted direct measurement techniques, such as the surface renewal method employed on Webb Tract and Twitchell Island, to calculate the amount of conserved water made available.

The following tables contain the monthly ET, not ETAW, for corn measured on Twitchell Island and applied to the idled acreage on Webb Tract, the ET measured from the idled land on Webb Tract Island, and the difference, being conserved water, by month. The totals covering the entire study period are included (top table is total volume in acre-feet; bottom table is depth as acre-feet/acre).

Comparison of Twitchell Corn ET Applied to Webb Idled Acreages and Webb Idle ET (acre-feet) 1_/

Month	Twitch Corn ET (AF)	Webb Idled Land ET (AF)	Conserved Water (AF) 2_/
May	487.7	690.8	-203.1
June	1,706.8	1,178.5	528.3
July	2,722.8	1,544.2	1,178.6
August	2,478.9	1,584.9	894.0
September	1,747.4	1,381.7	365.7
Total	**9,143.6**	**6,380.1**	**2,763.5**

1_/ Values are evaportranspiration (ET), not evaportranspiration of applied water (ETAW).
2_/ The conserved water in May was negative because Twitchell was weed free with corn seedlings, lower ET, and Webb Tract's soil had a rougher surface with varying amounts of vegetation (higher ET).

Comparison of Twitchell Corn ET Applied to Webb Idled Acreages and Webb Idle ET (acre-feet/acre) 1_/

Month	Twitch Corn ET (AF/A)	Webb Idled Land ET (AF/A)	Conserved Water (AF/A) 2_/
May	0.12	0.17	-0.05
June	0.42	0.29	0.13
July	0.67	0.38	0.30
August	0.61	0.39	0.21
September	0.43	0.34	0.09
Total	**2.25**	**1.57**	**0.68**

1_/ Values are evaportranspiration (ET), not evaportranspiration of applied water (ETAW).
2_/ The conserved water in May was negative because Twitchell was weed free with corn seedlings, lower ET, and Webb Tract's soil had a rougher surface with varying amounts of vegetation (higher ET).

It is important to note that the above data are for the duration that surface renewal stations operated on Webb Tract, May 15 to September 30, 2009. The conserved water for the period stipulated in the pilot study agreement between DW, MWD, and DWR as potentially transferable, July 1, 2009 through September 30, 2009, is 2438.3 acre-feet or 0.60 acre-feet/acre for the pre-determined 4,063.79 acres fallowed. This report relates to the data and methods employed in the calculation of conserved water. Issues of transferability and export of the conserved water are beyond the scope of this report, but can be found in DWR's pending comprehensive assessment document covering the 2009 Webb Tract crop idling pilot study outcome and recommendations for future Delta crop fallowing water transfers.

Letter 12: Thomas J. Shephard, Sr., Special Water Counsel, Neumiller & Beardslee, on behalf of San Joaquin County and the San Joaquin County Flood Control and Water Conservation District

12-1 As described on page 1-4 of the Draft Environmental Impact Report (DEIR), the analysis from the previous documents was updated to consider changed circumstances and new information that was not available at the time the 2001 Final Environmental Impact Report (FEIR) and 2001 Final Environmental Impact Report (FEIS) were published. The 2001 FEIR was decertified by the State Water Resources Control Board, and accordingly this DEIR is not a "supplemental EIR" or a "subsequent EIR". See also Responses to Comments 12-2 through 12-10.

12-2 The DEIR considered new information and changed circumstances since publication of the 2000 DEIR, including but not limited to changes in the status of listed species and the pelagic organism decline. The Project DEIR analysis of exports is consistent with the Operations Criteria and Plan (OCAP) Biological Opinions (BO) and does not need to be revised. Project exports would occur from July to November, with most exports (i.e., 80 percent) occurring in the July-September period which is the typical transfer window identified in the OCAP BOs. Exports would occur when State Water Project (SWP) pumping capacity is available under OCAP rules. A small percentage of Project exports are modeled to occur in October and November (i.e., 20 percent), outside of the typical OCAP transfer window. All Project exports are under review in the re-consultation for updated biological opinions and incidental take authorization from the resources agencies.

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

entrainment into agricultural diversions, retention in the south Delta, and transport downstream into Suisun Bay.

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

One of the seven particle releasing stations included in the PTM study was located in the north Delta, immediately south of Cache Slough. The resulting percentages of increased entrainment (when compared with baseline No Project conditions) of these particles released from the Cache Slough station, assuming February diversions, was less than 1 percent. As such, the likelihood of the Project to cause increased movement of smelt from the Cache Slough area into the south Delta, thereby adversely impacting SWP operations, is extremely low.

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

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

12-3 The City of Stockton Delta Water Project, Contra Costa Water District (CCWD) Alternative Intake Project and Freeport Regional Water Project were both included in the cumulative impact analysis for the Project. See Chapter 5 of the DEIR.

12-4 The Project includes a comprehensive seepage monitoring and control program to avoid seepage issues and to provide early detection of seepage. The program is summarized on pages 2-19 and 2-20 of the DEIR and is described in detail in the Project Dismissal Agreement (PDA) between Delta Wetlands Properties and East Bay Municipal Utility District (EMBUD), included as an appendix to the 2001 FEIR. Levee stability is addressed in Section 4.3 of the DEIR.

As it relates to the Project's Remedial Action Fund, the Project is responsible for the cost of all mitigation and remedial actions resulting from proposed Reservoir Island operations. Financial assurances in the form of the Seepage and Monitoring Fund, Drawdown Fund, Remedial Action Fund, and Insurance are required under the terms of the EBMUD PDA, Attachment C. The fund dollar amounts specified in the EBMUD PDA are the initial deposits estimated to cover the first year of Project diversions to storage. The fund amounts for each subsequent year will be determined by the Monitoring and Action Board (MAB), provided that the annual fund amounts cannot be less than the prior year's actual fund withdrawals. Each fund shall be replenished prior to that year's diversions to storage. Furthermore, as described in more detail in Section IV of Attachment C, the Diversion Suspension Limits require prompt remedial action by the Project if certain groundwater elevations are exceeded, including to suspend diversion of water and to lower reservoir pool (water storage) elevations. By restricting the diversion and export water, the financial assurances and diversion suspension limits will ensure that Project-related seepage impacts are remedied in a timely manner. Project levee design takes into consideration seepage concerns as part of proposed levee improvements. Reservoir island levee design addresses seepage concerns through the inclusion of toe berms on the levee interiors, a slurry wall core trench to control through-seepage, and an extensive seepage monitoring and shallow groundwater pumping system to control under-seepage. The reservoir island levee improvements would be designed to meet or exceed state-recommended criteria for levees in California Department of Water Resources (DWR) Bulletin 192-82. See page 2-10 of the DEIR.

Habitat island levee design addresses seepage concerns in accordance with existing levee maintenance practices, including toe berms, seepage ditches, and core trenching. Habitat island levee improvements would comply with the Corps Guidelines for Rehabilitation of Non-Federal Levees in the Sacramento-San Joaquin Delta also referred to as the PL 84-99 Delta Specific standards.

However, neither the reservoir nor the habitat islands would apply for inclusion in the Corps' PL 84-99 levee program which could require local levee maintenance agencies to readdress seepage concerns. Therefore, the basis for Project levee design based on adherence with PL 84-99 is not out of date as suggested by the comment.

The Project will provide financial assurances for the Seepage Control Plan in the form of a Seepage and Monitoring Fund, Remedial Action Fund, reservoir Drawdown Fund, and insurance in accordance with the Protest Dismissal Agreement between Delta Wetlands Properties and the East Bay Municipal Utility District, included as an appendix to the 2001 FEIR. The Seepage Control Plan and other commitments of the EBMUD PDA have been incorporated into the Project as an environmental commitment, as discussed in the DEIR on pages 2-19 to 2-20.

12-5 The growth inducing impacts of the Project and the alternatives are evaluated in Chapter 6 of the DEIR, including growth inducing impacts of the identified places of use. Specifically, Chapter 6 (Tables 6-1 through 6-3) identifies specific locations and type of growth that might be facilitated by deliver of Project water to the places of use. As discussed on page 6-9 of the DEIR, additional water supply provided by the Project could remove an obstacle to a portion of the planned growth in the identified places of use, which could result in secondary environmental effects; however, the responsibility to approve such growth and mitigate potential significant impacts is not in the jurisdiction of the Lead Agency or the Project applicant. Individual jurisdictions within the places of use have the authority to approve, condition, or deny individual development projects and make growth decisions. Therefore, additional alternatives to the Project to address growth inducing impacts, beyond those already evaluated, are not required.

Transfers of water by the places of use to third parties are outside the scope of this project and are too speculative to analyze in this EIR.

12-6 The places of use evaluated in this DEIR are identified in Chapter 2 in Table 2-1 on page 2-3 and are described on pages 2-3 through 2-5. They are also shown in Figures 1-3 through 1-6 in Chapter 1 Introduction.

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

The Project will provide water only to the places of use that are specified in its water rights applications and analyzed in the DEIR. The Project is not proposing the transfer of any Project water outside of the places of use.

The comment also cites documentation regarding Delta Wetlands Properties' 2009 transfer of water that was made available from the short term fallowing of agricultural land on Webb Tract, which was approved by the SWRCB in Order WR 2009-037-DWR. This short term water transfer was not a part of the Project. There

are no current plans for future transfer of the existing water rights. The findings from the 2009 transfer do not affect any analysis or conclusion in the DEIR.

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

12-7 The comment raises concerns about Project construction and operations traffic potentially accelerating the deterioration of San Joaquin County Roads in the Project vicinity. Section 4.10 of the DEIR evaluated impacts to affected roadways attributed to both construction and operation-generated Project traffic. Significant impacts were identified for increased traffic during construction activities (TRA-1), and the potential for traffic safety conflicts during construction (TRA-3) and mitigation measures were recommended to minimize those impacts to a less-than-significant level. It should be noted that under the No Project Alternative, even though construction-related traffic impacts would not occur, operational traffic associated with agricultural uses and hunting and other recreational uses would result in similar (almost the same) operational impacts as those attributed to the Project. Therefore, the rate of County road deterioration would not be anticipated to be substantially more with Project implementation compared to the No Project condition.

The Project would comply with San Joaquin County requirements to obtain an encroachment permit to do work in the County's rights-of-way, as appropriate, to minimize Project-generated road deterioration. The Project would also be required to obtain and comply with County transportation permit requirements for the use of oversized and/or overweight vehicles.

12-8 As discussed in the California Environmental Quality Act (CEQA) Guidelines Sections 15064(e) and 15131, economic and social changes resulting from a project shall not be treated as significant effects on the environment. They can be used to determine that a physical change could be considered a significant effect on the environment. The physical impact of the loss (conversion) of agricultural land is evaluated in Section 4.8 of the DEIR and it was determined to be significant and unavoidable (Impact I-4). No further analysis is required under CEQA.

12-9 The DEIR was prepared in compliance with the CEQA Guidelines which do not require an analysis of environmental justice. See also Response to Comment 12-8.

12-10 See Response to Comment 12-1. As described on page 1-4 of the DEIR, the analysis from the previous documents was updated to consider changed circumstances and new information that was not available at the time the 2001 FEIR and 2001 FEIS were published. The 2008 Draft Place of Use EIR is not a "supplemental EIR" or "subsequent EIR" because the 2001 FEIR was decertified

by the State Water Resources Control Board. See also Responses to Comments 12-2 through 12-9. The Corps is the Lead Agency under National Environmental Protection Act (NEPA) and will determine what, if any, NEPA documentation is necessary to support the 404 permit process.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

JUN 30 2010

RECEIVED
JUL 02 2010
S.W.S.D.

Semitropic Water Storage District
1101 Central Avenue
P.O. Box Z
Wasco, CA 93280-0877

Project: Delta Wetlands Place of Use EIR

Subject: District Rule 9510: Indirect Source Review (ISR) applicability

District CEQA Reference No: 20100358

To Whom It May Concern:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above and determined that the project may be subject to District Rule 9510 (Indirect Source Review). Rule 9510 requires applicants subject to the rule to provide information that enables the District to quantify construction, area and operational emissions, and potentially mitigate a portion of those emissions. An application must be filed with the District no later than concurrent with application with a local agency for the final discretionary approval. For additional information, please visit the District's ISR website: http://www.valleyair.org/ISR/ISRHome.htm

13-1

For your convenience, a document is enclosed which addresses frequently asked questions regarding Indirect Source Review (ISR). This may be used as a reference to better understand ISR, and how the District processes applications.

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. You can contact the District at (559) 230-6000 and CEQA/ISR staff will be available to further discuss the regulatory requirements that are associated with this project. Thank you for your cooperation in the matter.

Sincerely,

David Warner
Director of Permit Services

Jessica R Willis

Arnaud Marjollet
Permit Services Manager

Enclosure: ISR FAQ

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Frequently Asked Questions Regarding Indirect Source Review

Q: What is the purpose of Indirect Source Review (ISR)?

A: As land development and population in the San Joaquin Valley continues to increase, so will indirect air emissions that negatively effect air quality. The emissions are called indirect because they don't come directly from a smokestack, like traditional industry emissions, but rather the emissions are indirectly caused by this growth in population. As a consequence, the San Joaquin Valley Air Pollution Control District (District) adopted Indirect Source Review (Rule 9510) to reduce the impacts of growth in emissions from all new land development in the San Joaquin Valley.

Q: When is a project subject to ISR?

A: A project is subject to ISR if all of the following are applicable:

- The project received its **final discretionary approval** from the land use agency on or after **March 1, 2006**.
- The project meets or exceeds the following District applicability thresholds:

- 2,000 square feet commercial
- 20,000 square feet medical office
- 10,000 square feet governmental
- 9,000 square feet of space not included in the list
- 25,000 square feet light industrial
- 39,000 square feet general office
- 20,000 square feet recreation space
- 100,000 square feet heavy industrial
- 9,000 square feet educational
- 50 residential units

- The project's primary functions are not subject to District Rule 2201 (New and Modified Stationary Source Review Rule), or District Rule 2010 (Permits Required).

For more information on the applicability of ISR regarding a specific project, please contact the District at (559) 230-6000 or visit the District's website at http://www.valleyair.org/ISR/ISRHomc.htm.

Q: For the purposes of Rule 9510, what is final discretionary approval?

A: A decision by a public agency that requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular development project, as distinguished from situations where the public agency merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations. Examples of discretionary approvals include Tentative Tract Maps, Site Plans, and Conditional Use Permits. A building permit would be an example of a ministerial approval.

Q: What pollutants does ISR target?

A: The ISR rule looks to reduce the growth in NO_x and PM_{10} emissions associated with the construction and operation of new development projects in the San Joaquin Valley. The rule requirement is to reduce construction NO_x and PM_{10} emissions by 20% and 45%, respectively, as well as reducing operational NO_x and PM_{10} emissions by 33.3% and 50%, respectively, when compared to unmitigated projects.

Q: What are NO_x and PM_{10}?

A: Nitrogen oxide (NO_x) is an ozone precursor, or principal component of ozone. Ozone is a colorless, odorless reactive gas comprised of three oxygen atoms. It is found naturally in the earth's stratosphere, where it absorbs the ultraviolet component of incoming solar radiation that can be harmful to life. Ozone is also found near the earth's surface, where pollutants emitted from society's activities react in the presence of sunlight to form ozone. Hot sunny weather with stagnant wind conditions favors ozone formation, so the period from May through September is when high ozone levels tend to occur in the San Joaquin Valley Air Basin.

Particulate matter (PM) is a generic term used to describe a complex group of air pollutants that vary in composition. PM_{10} particles have a diameter of 10 microns (micrometers) or less. The sources of PM can vary from wind blown dust particles to fine particles directly emitted from combustion processes, or may be formed from chemical reactions occurring in the atmosphere.

Q: What is URBEMIS?

A: URBEMIS (Urban Emissions) is a computer modeling program that estimates construction, area source and operational emissions of NO_x and PM_{10} from potential land uses. This program uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors.

Q: How can a project's emissions be reduced to lessen the impact on air quality (On-site emissions reductions)?

A: A project's emissions can be reduced by incorporating District approved mitigation measures. These include, but are not limited to, the following:

- Bicycle lanes throughout the project
- Proximity to existing or planned local retail
- Cleaner fleet construction vehicles
- Proximity to existing or planned bus stops
- Eliminate woodstoves and fireplaces from the project
- Energy efficiency beyond Title 24 requirements

For more information on additional measures that help reduce emissions, please contact the District at (559) 230-6000 or by visiting the District's website at http://www.valleyair.org/ISR/ISROnSiteMeasures.htm

Q: What will I receive from the District once the Air Impact Assessment (AIA) has been approved?

A: When the AIA is approved the applicant will receive an approval letter, along with the following:

- Off-site emissions estimator worksheet (see below)
- Fee estimator worksheet (see below)
- Monitoring and Reporting Schedule (MRS), if applicable
- Project invoice, if applicable

Q: What is the Off-site Emissions Estimator Worksheet?

A: This Excel worksheet uses the project's total tons of NO_x and PM_{10} as calculated using URBEMIS and compares the unmitigated emissions against the mitigated emissions, determining whether the reduction in emissions is sufficient to satisfy the rule. If the reduction is not sufficient, the required off-site emission reductions are calculated using the District's off-site emission reduction equations, which can be found on the District's website at http://www.valleyair.org/rules/currntrules/r9510.pdf (Sections 7.0 through 7.1.2.2)

Q: What is the Fee Estimator Worksheet?

A: The Fee Estimator is an Excel worksheet used to calculate the total dollar amount of off-site fees that must be paid to the District in order to cover the District's cost of obtaining the required off-site emission reductions, and therefore fulfill the rule requirement. This fee amount is derived by multiplying the total tons of off-site reductions by the applicable rate.

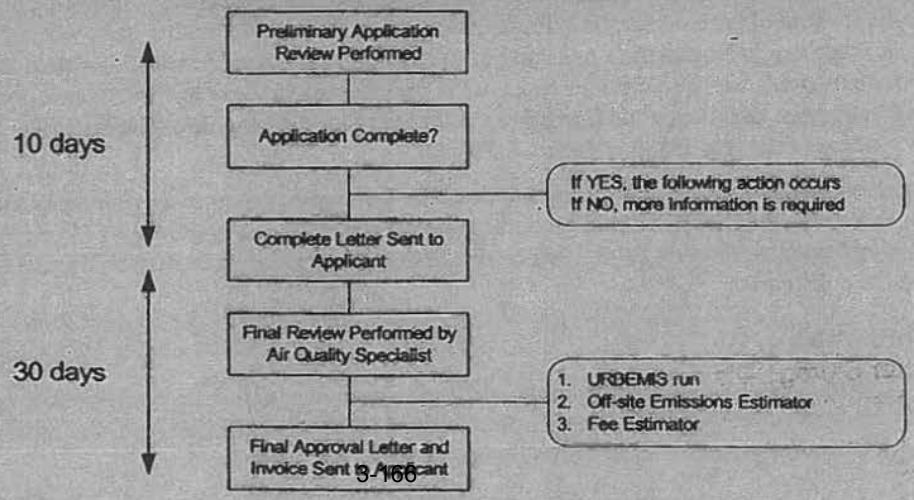
Q: Why are mitigation fees collected, and how are they used by the District?

A: When a development project cannot reduce its NO_x and PM_{10} emissions to the level required by the rule, then the difference must be mitigated through the payment of a fee. The monies collected from this fee will be used by the District to reduce emissions in the San Joaquin Valley on behalf of the project, with the goal of offsetting the emissions increase from the project by decreasing emissions elsewhere. More specifically, the fees received by the District are used in the District's existing Emission Reduction Incentive Program (ERIP) to fund emission reduction projects.

Q: How can additional information on the Indirect Source Review Program be found?

A: Additional information can be found by visiting the District's website at http://www.valleyair.org/ISR/ISRHome.htm or by calling the District at (559) 230-6000.

ISR Processing Flow Chart



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Letter 13: David Warner, Director of Permit Services and Arnaud Marjollet, Permit Services Manager, San Joaquin Valley Air Pollution Control District

13-1 Comment noted. As identified in the Table on page 7-7 of the Draft Environmental Impact Report, the Project will obtain applicable permits to construct and operated the Project. Furthermore, the Project applicants will coordinate with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to provide the information required under District Rule 9510, as applicable.

EAST BAY
MUNICIPAL UTILITY DISTRICT

June 16, 2010

Megan Smith
Project Manager
ICF International
630 K Street, Suite 400
Sacramento, CA 95814

Subject: Comments on Draft Environmental Impact Report
Delta Wetlands Place of Use

Dear Ms. Smith:

The East Bay Municipal Utility District (EBMUD) has reviewed the Draft Delta Wetlands Place of Use Environmental Impact Report (DEIR) dated April 2010. This Place of Use EIR analyzes potential environmental effects associated with the petitions to change water right Application Nos. 29062, 29066, 30268, and 30270 filed with the State Water Resources Control Board (State Water Board).

EBMUD wishes to reaffirm that it previously protested the applications and later entered into a September 13, 2000 Protest Dismissal Agreement (PDA) with Delta Wetlands Properties. A copy of that 2000 PDA was submitted to you with our July 31, 2009 joint East Bay Municipal Utility District-Contra Costa Water District-California Urban Water Agencies (EBMUD-CCWD-CUWA) comment letter. Pursuant to Sections 3 and 6 of the PDA, all terms and conditions of the Agreement remain in effect and, as noted in the DEIR, the terms, conditions and requirements of the Agreement continue to be part of the Project and remain binding on Delta Wetlands Properties as well as its successors in interest.

To gain better understanding of the analyses in the DEIR, EBMUD submits the following questions and comments:

FISHERIES

A) On p. 4.5-46, in the section on "Implementation of a Temperature Assessment Program," paragraphs (b) through (d) allow a weekly average temperature increase in the natural receiving water of the adjacent channel of only 1 to 4 degrees F from project discharges for export. High water temperature differentials generally pose potential negative impacts to fish survival and migration. Paragraph (a) is unclear and appears to contradict the rest of the text by allowing a higher temperature differential beyond 4 degrees F. The text prohibits discharges of reservoir water for export if the weekly average temperature differential between that discharge and the adjacent channel temperature is greater than or equal to 20 degrees F. What is the intent of this measure?

14-1

375 ELEVENTH STREET • OAKLAND • CA 94607-4240 • TOLL FREE 1-866-40-EBMUD

B) On p. 4.5-60, in the section on "Methods for Assessing Through-Delta Migration Mortality of Juvenile Sacramento River and Mokelumne River Salmonids," the equation below implies that when a high percentage of Sacramento fish enters the central Delta, the percentage mortality of Mokelumne fish is lowered.

% mortality of Mokelumne fish = % mortality of Sacramento fish due to Project × (100/% of Sacramento fish entering the central Delta)

The DCC gates are assumed to be closed January through June which is when most of the Mokelumne smolts are migrating out. Does the equation imply that when the DCC gates are open, the survival of Mokelumne fish is better? We request an explanation of this text.

14-2

C) On p. 4.5-87, in the section on "Through-Delta Migration Mortality of Juvenile Sacramento River and Mokelumne River Salmonids," the following statements are made:

> The average percentage loss for fall-run Chinook salmon was 0.09% (range: 0.02% to 0.38%) and for steelhead the average loss was 0.41% (range: 0.00% to 1.32%).

How were these percentages computed? Do these percentages include indirect mortality associated with pumping at the project intakes? We request an explanation of factors included in these loss figures.

14-3

D) On p. 4.5-88, in Table 4.5-11 on "Average Annual Mortality Losses of Juvenile Sacramento River Salmonids Migrating through the Delta under Simulated Baseline and Project Conditions," the project percentage loss is low because the export diversion occurs from July through November after the peak of the smolt outmigration (based on data from Table 4.5-18). Diversion onto the islands occurs from December through March, which could be a significant period of steelhead smolt outmigration and salmon fry movement to rearing areas within the delta. Where are the estimates for the project percentage loss from this operation? Does the project percentage loss include indirect mortality due to predation losses near the project intakes?

14-4

LEVEE EROSION CONTROL

Re-operational changes to facilitate exports of water to identified places of use proposed since the PDA was entered into in 2000 could adversely impact the levees protecting the Mokelumne Aqueducts.

The timing of export releases from the Delta Wetlands Project, in connection with other Delta water operations, changes the operation's hydrodynamics and could concentrate flows in Old River or Middle River such that high flow velocities scour levees on Palm Tract, Orwood Tract, Woodward Island, Lower Jones Tract, and Upper Jones Tract, which protect the Mokelumne Aqueducts. Analyses of the potential for high flow velocities with scouring potential in these areas and mitigation measures should be

14-5

submitted to the Reservoir Island Design Review Board and Reservoir Island Monitoring & Action Board (MAB) for review under the terms in Attachment B of the 2000 PDA. 14-5 Cont

SEEPAGE MITIGATION

If seepage impacts to neighboring Delta islands occur, and after the Reservoir Island MAB requires implementing a mitigation effort for which the cost of the MAB recommended mitigation exceeds the dollars available in the Remedial Action Fund, what is the remedy for timely resolution of the matter for the neighboring Reclamation District(s) that are impacted? What is the remedy for timely resolution of the matter for impacts to EBMUD interests? 14-6

Please let me know should you have any questions about these comments. We appreciate the acknowledgment in this document that the project will operate in compliance with the CUWA, CCWD, and EBMUD settlement agreements.

Sincerely,

Lena L. Tam

Lena L. Tam
Manager of Water Resources Planning

LLT:JGT

cc: Peter Kiel, Ellison, Schneider & Harris
California Urban Water Agencies

Letter 14: Lena L. Tam, Manager of Water Resources Planning, East Bay Municipal Utility District

14-1 The Temperature Assessment Program and Project temperature discharge limits described on page 4.5-46 of the Draft Environmental Impact Report (DEIR) were derived from the terms in the State Water Resource Control Board's (SWRCB) Temperature Plan. Bullet a) states that the Project would not discharge reservoir water for export if the weekly average temperature differential between the discharge and the adjacent channel temperature is greater or equal to 20 degrees F. This 20 degree maximum places a maximum limit on the discharge temperature. The weekly limits require that mixing in the channel be sufficient to prevent the channel temperatures from being warmed as a result of reservoir discharge by more than the weekly temperature averages defined in bullet items b) through d).

14-2 The equation presented on page 4.5-60 of the DEIR was used to estimate the mortality for fall-run Chinook salmon and steelhead juveniles originating in the Mokelumne River. Mokelumne fish mortality was estimated by adjusting the calculated mortality of Sacramento fish due to Project operations to take into account the percent of Sacramento fish that entered the central Delta channels. Specifically, the equation adjusts for the fraction of the Sacramento River fish that entered the central Delta channels because not all Sacramento River fish migrate through the central Delta pathways. Some of the Sacramento River fish migrate down the Sacramento River, some go through the Delta Cross Channel (DCC), if open), and some go down Georgiana Slough. For example, for fall-run Chinook salmon in 1980 (see Table B-103 in Appendix B of DEIR, page B-128), the percent mortality of the Sacramento population attributable to the Project was 0.01 percent. However, only 19.6 percent of the population went through the central Delta.

However, Mokelumne River fish are assumed to all migrate through central Delta pathways; therefore, mortality is always higher because the fish that migrate through the central Delta pathways are assumed to have a higher mortality rate. It was assumed that this central Delta mortality is applicable to the entire population of Mokelumne River fish. The equation is only valid for estimating Mokelumne River fish mortality from already calculated Sacramento River fish mortality, and percent fish entering the central Delta and does not imply that survival of Mokelumne fish is better when the DCC gates are opened.

14-3 The factors included in the migration loss calculations are presented on pages 4.5-58 through 4.5-60 of the DEIR and on pages B-125 and B-126 of DEIR Appendix B. Main assumptions used include:

- Fish enter the Delta with the same monthly fraction of the population each year.
- Fish entering the Delta and migrating down the Sacramento River to Chipps Island survive at an assumed rate of 90 percent.
- Fish entering the Delta and migrating through the central Delta (having

entered via the DCC or Georgiana Slough) survive at a maximum rate of 45 percent at low exports. This maximum survival declines with increasing exports in a similar manner to the relationship established by Brandes and McLain (2001) for Georgiana Slough survival compared to the survival on the Sacramento River. The maximum survival of 45 percent was based on Brandes and McLain's finding that survival through the Delta via Georgiana Slough at low exports was about half of the survival down the Sacramento River (i.e., based on coded wire-tag studies).

- Indirect mortality associated with Project intakes was assumed to be 50 percent of the effect of Central Valley Project/State Water Project (CVP/SWP) exports because of the smaller screened Project diversions and because the Project diversions would be closer to the salmonids' migration path through the Delta and would be less likely to divert fish away from that path.

Once annual mortality values were calculated for Sacramento River fish, an equation was used to adjust the mortality estimate for Mokelumne River fish (see Response to Comment 14-2). Tables B-103 and B-107 in Appendix B of the DEIR show the annual totals for all years for Sacramento River Chinook salmon and steelhead, respectively, that were used to derive the Mokelumne fish values. The Mokelumne River fish impacts are greater than the Sacramento River fish impacts as a percentage of the population because all Mokelumne fish were assumed to enter the Central Delta with higher migration mortality (see Response to Comment 14-2). Only central Delta migration mortality was increased by CVP and SWP exports and by Project diversions and by Project exports. Project diversions and exports would increase mortality whenever fish are migrating in the months when the Project diversion or export occurs.

14-4 The calculations do include the percentage loss attributable to both Project diversions and Project exports. Project exports would increase the CVP and SWP exports and have both entrainment and migration mortality impacts, as described above and shown in Table 1. Project diversions were assumed to have less of an impact on fish than the existing CVP and SWP exports because of their location in the central Delta and because the intakes would have fish screens. Impacts from Project exports were generally small because fish densities are generally lower in the summer and fall. Predation losses near the Project intakes are included in these general estimates of entrainment and migration mortality for the Project diversions and increased exports.

14-5 An analysis of the potential for high flow velocities with scouring potential was evaluated in the 2001 Final Environmental Impact Report (2001 FEIR) in Chapter 3B Hydrodynamics. The average and maximum discharge (568 and 2,847 cubic feet per second (cfs), respectively) rates evaluated for the Project in the DEIR are less than what was evaluated in the 2001 FEIR and 2001 Final Environmental Impact Statement (2001 FEIS) (6,000 cfs). Both the 2001 FEIR and 2001 FEIS found that hydrodynamic effects on local channel velocities or stage were less than significant. Even with discharges of 6,000 cfs, the hydrodynamics in the Delta

channels surrounding the proposed Reservoir Islands were within the normal range of stage and velocities resulting from tidal and seasonal fluctuations.

14-6 The Project is responsible for the cost of all mitigation and remedial actions resulting from proposed Reservoir Island operations. Financial assurances in the form of the Seepage and Monitoring Fund, Drawdown Fund, Remedial Action Fund, and Insurance are required under the terms of the Protest Dismissal Agreement (PDA) between East Bay Municipal Utiliy District (EBMUD) and Delta Wetlands Properties, Attachment C. The fund dollar amounts specified in the EBMUD PDA are the initial deposits estimated to cover the first year of Project diversions to storage. The fund amounts for each subsequent year will be determined by the Monitoring and Action Board (MAB), provided that the annual fund amounts cannot be less than the prior year's actual fund withdrawals. Each fund shall be replenished prior to that year's diversions to storage. Furthermore, as described in more detail in Section IV of Attachment C, the Diversion Suspension Limits require prompt remedial action by the Project if certain groundwater elevations are exceeded, including to suspend diversion of water and to lower reservoir pool (water storage) elevations. By restricting the diversion and export water, the financial assurances and diversion suspension limits will ensure that Project-related seepage impacts are remedied in a timely manner.

Buena Vista Water Storage District
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Buttonwillow, California 93206
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(661) 764-5510
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June 23, 2010

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

Re: Draft Delta Wetlands Place of Use EIR

Dear Ms. Smith:

Upon request, we have received the April 2010 Executive Summary for the above mentioned project. Buena Vista Water Storage District (Buena Vista) appreciates the opportunity to review the document, and our comments are as follows:

1. Purpose Supported We support the purpose of the Project to ". . . increase the availabitly of high-quality water…for export …for south-of-Delta users." Recognizing that the recent restrictions on the State Water Project will have a significant water supply impact on the Semitropic Water Storage District's (SWSD) ability to offset groundwater pumping, we applaud this attempt to access supplies via creative management programs from neighboring agencies. Buena Vista, having boundaries adjacent to SWSD, would appreciate a quantitative estimate of how much water additional supply this project is expected to yield to SWSD. 15-1 15-2

2. Lack of Pre-Consultation The document fails to identify other adjoining entities, projects, and/or pumpers of the Semitropic Groundwater Storage Bank that could be affected by the proposed project. In order to identify and evaluate cumulative impacts Semitropic should have at least identified and more than likely consulted with others, including Buena Vista, to adequately evaluate impacts in the initial study. 15-3

3. Project Description Because of the vagueness of the project description, we are unable to determine the true scope of the project, and are therefore unable to evaluate the magnitude of proposed water recharge and recovery operations that could take place, and how such operations might affect Buena Vista operations. 15-4

4. MOU Regarding Operations and Monitoring As written, we are unable to determine how this proposed project relates with the September 14, 1994 MOU Regarding Operation and Monitoring of the Semitropic Water Storage District Banking Project. Since this project purports to include recharge and recovery operations, will this project's impacts be evaluated, precluded, and/or mitigated per that document? Typically, banking projects in Kern County have provided for an MOU in which the banking participants and all adjoining entities cooperatively monitor and assess recharge, recovery, and related activities. Will this banking project use the same MOU process? 15-5

Thank you for considering our comments and questions.

Sincerely,

Dan Bartel
Engineer-Manager

cc: Robert Hartsock, McMurtrey, Hartsock & Worth
Curtis Creel, KCWA

Letter 15: Dan Bartel, Engineer-Manager, Buena Vista Water Storage District

15-1 Comment noted.

15-2 As described in Chapter 1 of the Draft Environmental Impact Report (DEIR) on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The Project will not result in a change of capacity or operation of the Semitropic Groundwater Storage Bank. Estimated storage of Project water in and withdrawal of Project water from groundwater banks are presented in Chapter 3 and Tables 3-16(c) and 3-17 of the DEIR. On average, 51,000 acre-feet per year of Project water will be delivered to groundwater storage (combined for Semitropic Groundwater Storage Bank and Antelope Valley Water Bank) (see Table 3-17(A)) for subsequent withdrawal and delivery to the places of use. Estimated Project water deliveries to each place of use (accounting for both direct delivery and withdrawal from groundwater storage) are summarized in Table 2-1. The DEIR estimates that the maximum annual delivery of Project water to Semitropic for irrigation purposes would be 45,000 acre-feet.

15-3 As described in Chapter 1 of the DEIR on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The facilities, operations, and environmental effects of the groundwater banking components are separately described and analyzed in the respective environmental impact reports for those projects (see page 1-20). The original Semitropic Groundwater Storage Bank and Semitropic Stored Water Recovery Unit are approved and currently in operation. Implementation of the Project will not alter current approved operations or expand the capacity of those groundwater storage banks. No new construction would be required to convey Project water to the groundwater banks for recharge or for pumping and delivery from the groundwater banks (page 2-6 of the DEIR).

Semitropic did not consult with entities in the vicinity of the Semitropic Groundwater Bank independent of the CEQA process for this Project because the Project will not alter current approved operations or expand the capacity of the original Semitropic Groundwater Storage Bank and Semitropic Stored Water Recovery Unit. Semitropic would be pleased to confer with and provide additional information to Buena Vista Water Storage District about this Project.

15-4 See Responses to Comments 15-2 and 15-3.

15-5 See Response to Comment 15-3.

50.3 Environmental

June 23, 2010

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

Re: Draft Delta Wetlands Place of Use Environmental Impact Report

Dear Ms. Smith:

The Kern County Water Agency (Agency) would like to thank you for the opportunity to review and comment on the Delta Wetlands (Project) Place of Use Draft Environmental Impact Report (DEIR).

The Agency was created by the California State Legislature in 1961 to contract with the California Department of Water Resources for State Water Project (SWP) water. The Agency has contracts with water districts throughout Kern County to deliver SWP water. The Agency also manages and/or is a participant in multiple groundwater banking projects, including the Kern Water Bank, Pioneer Property and Berrenda Mesa banking projects. Therefore, the Agency is uniquely qualified to provide comments on the Project.

Comment 1: The DIER incorrectly refers to the Agency as the "Kern County Water Authority" on page 3-19.

The DEIR incorrectly refers to the Agency as the "Kern County Water Authority" on page 3-19. Please correct the statement to read the "Kern County Water Agency". 16-1

Comment 2: The DEIR mischaracterizes the relationship between the Agency and Semitropic Water Storage District (Semitropic).

The DEIR describes the Agency as Semitropic's "sister agency" on pages ES-6 and 1-19. This is a mischaracterization of the Agency's relationship to Semitropic. The Agency requests, in each instance, that the sentence be corrected to read "Through appropriate arrangements with the Kern County Water Agency, Semitropic will …". 16-2

(661) 634-1400

Mailing Address
P.O. Box 58
Bakersfield, CA 93302-0058

Street Address
3200 Rio Mirada Dr.
Bakersfield, CA 93308

Comment 3: The DEIR does not consistently include or depict the same the places of use.

The DEIR includes multiple lists and figures of the potential places throughout the document. However, the places of use listed are inconsistent with one another. In particular, on page 3-28, the listed places of use include Rosedale-Rio Bravo Water Storage District (Rosedale). Rosedale is not listed in any other section though, nor is it included on any of the place of use maps (Figures 1-2 through 1-6). Additionally, the Antelope Valley Groundwater Bank (AVGB) is described as a potential place of use. However, AVGB is not depicted on any the place of use maps (Figures 1-2 through 1-6). Therefore, the Agency recommends that the document be amended to consistently include all places of use within the text and figures. 16-3

Comment 4: The DEIR should list the Agency's service area as a place of use.

The places of use include Semitropic, Rosedale and the Semitropic Groundwater Storage Bank, among others. Rosedale, Semitropic and their respective banking projects have numerous partners within Kern County and contractual obligations to adjoining entities. Additionally, Rosedale and Semitropic routinely enter into exchange agreements with other water districts within Kern County for single or multi-year exchanges. However, the places of use descriptions are limited to the district boundaries of Rosedale and Semitropic. As a result, the Agency believes the descriptions of the places of use within Kern County are not defined broadly enough. Therefore, we recommend the place of use be amended to include the Agency's entire service area. 16-4

Comment 5: Specific agreements must be in place before Project water can be delivered to Kern County.

In order to move Project water into Kern County for use within Rosedale, Semitropic or their respective banking facilities, both Semitropic and Rosedale will be required to enter into agreements with the Agency. Additionally, the Agency will have to enter into an Article 55 agreement with the California Department of Water Resources (DWR). All agreements must be in place before Project water can be delivered to Kern County. 16-5

Comment 6: The Agency will only facilitate the movement of Project water if it does not limit or somehow impair the ability of the Agency's remaining Member Units to move water into and/or within Kern County.

The Agency has long-term contracts with several local water districts, referred to as Member Units, to provide a water supply. The ability of the Project proponents, and more specifically Semitropic and Rosedale, to move Project water into and within Kern County will be limited to available capacity. Additionally, the Agency will not facilitate the movement of Project water if it will limit or impair the ability of the Agency's remaining Member Units to move water into and/or within Kern County. 16-6

Comment 7: The DWR and United States Bureau of Reclamation (USBR) must be included in any on-going and/or future re-consultations regarding the Project's operations criteria.

Throughout the DEIR are numerous references to future reconsultations with the California Department of Fish and Game and the United States Fish and Wildlife Service. Further, the DEIR implies that the operations criteria of the Project may be subject to change as a result of any reconsultations. To ensure that the Project does not adversely affect the operations of the State Water Project or Central Valley Project, representatives from DWR and USBR should be included in any and all reconsultation processes.

16-7

If you have any questions, please contact Curtis Creel of my staff at (661) 634-1400.

Sincerely,

James M. Beck
General Manager

Letter 16: James M. Beck, General Manager, Kern County Water Agency

16-1 Comment noted. The first sentence of the fourth paragraph on page 3-19 is revised to read as follows:

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

16-2 Comment noted. The second sentence of the last paragraph on page ES-6 and the second sentence of the first paragraph on page 1-9 are revised to read as follows:

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

16-3 The places of use evaluated in this Draft Environmental Impact Report (DEIR) are identified in Chapter 2 in Table 2-1 on page 2-3 and are described on pages 2-3 through 2-5. They are also shown in Figures 1-3 through 1-6 in Chapter 1 Introduction.

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

The Antelope Valley Water Bank is a place of underground storage, but it is not a place of use.

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

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

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

16-4 See Response to Comment 16-3. The Project will provide water to the specified places of use only.

16-5 A combination of conveyance, banking "turn-in" and other agreements with the California Department of Water Resources (DWR), Kern County Water Agency, Semitropic, Metropolitan and other agencies may be required to convey Project water through State Water Project (SWP) facilities and to store and recover Project water from groundwater banks. Semitropic and Metropolitan will utilize existing agreements to the extent practicable.

16-6 The comment is noted that the conveyance of Project water into and within the Kern County Water Agency service area will be limited to available capacity and that Kern County Water Agency will not facilitate the movement of Project water if it will limit or impair the ability of Kern County Water Agency's remaining Member Units to move water into and/or within the Kern County Water Agency service area. As described in Chapter 1 of the DEIR on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The facilities, operations, and environmental effects of the groundwater banking components are separately described and analyzed in the respective environmental impact reports for those projects (see page 1-20). The original Semitropic Groundwater Storage Bank and Semitropic Stored Water Recovery Unit are approved and currently in operation. Implementation of the Project will not alter current approved operations or expand the capacity of those groundwater storage banks. No new construction would be required to convey Project water to the groundwater banks for recharge or for pumping and delivery from the groundwater banks (page 2-6 of the DEIR).

16-7 Comment noted. The Project applicant will consult with DWR and United States Bureau of Reclamation (Reclamation) to ensure that the project does not adversely affect operations of the SWP and Central Valley Project (CVP). An operations agreement will be developed for the Project in consultation with DWR and Reclamation.

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

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June 25, 2010

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

Subject: CCWD Comments on Delta Wetlands Project Draft Place of Use EIR

Dear Ms. Smith:

Contra Costa Water District (CCWD) appreciates this opportunity to comment on the Delta Wetlands Project (DWP) Draft Place of Use Environmental Impact Report (DEIR).

DWP has made the commitment to operate in accordance with the terms of the October 2000 Protest Dismissal Agreements (PDAs) with CCWD and with the California Urban Water Agencies (CUWA), both in conversation with us and in the petitions for change on the DWP water rights applications that were filed with the State Water Resources Control Board on March 18, 2009. These commitments apply to the actual operations of the DWP, which may differ from the operations described in the DEIR since the modeling performed for the DEIR does not explicitly include the PDA terms.

CCWD requests that the DEIR be modified to include a strong statement of Delta Wetlands' commitment to honor the terms of its PDA with CCWD. The DEIR contains several statements regarding DWP's intention to operate in accordance with the terms of the CUWA PDA. The CUWA PDA includes a Water Quality Management Plan (WQMP), which is incorporated into CCWD's PDA. However, the CCWD PDA also includes a number of additional restrictions on DWP diversions to protect Delta water quality that are not a part of the WQMP. We were unable to find acknowledgement of these additional restrictions in the DEIR, and we request that they be listed explicitly in the Final Environmental Impact Report, together with the statement that the DWP will be operated in accordance with the terms of both the CCWD and CUWA PDAs. 17-1

CCWD is also concerned that the water quality modeling performed for the DEIR contains erroneous assumptions that may lead to an underestimate of the requirements for conformance with the CCWD PDA and thus to an overly optimistic estimate of the proposed project's performance. The attachment to this letter provides some examples.

If you would like to discuss these comments, please do not hesitate to call me at (925) 688-8083, or call Lucinda Shih at (925) 688-8168.

17-1 Cont

Sincerely,

Leah Orloff
Water Resources Manager

LO/LHS:wec

Attachment

cc: Dave Forkel, Delta Wetlands Project
Ernie Avila, CUWA
Melinda Terry, North Delta Water Agency

Delta Water Quality Data

Some discrepancies between the Delta Wetlands Project (DWP) Draft Place of Use Environmental Impact Report (DEIR) modeling and field observations or standard approaches to Delta modeling are documented here. The historical water quality data presented in the figures below are available to the public from the California Data Exchange Center maintained by the California Department of Water Resources (http://cdec.water.ca.gov).

- On page 4.2-36, the DEIR includes the assumption that a Delta outflow of 11,400 cfs is equivalent to X2 (the 2 parts per thousand isohaline) being at Chipps Island (75 km from the Golden Gate). While this outflow is one of the 1994 Bay-Delta Accord/D1641 "three ways to comply" with the X2 standards specified for the state and federal export projects, the DWP operational restrictions do not specify the same three ways to comply, and it is not always true that salinity at Chipps Island is below 2,640 uS/cm EC when outflow is 11,400 cfs or more. (See Figure 1.) X2 can be related to Delta outflow (for instance, using the well-established Kimmerer-Monismith equation), but antecedent outflow must also be included to yield accurate results. Terms 3a(1) and 3a(2) of the CCWD PDA require DWP diversions to be limited based on the actual position of X2 rather than an equivalent outflow.

- On page 4.2-30, the DEIR states that Jersey Point EC is "likely" to be less than 200 uS/cm when outflow is greater than 11,400 cfs. Field data collected over the past 10 years shows that this is the case less the a third of the time, and Jersey Point EC can be an order of magnitude greater even at twice the outflow. (See Figure 2.) Analysis of potential impacts of DWP diversions on Delta water quality standards at Jersey Point based on this assumption would yield misleading conclusions.

- Calculated chloride concentrations at Rock Slough Intake are unrealistically low. As presented in Table 4.2-6 (which is mislabeled in the body of the table as "Jersey Point EC"), the median value for half the year is less than 20 mg/L. In reality, chlorides at Rock Slough are very rarely that low; historical records from 1976-1991 show that Rock Slough chlorides are less than 20 mg/L less than 5% of the time. (See Figure 3.) Term 3c of the CCWD PDA restricts DWP diversions from causing an increase of more than 10 mg/L chloride at any CCWD intake; it is difficult to verify that this condition is being met, since the DEIR water quality model is miscalibrated.

- On page 3-27 The DEIR states that a 1,000 cfs release from DWP reservoir island storage will increase Delta outflow such that salinity at Rock Slough PP1 will decrease by 100 mg/L chlorides if Rock Slough chlorides are 250 mg/L, and by 50 mg/L if Rock Slough chlorides are 150 mg/L. This claim incorporates the non-linear relationship between Delta outflow and salinity, but it neglects the importance of antecedent outflow conditions on Delta salinity. Because of the "memory" of Delta salinity for antecedent flow conditions, it is an over-simplification to specify the magnitude of the salinity change caused by an increase in outflow as a one-to-one relationship. There is also a lag between an increase in outflow and the Delta salinity response that should be discussed in the DEIR. The DEIR modeling would be

improved if it were to incorporate a more realistic relationship between Delta outflow and salinity. The G-Model is one of the simpler commonly used models employed to estimate Delta salinity which accounts for antecedent conditions.

Figure 1.

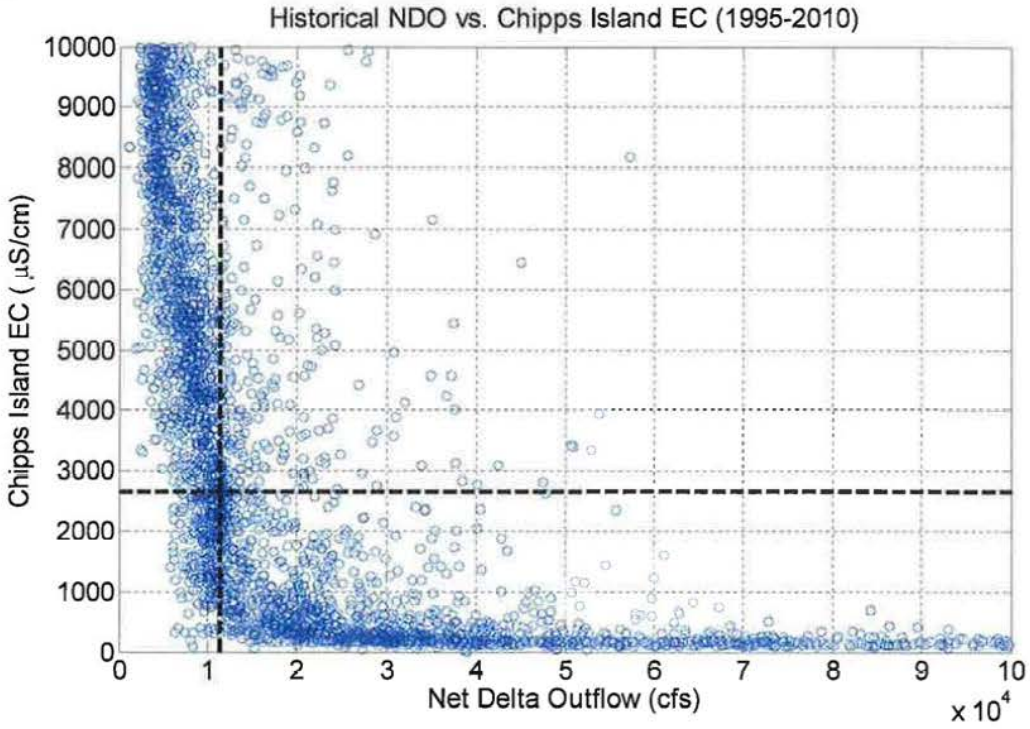


Figure 2.a.

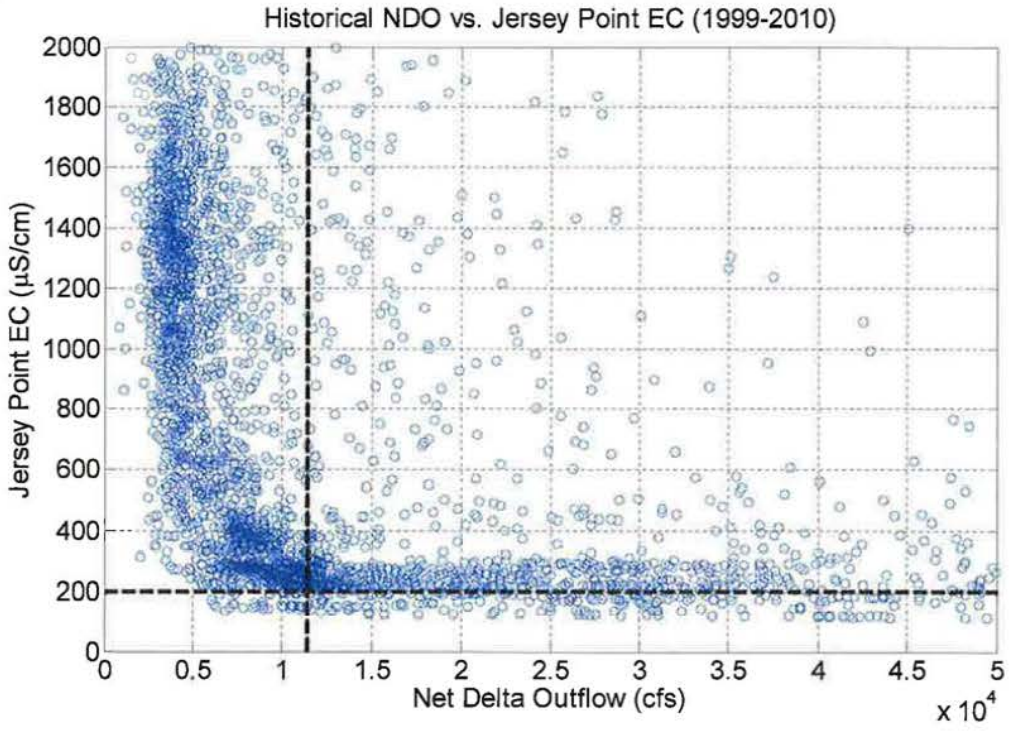


Figure 2.b.

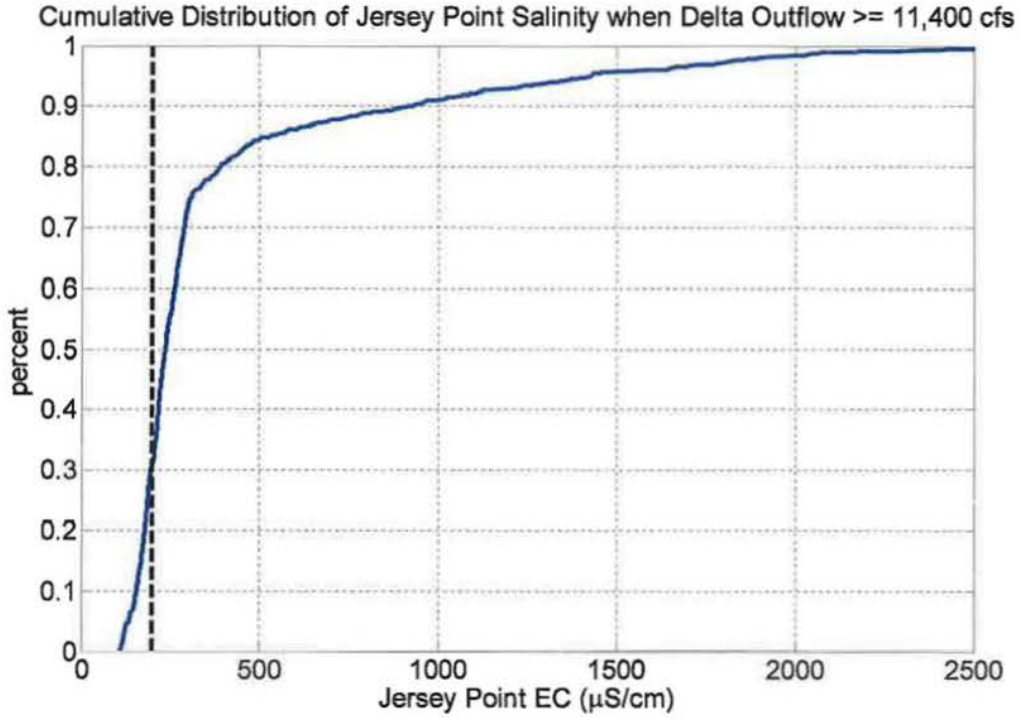
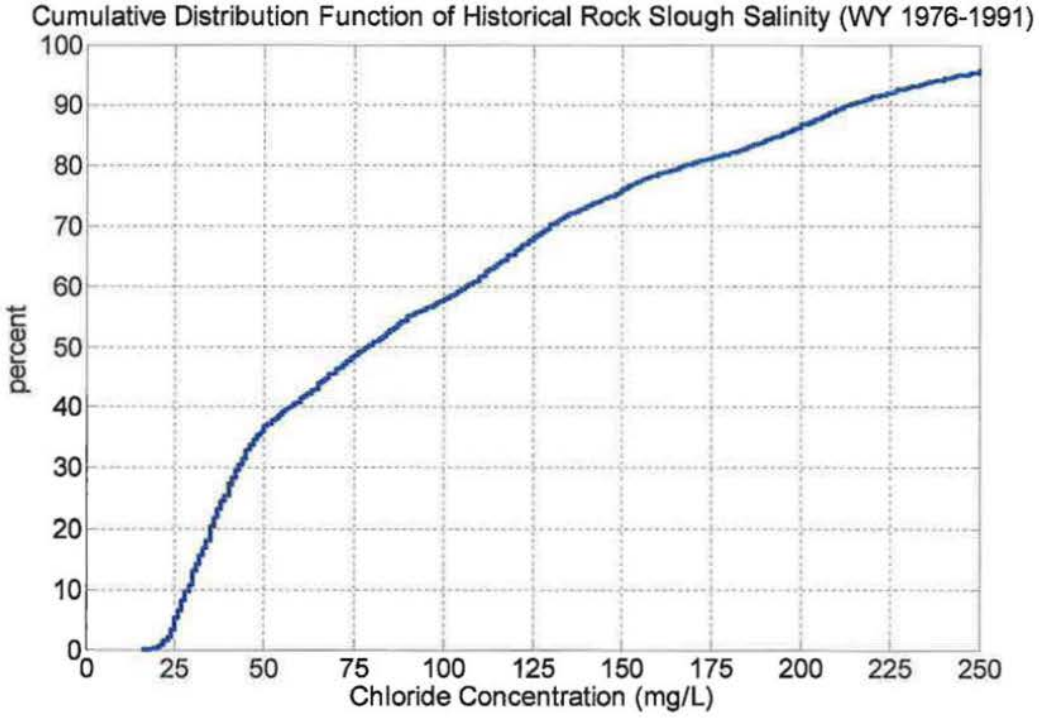


Figure 3.



Letter 17: Leah Orloff, Water Resources Manager, Contra Costa Water District

17-1 The Project will operate in accordance with the terms and conditions set forth by the 2000 Agreement to Resolve Certain Delta Wetlands Permit Issues (Protest Dismissal Agreement) between Contra Costa Water District (CCWD) and Delta Wetlands Properties. All CCWD operating conditions are included in either the Final Operating Criteria (FOC) or the Water Quality Management Plan (WQMP). Some terms are also satisfied by the new season of diversion and minimum outflow requirement. X2 conditions are fully satisfied by the minimum outflow requirement of 11,400 cubic feet per second (cfs) which maintains X2 beyond Chipps Islands (75 kilometers [km]). Maximum outflow percentages are included in the FOC measures. Salinity protections are included in the WQMP. Daily constraints are approximated by monthly averages. While not every term and condition is explicitly included in the operations modeling, the effort is an accurate representation of the terms and conditions set forth in the protest dismissal agreements and an adequate representation of the environmental impacts.

Attachment – 1st Bullet: Comment noted. The Protest Dismissal Agreement includes diversion restrictions under Term 3.a that are based on actual position of X2 rather than equivalent flow. Daily Project operations will comply with the requirements of Term 3.a to address CCWD water quality concerns. The Draft Environmental Impact Report (DEIR) used equivalent flows and the Kimmerer-Monismith equation as a methodology to estimate changes in X2 associated with Project operations.

Attachment – 2nd Bullet: The strong relationship between Delta outflow and Jersey Point salinity support the modeling assumptions included in the In-Delta Storage Model (IDSM) and the conclusions presented in the DEIR. As evidenced by Figure 4.2-7c of the DEIR and Figure 2.a of CCWD's comment letter, Jersey Point electrical conductivity (EC) is very low at Delta outflows in excess of 11,400 cfs. In addition, Project diversions would occur only in the months of December to March when there are no established salinity objectives for Jersey Point.

Attachment – 3rd Bullet: Comment noted. Table 4.2-6 was mislabeled. The Rock Slough chloride concentrations in the DEIR were estimated in the IDSM utilizing the CCWD G-model equation. Salinity changes were minor and never approached the 10 mg/L constraint included in Term 3.c of the protest dismissal agreement. Daily Project operations will fully comply the requirements of Term 3.c to address CCWD water quality concerns.

Attachment – 4th Bullet: Comment noted. The improvements in Rock Slough chloride concentrations described on page 3-27 oversimplified the relationship between outflow and Rock Slough salinity. The analysis in Chapter 4.2 did incorporate the CCWD G-model equation, including antecedent flow conditions and effective Delta outflow. The changes in Rock Slough chloride concentrations are presented in Table 4.2-6.

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June 25, 2010

Megan Smith, Esq.
ICF Jones & Stokes
630 K Street, Suite 4000
Sacramento, CA 95814

RE: Draft Delta Wetlands Project Place of Use EIR

Dear Ms Smith:

Thank you for the opportunity to comment on the Draft Delta Wetlands Project Place of Use EIR (the "DEIR"). I am writing to you on behalf of Ironhouse Sanitary District (ISD) in my capacity as its General Manager. ISD owns virtually all of Jersey Island which is located to the southwest and within a mile of Webb Tract, one of the two proposed "reservoir islands" for the Delta Wetlands Project. ISD commented on the two prior Delta Wetlands Project EIRS/S published in 1995 and 2000 with regard to the impacts of the Project on Jersey Island and on ISD's operations on Jersey Island. Among these impacts are: (a) what the prior EIRs referred to as the "Potential for Seepage from Reservoir Islands to Adjacent Islands" and (b) vehicle traffic on Jersey Island enroute to the proposed recreation facilities on Webb Tract.

Comment #1: Please provide an explanation of why piezometers and background piezometers are not being proposed for installation on Jersey Island as part of the Seepage Monitoring and Control System.

ISD applies treated wastewater to portions of Jersey Island. Any increase in the height of the water table on Jersey Island due to seepage from the flooding of Webb Tract would interfere with the treatment process. On Bethel Island and Hotchkiss Tract, ISD's sewer system piping is subject to groundwater infiltration which, if increased, will adversely impact the system pumping, conveyance and treatment capacities. Seepage from Webb Tract to Bethel Island and Hotchkiss Tract would exacerbate this infiltration problem. This is a critical impact which could place the District in a position of non-compliance with its regulatory requirements.

18-1

The DEIR describes the Seepage Monitoring and Control System at pages 2-19 through 2- 20, and references a detailed description of this system in the 2000 RDEIR/EIS, Appendix H. Appendix H at page 2-19 describes the Seepage Monitoring System and the proposed system of monitoring wells and background wells which is shown in Figure 2.4.1. Figure 2.4.1 does not show the installation of any piezometers or background piezometers on Jersey Island, although they are shown on Bethel Island. Please provide an explanation of why piezometers and background piezometers are not being proposed for installation on Jersey Island as part of the Seepage Monitoring and Control System. 18-1 Cont

Comment #2: On page 4.10-11 of the DEIR it is stated: "In the 1980s, Contra Costa County Department of Public Works abandoned maintenance on the levee portion of the [Jersey Island] road." This statement is incorrect. Contra Costa County does maintain the road on the levee portion of Jersey Island Road. In 2006 and 2007 the County chip sealed the levee portion of Jersey Island Road and has since maintained it annually. 18-2

Comment #3: Because the vehicle trips by members of the public seeking access to the recreation facilities proposed on Webb Tract would have an adverse impact on ISD's wastewater treatment facilities, and its other significant operations on Jersey Island, and because the increased vehicle trips by members of the public will have an adverse impact on the wear and tear of the levee road and the levee itself, ISD demands that these facilities unequivocally be eliminated from the Project and that their elimination in perpetuity be assured by making their elimination a recorded condition of Project approval. 18-3

Chapter 2 Project Description and Alternatives contains Figure 2-2 Proposed Project Facilities on Webb Tract, which along with Bacon Island is one of the two proposed Reservoir Islands. (Note: Figure 2-2 is the second unnumbered page following numbered page 2-8.) Figure 2-2 shows the location of 11 "Conceptual recreation facilit[ies]" on Webb Tract. 18-4

Section 4.10 of the DEIR analyzes, among other subjects, the vehicular traffic impacts of the Project, including vehicle traffic travelling to and from these recreation facilities. Table 4.10-4 "Daily Vehicle Trip Generation from Project 18-5

Operation and Maintenance" is found at page 4.10-22. Table 4.10-4 shows that maximum daily recreation-related vehicle trips for Webb Tract would be 521 trips.

As you know, Jersey Island is located to the southwest and within one mile of Webb Tract, which is proposed as one of two "reservoir islands" for the Delta Wetlands Project. As noted at page 4.10-11 of the DEIR, "No roads provide access to Webb Tract." The exclusive means of vehicular access from the mainland to Webb Tract is via Jersey Island Road. Beginning at its intersection with East Cypress Road, Jersey Island Road continues north until it crosses over the Jersey Island Bridge onto Jersey Island.

Once on Jersey Island, Jersey Island Road continues in a northwesterly direction until it terminates in the vicinity of ISD's Jersey Island Headquarters near the north shore of Jersey Island. Approximately midway between the Jersey Island Bridge and ISD's Jersey Island Headquarters, Jersey Island Road intersects with the Ferry Road. From this intersection, the Ferry Road runs in a northeasterly direction until it reaches the levee, and then it runs along the crown of the levee until it terminates at the Delta Ferry Authority ferry slip. The total distance from the intersection of East Cypress Road and Jersey Island Road to the ferry slip is 6.5 miles.

18-5
Cont

All of the maximum daily 521 recreation-related vehicle trips to Webb Tract must use Jersey Island Road and the Ferry Road to access Webb Tract. For reasons stated in following paragraphs, ISD strongly and unequivocally supports the elimination of all recreation facilities on Webb Tract, as is stated at page 2-11 of the DEIR:

> This 2010 Place of Use EIR proposes **to eliminate the recreation facilities on the Reservoir Islands** as mitigation discussed in Section 4.2, Water Quality; Section 4.4, Utilities; Section 4.5, Fishery Resources; Section 4.9, Recreation; Section 4.10, Traffic and Navigation; and Section 4.13, Air Quality. (Emphasis added.)

However, at page 4.10-19 the DEIR it is stated:

> The Project applicant removed construction of recreation facilities from its CWA permit applications, and the Corps will not include the constriction of such facilities in permits issued for the Project at this time. **However, it is anticipated that the Project applicant would subsequently apply for CWA and Harbors and River Act permits for some or all of these recreation facilities.** (Emphasis added.)

Recreation-related vehicle trips ("Recreation Trips") by members of the public seeking access to the recreation facilities proposed on Webb Tract would have an adverse impact on the ISD wastewater treatment facilities, ISD cattle operations, County levee road maintenance and RD 830 levee maintenance located on Jersey Island. These facilities include but are not limited to: (a) approximately 450 acres of cultivated fields to which ISD applies treated wastewater as an integral part of the wastewater treatment process, (b) a cattle herd of approximately 2,000 head with an estimated value of $1,900,000 which consume much of the field crops produced by the treatment process, as well as the vegetation on the balance of the island, (c) approximately 30 pieces of harvesting and other heavy equipment, with an estimated value of $1,300,000 used by ISD in the daily operation of (a) and (b), and (d) approximately 3.3 miles of Delta levee and levee road along the Ferry Road access. Based on its experience as the owner of Jersey Island since 1993, ISD believes it is reasonable to anticipate that some members of the public traveling through Jersey Island enroute to the recreational facilities on Webb Tract may unfortunately be attracted to and may potentially vandalize these ISD facilities and the RD 830 levee along the Ferry Road on Jersey Island. ISD does not have the personnel resources required to effectively monitor ISD facilities in the manner necessary to prevent these activities.

18-5 Cont

In addition, ISD currently experiences illegal dumping of household and commercial waste materials on Jersey Island. It is reasonable to anticipate that the increased exposure of Jersey Island to the public occasioned by these Recreation Trips would result in an increase in illegal dumping of Jersey Island.

In the interest of public safety for the foregoing reasons, ISD respectfully demands that all recreational facilities on Webb Tract be unequivocally eliminated from the Project and that their elimination in perpetuity be assured by making elimination a recorded condition of Project approval.

Thank you for your attention to this letter, and please do not hesitate to contact me if you have any questions. I look forward to receiving the Responses to Comments on comments on the Delta Wetlands Project Draft EIR.

Sincerely,

Tom Williams,
General Manager, ISD

Cc: Board of Directors, ISD
Marc Haefke, RD 830 Trustee
Dennis Nunn, RD 830 Trustee
Jay Sheen, Milani and Associates
Kevin Tillis, Hultgren-Tillis Engineers

Letter 18: Tom Williams, General Manager, Ironhouse Sanitary District

18-1 Consistent with the Protest Dismissal Agreement between East Bay Municipal Utility District and Delta Wetlands Properties (EBMUD PDA), a monitoring well would be installed on Jersey Island. A background well could be installed on Jersey Island as part of the final seepage monitoring program, if requested as provided under the terms of the Seepage Control Plan required by the EBMUD PDA.

18-2 Comment noted that the County still maintains the levee portion of Jersey Island Road. Therefore, the last sentence of the second paragraph on page 4.10-11 of the Draft Environmental Impact Report (DEIR) is deleted as follows:

~~In the 1980s, Contra Costa County Department of Public Works abandoned maintenance on the levee portion of the road~~.

18-3 As discussed on page 2-11 of the DEIR, the 2001 Final Environmental Impact Report identified up to 11 recreational facilities on each of the two Reservoir Islands (Bacon Island and Webb Tract). Mitigation measures are proposed for the Project that would reduce the number and size of recreational facilities (including removal of all 22 facilities proposed for construction from Bacon Island and Webb Tract, and reducing the number or size of proposed facilities on Bouldin Island and Holland Tract by 70 percent) in order to address associated water quality (Section 4.2), utilities (Section 4.4), fisheries (Section 4.5), recreation (Section 4.9), traffic and navigation (Section 4.10), and air quality (Section 4.13) impacts.

18-4 See Response to Comment 18-3. Mitigation measures are proposed for the Project that would eliminate the earlier proposed recreational facilities on Webb Tract. Because the recreational facilities are part of the Project that was evaluated in this DEIR, revisions to the figures are not required.

18-5 See Response to Comment 18-3.

Reclamation District 830
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June 25, 2010

Megan Smith, Esq.
ICF Jones & Stokes
630 K Street, Suite 4000
Sacramento, CA 95814

RE: Draft Delta Wetlands Project Place of Use EIR

Dear Ms Smith:

Thank you for the opportunity to comment on the Draft Delta Wetlands Project (the "Project") Place of Use EIR (the "DEIR"). I am writing to you on behalf of Reclamation District 830 (RD 830) in my capacity as President of its Board of Trustees. RD 830 is responsible for maintaining the reclamation works on Jersey Island, which is located to the southwest and within a mile of Webb Tract, one of the two proposed "reservoir islands" for the Delta Wetlands Project. Please allow me to offer the following comments which I believe will help guide the preparation of the Final EIR.

Comment #1: Please provide an explanation of why piezometers and background piezometers are not being proposed for installation on Jersey Island as part of the Seepage Monitoring and Control System.

As noted above, RD 830 is responsible for maintaining the reclamation works on Jersey Island, including the approximately sixteen mile levee which forms the perimeter of Jersey Island and the all-weather roadway which runs along its crown, as well as the ramps to access the levee and the levee toe-roads on Jersey Island. RD 830 is also responsible for maintaining the central drainage canal which runs parallel to and on the immediate east side of Jersey Island Road from the Jersey Island Bridge to the pumping station on the east side of ISD Headquarters at the north shore of Jersey Island. RD 830 is also responsible for maintaining the two lesser canals which run from Blind Point on the west and Jackass Point on the east to drain into the central canal. 19-1

In Chapter 2 Project Description and Alternatives at page 2-19, it is stated:

> Though the new reservoir levee design reduces the risk of through-levee seepage, the risk of under seepage to neighboring islands is still a concern. Deep sand aquifers underlie the Reservoir Islands and adjacent islands, as well as the channels and sloughs separating them. Storing water on the Reservoir Islands could increase the elevation of the groundwater surface and the hydraulic pressure on the aquifer, thereby inducing seepage through the sand aquifer onto the neighboring islands.

19-1 Cont

It goes without saying that the status and condition of the Jersey Island levee is of paramount and constant concern to RD 830. Any mechanism potentially available to monitor the condition of the levee and give early warning of problems is of great interest to the District. At pages 2-19 through 2- 20, the DEIR describes the Seepage Monitoring and Control System designed "to avoid seepage issues and provide early detection of seepage problems caused by the Project." This discussion references a detailed description of this system in the 2000 RDEIR/EIS, Appendix H.

Appendix H at page 2-19 describes the Seepage Monitoring System and the proposed system of monitoring wells and background wells which is shown in Figure 2.4.1. Figure 2.4.1 does not show the installation of any piezometers or background piezometers on Jersey Island, although seven are shown on Bethel Island. Please provide an explanation of why piezometers and background piezometers are not being proposed for installation on Jersey Island as part of the Seepage Monitoring and Control System. In particular, please address why they are not being proposed, given that their purpose is to provide early detection of seepage problems caused by the Project."

Comment #2: Please see Comment #3 in the DEIR Comment letter from Ironhouse Sanitary District. Recreation-related vehicle trips to access the recreation facilities proposed on Webb Tract would adversely impact on the reclamation works on Jersey Island which are operated and maintained by RD 830. RD 830 supports the position of ISD that recreational facilities on Webb Tract should unequivocally be eliminated from the Project and that

19-2

their elimination in perpetuity be assured by making their elimination a recorded condition of Project approval.

19-2 Cont

RD 830 is very concerned about the proposed increased vehicle trips on the levee road and the increased wear and tear on the levee and the levee road. In the past, RD 830 has experienced significant levee impacts due to vehicles accessing and driving up and down the levee side slopes, as well as significant trash dumping and other vandalism along the levee road. RD 830 worked with Ironhouse Sanitary District and Contra Costa County in relation to access along the Ferry Road to minimize impacts. However, RD 830 occasionally still sees trash dumping and damage to the levee due to vehicles leaving the paved levee road and driving down and up the levee side slope.

19-3

Comment #3: On page 4.10-11 of the DEIR it is stated: "In the 1980s, Contra Costa County Department of Public Works abandoned maintenance on the levee portion of the [Jersey Island] road." This statement is incorrect. Contra Costa County does maintain the road on the levee portion of Jersey Island Road. In 2006 and 2007 the County chip sealed the levee portion of Jersey Island Road and has since maintained it annually.

Thank you for your attention to this letter, and please do not hesitate to contact me if you have any questions. I look forward to receiving the Responses to Comments on comments on the Delta Wetlands Project Draft EIR.

Sincerely,

Tom Williams

Tom Williams, President
Board of Trustees, RD 830

Cc: Dennis Nunn, RD 830 Trustee
Marc Haefke, RD 830 Trustee
Board of Directors, ISD

Letter 19: Tom Williams, Board of Trustees, Reclamation District 830

19-1 Consistent with the Protest Dismissal Agreement between East Bay Municipal Utility District (EBMUD) and Delta Wetlands Properties (EBMUD PDA), a monitoring well would be installed on Jersey Island. A background well could be installed on Jersey Island as part of the final seepage monitoring program, if requested as provided under the terms of the Seepage Control Plan required by the EBMUD PDA.

19-2 As discussed on page 2-11 of the Draft Environmental Impact Report (DEIR), the 2001 Final Environmental Impact Report (FEIR) identified up to 11 recreational facilities on each of the two Reservoir Islands (Bacon Island and Webb Tract). Mitigation measures are proposed for the Project that would reduce the number and size of recreational facilities (including removal of all 22 facilities proposed for construction from Bacon Island and Webb Tract, and reducing the number or size of proposed facilities on Bouldin Island and Holland Tract by 70 percent) in order to address associated water quality (Section 4.2), utilities (Section 4.4), fisheries (Section 4.5), recreation (Section 4.9), traffic and navigation (Section 4.10), and air quality (Section 4.13) impacts.

19-3 Comment noted that the County still maintains the levee portion of Jersey Island Road. Therefore, the last sentence of the second paragraph on page 4.10-11 of the DEIR is deleted as follows:

~~In the 1980s, Contra Costa County Department of Public Works abandoned maintenance on the levee portion of the road~~.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
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June 28, 2010

Megan Smith
ICF International
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Sacramento, CA 95814

RE: **Comments on Draft Delta Wetlands Place of Use Environmental Impact Report**

Dear Ms. Smith:

Zone 7 of Alameda County Water Conservation and Flood Control District (Zone 7 Water Agency, or Zone 7) appreciates the opportunity to comment on the April 2010 Draft Delta Wetlands Place of Use Environmental Impact Report (DEIR). Zone 7 has tracked this project since its inception in 1987 and, as a member of the California Urban Water Agencies (CUWA) has actively participated in development of CUWA's comments on this DEIR and previous documents prepared for this project. Zone 7 supports the project and appreciates the DEIR's numerous references to the October 9, 2000, water rights protest dismissal agreement with CUWA and the frequent reassurances that the project will be operated in compliance with that settlement agreement. 20-1

Zone 7 supports the comments provided by CUWA and offers the following additional comments for your consideration. 20-2

Comment #1: Increased Taste and Odor Compounds is Inadequately Addressed
The DEIR inadequately addresses the potential of elevated levels of taste and odor (T&O) compounds in the State Water Project, and in particular, the South Bay Aqueduct (SBA), by proposing to store excess Delta water on Webb Tract and Bacon Island. The two most common T&O compounds monitored by water utilities are 2-methylisoborneol (MIB) and geosmin. Zone 7 has a Water Quality Management Program with goals of delivering treated water to our customers containing MIB concentrations less than 9 parts per trillion (ug/L) and geosmin concentrations less than 4 ppt. MIB/Geosmin concentrations in finished water greater than these thresholds have been shown to result in an increase in customer complaints and a reduced confidence of customers in the quality of our delivered water. In the case of the Jones Tract Levee breech in 2004, we were unable to provide adequate T&O treatment and had to make a press release to the public in our service area, which includes the cities of Livermore, Pleasanton, and Dublin. 20-3

Comment #2: Previous Experience Illustrates Potential T&O Impacts

The Jones Tract Levee breach, while unintentional, provides an example of how the Delta Wetland Project could impact tastes and odors of the delivered water. Even after actively working with the California Department of Water Resources (DWR) to assure that flood water would be released in only small amounts from the Jones Tract levee failure, MIB as high of 31 ug/L was detected at Del Valle Check 7 on the SBA, the closest sampling station to Zone 7's Del Valle and Patterson Pass Water Treatment Plants (DVWTP and PPWTP). Bench-top testing of the existing Powdered Activated Carbon (PAC) treatment at DVWTP and PPWTP suggests this method is only able to effectively treat levels of MIB up to 15 ug/L, meaning that existing treatment capabilities would be unable to address the high levels of contaminants and that, regardless of expense, customers would received water with detectable levels of taste and odor compounds.

20-4

Comment #3: The Proposed Project Could Increases Costs of Water Treatment and Operation.

During the Jones Tract Levee breach, MIB levels at Del Valle Check 7 exceeded 9 ppt for 95 days as compared to an average of 40 days in the prior years. Therefore, based on the Jones Tract Levee breech and review of existing data, potentially increased T&O compounds resulting from the proposed Delta Wetland Project, in the absence of any proactive management strategies, would definitely require implementation of ozonation at both WTPs with a probable capital cost about $33 million in 2009 dollars. This capital cost would place a substantial financial burden on this agency.

Furthermore, assuming approximately 70% removal of MIB at a maximum ozone dose of 3.0 mg/L to treat MIB, and a dose of 1.0 mg/L (to meet CT requirement) when no taste and odor compounds are present, the increased operation cost to Zone 7 would be $65,000 per year to treat water stored on Bacon Island and Webb Tract.

20-5

Comment #4: Algal outbreaks are not adequately addressed.

The possibility of algal toxin outbreaks are also not address in the DEIR. Some cyanobacteria, one of which is *Microcystis aeruginosa*, are capable of emitting potent toxins when cells die and release their contents. These toxins are produced by algae similar to MIB/geosmin producing algae, and blooms have been observed in Delta waters since 2000. It is reasonable to expect that toxin-producing cyanobacteria blooms will occur at times in the project's reservoir islands. Treatment of these algal toxins is similar to treatment of T&O-causing compounds (i.e., application of ozone or PAC), and can be expected to increase operating costs at our WTPs.

20-6

Comment #5: TOC/DOC will likely increase with this project.

TOC/DOC is expected to increase with this proposed project which will also impact the coagulation processes at Zone 7's existing plants.

20-7

Zone 7 appreciates the opportunity to provide comments on the DEIR. We strongly recommend that the DEIR be revised to include a discussion of how Delta Wetlands will manage T&O and algal toxin events on Bacon Island and Webb Tract, including detailing a monitoring plan and management strategies such as proposed algaecide treatment/s and discharge restrictions to avoid harming water agencies. The plan, licenses, and permits must be in place before water can be stored on the islands. 20-8

If you would like to discuss these comments, please feel free to contact Gurpal Deol at (925) 447-0533 or myself at (925) 454-5050.

Sincerely,

Kurt A. Arends
Assistance General Manager, Engineering

BK

cc: Jill Duerig, Zone 7 GM
Vince Wong, Zone 7 AGM of Operations
Gurpal Deol, Water Quality manager
Dave Forkel, Delta Wetlands Project
Ernie Avila, CUWA

Letter 20: Kurt A. Arends, Assistance General Manager, Engineering, Alameda County Flood Control and Water Conservation District, Zone 7

20-1 The comment is noted that Zone 7 supports the Project and the Draft Environmental Impact Report's (DEIR) frequent reassurances that the Project will be operated in compliance with the protest dismissal agreement.

20-2 Comment noted.

20-3 The comment states that the DEIR inadequately addresses the potential of elevated levels of taste and odor (T&O) compounds in the State Water Project (SWP), an in particular, the South Bay Aqueduct, by proposing to store excess Delta water on Webb Tract and Bacon Island.

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

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

The California Department of Water Resources (DWR) Division of O&M, Water Quality Section has analyzed samples from SWP facilities for T&O producing compounds, MIB and geosmin, since 2000. This monitoring provides a direct measurement of T&O potential in drinking water supplies. DWR O&M Division staff send out weekly email reports with the results from the previous week's monitoring to provide advanced notice of potential T&O problems to SWP Contractors. T&O issues are of greatest concern for Contra Costa Water District (CCWD) intakes and the South Bay Aqueduct, due to relatively short travel times (i.e., days) from the Delta to the treatment plants. No T&O incidents from MIB or geosmin have been reported from North Bay Aqueduct (NBA) contractors. The algal blooms responsible for T&O incidents occur in the Delta channels, in Clifton

Court Forebay (CCF) and the aqueducts and reservoirs of the SWP system. The rivers are not monitored for MIB and geosmin. Banks Pumping Plant and CCF are both monitored for MIB and geosmin.

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

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

MIB and geosmin are both measured at high concentrations in the East Branch of the aqueduct. The maximum concentrations recorded were 130 ng/L of MIB in September 2001 and 240 ng/L of geosmin in May 2003. DWR attributed the high levels of geosmin and moderate levels of MIB to benthic algae growing in the East Branch. Peaks of MIB in July 2004 and 2005 also appear to have been generated in the East Branch. Results of monitoring at the outlet to Silverwood Lake show that MIB and geosmin concentrations suggest the same general pattern as the aqueduct inflow location. These data indicate that the source of MIB and geosmin is the California Aqueduct rather than algal growth in Silverwood Lake. The Sanitary

Survey also presents extremely high concentrations of MIB and geosmin in Lake Perris. These measurements (much higher than upstream locations) suggest significant production of T&O compounds in Lake Perris. These high T&O compounds are of particular interest because Lake Perris is a major source for Metropolitan Water District drinking water, although water is typically not drawn from Lake Perris when T&O conditions are adverse.

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

This summary of SWP measurements of the major T&O compounds, geosmin and MIB, indicates that T&O are generally associated with blue-green benthic algae in the CCF, along the aqueduct, and in the terminal reservoirs. There is no definitive information to conclude that these T&O compounds originated from the temporary discharge of water from Jones Tract in July and August 2004. There is no evidence to suspect that a major source of T&O compounds will be created on the Project Reservoir Islands because annual sources of nutrients, including nitrates and phosphorus, on the Reservoir Islands would be less than under existing agricultural operations. As a result, discharges from the Reservoir Islands are not expected to contribute to an increase in Delta channel nutrient concentrations over that which currently exists.

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

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

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

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

In addition, The WQMP on page 5 states that "If Project operations threatened a drinking water quality protection principle at the water treatment plant without offsetting benefits and the treatment plant owner has not waived its right to protection, Project operations will be reduced, rescheduled or otherwise constrained as necessary to prevent the impact from occurring". An intent of this provision is to allow an urban water supplier to waive the treatment plant protections afforded by the WQMP if the value of the water outweighs the value of the WQMP protections (e.g., during severe drought conditions).

20-4 See Response to Comment 20-3.

20-5 See Response to Comment 20-3.

20-6 Some blue-green algae (cyanobacteria) are capable of emitting potent toxins (microcystins) when cells die and release their contents. *Microcystis aeruginosa* is a common bloom-forming blue-green algae, but not all strains of *Microcystis aeruginosa* produce microcystin toxins. Blooms of *Microcystis aeruginosa* have occurred in the Delta each year between 2001-2005, but there have been no documented cases of humans or animals affected by the blooms in the Delta. There are currently no regulatory limits for algal toxins in drinking water supplies; however, other water quality criteria (e.g. chlorophyll *a* or dissolved oxygen) would likely be triggered during algal blooms and, as stated in the comment, treatment would be similar to treatment for T&O compounds which are treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose). As described in Response to Comment 20-3, the WQMP, which is part of the Project requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

20-7 The amount of total organic carbon/ dissolved organic carbon (TOC/DOC) anticipated as a result of Project operation was determined to not be significant. As described in Impact WQ-6 of the DEIR, discharges from Project islands could have relatively high DOC concentration that could result in significantly increase DOC levels in Delta exports. However, as discussed on page 4.2-43, implementation of the WQMP Comprehensive Monitoring Program would ensure that Project releases would be monitored to minimize DOC levels and would not adversely affect urban intakes. As described in Response to Comment 20-3, the WQMP requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

20-8 Comment noted. See Responses to Comments 20-1 through 20-7. The Project will obtain all applicable permits and licenses, as appropriate.

ALAMEDA COUNTY WATER DISTRICT

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(510) 668-4200 • FAX (510) 770-1793 • www.acwd.org

June 28, 2010

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

Dear Ms. Smith:

Subject: Comments on Draft Delta Wetlands Place of Use Environmental Impact Report

Alameda County Water District (ACWD) appreciates the opportunity to comment on the Draft Delta Wetlands Place of Use Environmental Impact Report (DEIR). ACWD supplies water to a population of over 330,000 in the cities of Fremont, Newark and Union City and relies on purchases from the State Water Project (SWP) for approximately 40% of its supplies. ACWD's SWP supply is delivered by way of the South Bay Aqueduct (SBA). Water quality in the SWP is a high priority for ACWD, and we support the comments made by the California Urban Water Agencies (CUWA) in their June 25 comment letter on the DEIR. In addition, the comments below outline the key issues that ACWD believes still need to be addressed in a revised DEIR that is circulated for public review. 21-1 21-2

The DEIR does not address the impacts of island flooding on nutrient concentrations and related algal blooms. The revised DEIR must describe and evaluate the impacts of island flooding and releases on nutrient concentrations and the potential for project-derived nutrients to result in algal blooms when project water enters the SWP aqueducts and reservoirs, as noted by CUWA. Algal blooms in SWP facilities, and specifically in the SBA, have a direct and immediate impact on ACWD's treatment plants and can result in treatment challenges due to algal biomass and major taste and odor (T&O) issues for our customers. 21-3

The DEIR does not address the potential detrimental impact of algae-produced taste and odors (T&O). Algal blooms that produce T&O compounds, as described in the letter submitted by CUWA, have a significant impact on ACWD's treatment facilities. This is a particularly big issue for all of the SBA Contractors due to our close proximity to the SWP intakes. While one of ACWD's treatment plants uses ozone treatment and has the ability to handle T&O compounds, our Mission San Jose Water Treatment Plant (MSJWTP) does not have the ability to control T&O compounds from significant algal T&O events. Upgrading MSJWTP to ozone treatment would be costly. Further, use of increased ozone doses for dealing with T&O compounds 21-4

increases the potential for formation of regulated disinfection byproducts such as bromate, which already presents a challenge to control with existing water quality conditions. ACWD supports CUWA's request that additional analyses be included in a revised DEIR that address the potential T&O problems, frequencies and costs resulting from project implementation. 21-4 Cont

The DEIR does not address the potential detrimental impacts of algal toxins. ACWD concurs with CUWA that the impact of toxins related to project-related algal blooms be evaluated in the revised DEIR.

The revised DEIR should include a management plan for controlling algae that produce T&O compounds and algal toxins. ACWD concurs with CUWA that a monitoring and management plan should be included in the revised DEIR and that all necessary permits & licenses for implementing the plan must be in place before water is stored on the islands. 21-5

The DEIR does not address the production of TOC by algae. ACWD concurs with CUWA that this issue should be addressed in the revised DEIR.

The DEIR under-states the importance of source water TOC. ACWD concurs with CUWA on this issue and believes it must be addressed throughout the DEIR. ACWD disagrees with statements such as on page 4.2-10 that, "TOC concentrations and TOC removal is not as important for treatment plants using alternative disinfection technologies, such as ozone." Higher TOC concentrations require increased ozone dosages, which in our experience result in increased treatment costs and higher levels of bromate production in the presence of bromide, which is very challenging to control even under existing water quality conditions. Further, not all treatment plants have implemented ozone treatment, which is very costly. Treatment plants without ozone, such as our MSJWTP, could have difficulty meeting the total trihalomethane (TTHM) standard with increased source water TOC, in particular when the Stage 2 Disinfectants/Disinfection Byproducts (D/DBP) Rule becomes effective in 2012 and requires TTHM compliance at individual monitoring locations in the distribution system. 21-6

The DEIR incorrectly characterizes compliance requirements for the Total Trihalomethanes (TTHM) standard. Page 4.2-11 states that "...the [T]THM standard is applied to a moving annual average *based on quarterly or monthly samples at the treatment plants*." This statement is incorrect and should be corrected. The TTHM standard is currently applied based on a running annual average of quarterly samples in a utility's distribution system, not at the treatment plant. Further, the Stage 2 D/DBP rule that becomes effective in 2012 will require compliance on a running annual average basis at individual points within a utility's distribution system rather than on a system-wide basis. This application of the TTHM standard will be even more difficult to meet than the way the standard is currently applied, in particular if source water TOC increases. 21-7

ACWD appreciates the opportunity to provide comments on this DEIR. Given the specific issues noted above and the other potential impacts to drinking water agencies that were not addressed in the DEIR, as highlighted by CUWA and others, ACWD requests that a revised 21-8

DEIR be prepared and circulated for public review. Should you have any questions on our comments, please feel free to ACWD's Water Quality Manager, Doug Chun, at (510) 668-6510. 21-8 Cont

Sincerely,

Walter L. Wadlow
General Manager

lh
By email

Letter 21: Walter L. Wadlow, General Manager, Alameda County Water District

21-1 Comment noted.

21-2 The decision to certify the Environmental Impact Report (EIR) and approve the Project will be made by the decision-makers in consideration of the whole of the record, including the responses to comments. At that time the decision-makers will determine if the analysis contained in Chapter 4 of the Project Draft EIR (DEIR) adequately addresses the impacts of the Project as required by California Environmental Quality Act (CEQA). As presented in Responses to Comments 21-3 through 21-7, the analysis contained in Chapter 4 of the DEIR adequately addresses the impacts of the Project and no new or substantially more severe impacts would occur requiring recirculation (prior to certification).

21-3 Algal/bacteria blooms occur when the population of a species of algae increases exponentially to dominate a water body. The species dominance that occurs during a bloom is generally temporary, lasting for a period of days to weeks, before the algae population crashes, returning to pre-bloom levels. Blooms are believed to be the result of environmental conditions that temporarily favor a particular species. Factors that favor individual species may include relative availability of nitrogen and phosphorus, temperature, and light conditions. Algal population dynamics are highly complex, and generally not predictable from basic environmental measurements. Instead, the effects of algae blooms on taste and odor (T&O) compounds are monitored and used as early warning for the treatment plant operators, because T&O compounds are not removed in conventional water treatment processes, but can be treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose).

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

The California Department of Water Resources (DWR) Division of O&M, Water Quality Section has analyzed samples from SWP facilities for T&O producing compounds, MIB and geosmin, since 2000. This monitoring provides a direct measurement of T&O potential in drinking water supplies. DWR O&M Division staff send out weekly email reports with the results from the previous week's monitoring to provide advanced notice of potential T&O problems to SWP Contractors. T&O issues are of greatest concern for Contra Costa Water District (CCWD) intakes and the South Bay Aqueduct, due to relatively short travel times (i.e., days) from the Delta to the treatment plants. No T&O incidents from MIB or

geosmin have been reported from North Bay Aqueduct (NBA) contractors. The algal blooms responsible for T&O incidents occur in the Delta channels, in Clifton Court Forebay (CCF) and the aqueducts and reservoirs of the SWP system. The rivers are not monitored for MIB and geosmin. Banks Pumping Plant and CCF are both monitored for MIB and geosmin.

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

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inflow location. These data indicate that the source of MIB and geosmin is the California Aqueduct rather than algal growth in Silverwood Lake. The Sanitary Survey also presents extremely high concentrations of MIB and geosmin in Lake Perris. These measurements (much higher than upstream locations) suggest significant production of T&O compounds in Lake Perris. These high T&O compounds are of particular interest because Lake Perris is a major source for Metropolitan Water District drinking water, although water is typically not drawn from Lake Perris when T&O conditions are adverse.

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

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

In addition, The WQMP on page 5 states that "If Project operations threatened a drinking water quality protection principle at the water treatment plant without offsetting benefits and the treatment plant owner has not waived its right to protection, Project operations will be reduced, rescheduled or otherwise constrained as necessary to prevent the impact from occurring". An intent of this provision is to allow an urban water supplier to waive the treatment plant protections afforded by the WQMP if the value of the water outweighs the value of the WQMP protections (e.g., during severe drought conditions).

21-4 See Response to Comment 21-3.

21-5 Some blue-green algae (cyanobacteria) are capable of emitting potent toxins (microcystins) when cells die and release their contents. *Microcystis aeruginosa* is

a common bloom-forming blue-green algae, but not all strains of *Microcystis aeruginosa* produce microcystin toxins. Blooms of *Microcystis aeruginosa* have occurred in the Delta each year between 2001-2005, but there have been no documented cases of humans or animals affected by the blooms in the Delta. There are currently no regulatory limits for algal toxins in drinking water supplies; however, other water quality criteria (e.g. chlorophyll *a* or dissolved oxygen) would likely be triggered during algal blooms and, as stated in the comment, treatment would be similar to treatment for T&O compounds which are treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose). As described in Response to Comment 21-3, the WQMP, which is part of the Project requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

21-6 The amount of total organic carbon/dissolved organic carbon (TOC/DOC) anticipated as a result of Project operation was determined to not be significant. As described in Impact WQ-6 of the DEIR, discharges from Project islands could have relatively high DOC concentration that could result in significantly increase DOC levels in Delta exports. However, as discussed on page 4.2-43, implementation of the WQMP Comprehensive Monitoring Program would ensure that Project releases would be monitored to minimize DOC levels and would not adversely affect urban intakes. As described in Response to Comment 21-3, the WQMP requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

21-7 Comment noted. The text in the second paragraph on page 4.2-11 is revised to read as follows:

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

The comment notes that the Stage 2 D/DBP rule will become effective in 2012 and it will require compliance on a running annual average basis at individual points within a utility's distribution system rather on a system-wide basis. The Project will comply with applicable adopted rules and regulations. As described in Response to Comment 21-3, the WQMP (which is part of the Project) includes operations criteria for estimated effects at treatment plants and operations are not to cause modeled total trihalomethanes (THM) or bromate concentrations at any treatment plant to be greater than 80 percent of the established maximum contaminant level. As further discussed on page 4.2-35, the WQMP restrictions on DOC (which is the

largest component of TOC) and electrical conductivity should be adequate to protect against elevated disinfection byproducts (DBP) at the water treatment plans.

21-8 See Responses to Comments 21-1 through 21-7.

CALIFORNIA URBAN WATER AGENCIES

June 28, 2010

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

RE: **Comments on Draft Delta Wetlands Place of Use Environmental Impact Report**

Dear Ms. Smith:

California Urban Water Agencies (CUWA) appreciates the opportunity to comment on the Draft Delta Wetlands Place of Use Environmental Impact Report (DEIR). CUWA has tracked this project since 1987 and commented on previous documents prepared for this project. There are several key issues that have not been addressed in the DEIR and other issues that have not been adequately addressed in the DEIR. These issues should be addressed in a Revised DEIR that is circulated for public review. 22-1

Settlement Agreements and Water Quality Management Plan

CUWA and Delta Wetlands Properties signed a water rights protest dismissal agreement on October 9, 2000, with an included Water Quality Management Plan (WQMP). Contra Costa Water District (CCWD) and Delta Wetlands Properties signed a water rights protest dismissal agreement on October 9, 2000, which incorporated the CUWA WQMP by reference and added additional operating terms responsive to CCWD's concerns. East Bay Municipal Utility District (EBMUD) and Delta Wetlands Properties signed a water rights protest dismissal agreement on September 13, 2000. The State Water Resources Control Board's Decision 1643 includes terms and conditions specified by the WQMP and by CCWD's and EBMUD's protest dismissal agreements. 22-2

CUWA is pleased that the DEIR states in numerous places that the project will be operated in compliance with the CUWA, CCWD, and EBMUD settlement agreements; however, the terms of the CCWD settlement agreement, which contain additional restrictions on project diversions to protect Delta water quality that are not a part of the WQMP, were not explicitly acknowledged in the DEIR. CUWA is concerned that the DEIR did not model the impacts of the WQMP requirements on both project yield and water quality, as we requested in our letter of July 31, 2009. As a result, the DEIR may overestimate the project yield because it does not fully consider the constraints on project operation.

455 Capitol Mall, Suite 705, Sacramento, CA 95814 916.552.2929 FAX 916.552.2931

New Water Quality Information

When CUWA negotiated the WQMP with Delta Wetlands Properties in 2000, the primary water quality concerns were total organic carbon (TOC), bromide, total dissolved solids (TDS), and chloride. In the last ten years, additional water quality concerns have arisen. Nutrients have stimulated algal growth in reservoirs and aqueducts resulting in numerous water treatment challenges.

The DEIR Does Not Address the Impacts of Island Flooding on Nutrient Concentrations – The Department of Water Resources (DWR) monitored nutrient concentrations during the Jones Tract flooding event and found that nutrient concentrations on the islands were substantially higher than the nutrient concentrations in adjoining Delta channels.[1] Releases will be made from the reservoir islands during the summer months when there is tremendous potential for algal blooms to occur in aqueducts and reservoirs due to the warm water temperatures and abundant light. Growths of attached and planktonic algae and rooted vascular plants are sufficiently troublesome in the State Water Project (SWP) that chemical treatment and physical removal are periodically required. Copper sulfate is used to treat algal blooms in the SWP but, in addition to the expense associated with its use, undesirable consequences are possible. Treated algae can die in large numbers, causing taste and odor (T&O) spikes and clogging of treatment plant filters, which can substantially reduce plant production and create difficulties meeting customer demands. Copper in treatment plant solid waste can be classified as hazardous waste, greatly increasing the cost and difficulty of disposal. Excessive algal growth also results in daily fluctuations in pH, which can reduce the effectiveness of coagulants and other chemicals. The Revised DEIR must describe the impacts of island flooding on nutrient concentrations and the potential for project derived nutrients to result in algal blooms when project water enters SWP aqueducts and reservoirs and CCWD's Los Vaqueros Reservoir.

22-3

The DEIR Does Not Address the Potential Deleterious Impact of Algal-Produced Taste and Odors – Algae and certain bacteria produce chemical compounds that are difficult to remove in conventional water treatment processes and are capable of causing unpleasant tastes and odors in drinking water. T&O incidents in the SWP are commonly associated with geosmin and 2-methylisoborneol (MIB). The ability of individuals to detect these chemicals varies, with sensitive individuals detecting both compounds down to 1 or 2 ng/L. However, water purveyors receive numerous, strong complaints from the public once the concentration exceeds 10-12 ng/L.[2]

22-4

In August 2004 the prolific MIB-producing cyanobacterium, *Planktothrix perornata,* bloomed in Jones Tract, a Delta island that flooded in June of that year. This species of algae had previously

[1] California Department of Water Resources. 2009. Jones Tract Flood Water Quality Investigation. Division of Environmental Services, Municipal Water Quality Investigations Program.

[2] W Taylor, R Losee, M Torobin, G Izaguirre, D Sass, D Khiari, K Atasi. 2006. Early Warning and Management of Surface Water Taste-and-Odor Events. *AwwaRF Report 91102F*

been identified as a T&O problem species in Mississippi catfish ponds[3] but had not been seen in the SWP source waters before the Jones Tract incident.[4] During the *Planktothrix* bloom on Jones Tract, the concentrations of MIB exceeded 1,000 ng/L on both Upper and Lower Jones Tract. The peak MIB concentration at the Clifton Court Inlet Structure was 130 ng/L and the MIB concentration reached 31 ng/L at mile 16.38 of the South Bay Aqueduct (SBA), some 35 river and aqueduct miles from the Jones Tract discharge pumps. Alameda County Water District, Santa Clara Valley Water District, and Zone 7 Water Agency (the SBA Contractors) experienced considerable difficulty treating the water, incurred significant additional expense, and received numerous customer complaints as a result of the discharge of water from Jones Tract.

- All SBA Contractors incurred significant added treatment costs. Specifically, Santa Clara Valley Water District incurred substantial additional chemical costs by using powdered activated carbon (PAC) to reduce the level of MIB in treated water. PAC was added to the water for over three weeks (longer than any prior T&O event) and at higher doses than ever before needed. All SBA Contractors incurred additional costs for sludge disposal as a result of the additional chemicals required to manage the incident.

- All SBA Contractors were not able to completely eliminate MIB in treated water by the addition of PAC. PAC is generally not effective at eliminating tastes and odors in finished drinking water when MIB concentrations exceed 15 ng/L.

- All SBA Contractors received customer complaints. Santa Clara Valley Water District received complaints from its retail water providers, even after adding PAC. Zone 7 Water Agency issued a press release in response to the numerous customer concerns over the safety of the water.

- All SBA Contractors incurred additional costs to blend and switch to other water sources.

- All SBA Contractors devoted significant staff time throughout the incident to sample and monitor water quality, adjust treatment processes, communicate with retail water providers and customers, and work with DWR to adjust the blend of water from the Delta and Lake Del Valle.

Following the discharge of water from Jones Tract, *Planktothrix* spread throughout the SWP and connected water bodies. As a result of the seeding of the SWP with *Planktothrix* by the flooding of Jones Tract, Metropolitan Water District of Southern California experiences annual T&O

22-4
Cont

[3] Martin, John F., G. Izaguirre, and P. Waterstrat. 1991. A planktonic Oscillatoria species from Mississippi catfish ponds that produces the off-flavor compound 2-methylisoborneol. Water Research 25, 1447-1451.

[4] Izaguirre, G. and W. D. Taylor. 2007. *Planktothrix*, a New Source of MIB in Drinking Water. Presented at California Lake Management Society. Clear Lake, California.

episodes in Lake Skinner. These algae have produced T&O events requiring treatment as far south as Lake Dixon, City of Escondido, in San Diego County.[5]

Conditions on the project's reservoir islands will be ideal for growing algae because of the high nutrient content and relatively shallow water depth. Production of blooms will be enhanced because of the residence time of water on the islands relative to the Delta channels. The prolific cyanobacteria blooms during the Jones Tract flooding[6] and the increasing occurrence of cyanobacteria in the Delta[7] are evidence that cyanobacteria blooms are likely to occur on the Delta Wetlands Project reservoir islands. The pumps used to drain the flooded Jones Tract were located directly across Middle River from the proposed Bacon Island discharge pump station, indicating that discharges from Bacon Island could easily create the same T&O conditions as Jones Tract.

The accidental flooding of a Delta island with characteristics similar to those of the project's reservoir islands has had a substantial impact on drinking water providers. The potential for the project to exacerbate T&O problems must be addressed in the Revised DEIR. Specifically CUWA requests that the analysis address: 22-4 Cont

- The frequency of T&O events resulting from storage of water on the reservoir islands – The Jones Tract incident was an anomaly that resulted from a levee breach whereas the project will flood islands and discharge water every year during the summer months when T&O events have historically been the most troublesome.

- Water agencies' ability to address a T&O event – This analysis should address the uncertainty associated with having alternative supplies available to blend with Delta water; the ability to treat water with PAC, ozone, and peroxide; and the ramifications of this treatment (e.g. increasing ozone doses increases the production of harmful DBPs such as bromate).

- Operational costs associated with a T&O event – As discussed previously there are substantial chemical and staff costs required during an event.

- The substantial capital and operational costs required to upgrade to ozone – A number of water agencies do not have ozone facilities and may need to upgrade to ozone if T&O events become routine as a result of the project. As discussed previously, PAC is generally not effective at eliminating tastes and odors in finished drinking water when MIB concentrations exceed 15 ng/L.

[5] *Ibid*.

[6] California Department of Water Resources. 2009. Jones Tract Flood Water Quality Investigation. Division of Environmental Services, Municipal Water Quality Investigations Program.

[7] Lehman, P.W., G. Boyer, C. Hall, S. Waller, and K. Gehrts. 2005. Distribution and toxicity of a new colonial Microcystis aeruginosa in the San Francisco Bay Estuary, California. Hydrobiologia. 541:87–99.

- The potential for increasing disinfection byproduct (DBP) production with higher ozone doses - Increasing ozone and peroxide doses can result in increased production of harmful disinfection byproducts (DBPs) such as bromate.

- The loss of customer confidence during a T&O event – When customers detect the presence of T&O compounds in treated drinking water they question its safety and often incur costs associated with buying bottled water.

22-4 Cont

The DEIR does not Address the Potential Deleterious Impact of Algal Toxins – Some cyanobacteria, one of which is *Microcystis aeruginosa*, are capable of emitting potent toxins when cells die and release their contents. *Microcystis* blooms have been occurring at a greater frequency and larger bloom size in the Delta since 2000.[8] Cyanobacteria produced toxins are analogous to cyanobacteria produced T&O compounds in that they are organic molecules produced by similar algae; on rare occasions some cyanobacteria produce both T&O compounds and toxins.[9] Therefore, it is reasonable to expect that toxin producing cyanobacteria blooms will occur at times in the project's reservoir islands. Algal toxins are not yet regulated in the U.S.; however they remain on the list of contaminants that EPA will evaluate for new drinking water regulations in the foreseeable future. Internationally, algal toxins are regulated in some countries already and they are incorporated into the existing World Health Organization's water quality guidelines, which recommend a maximum level of 1 μg/L for microcystin-LR in drinking water. The impact on drinking water supplies must be addressed in the Revised DEIR.

22-5

The Revised DEIR must Include a Management Plan for Controlling Algae that Produce T&O Compounds and Algal Toxins - The revised DEIR must include a description of how Delta Wetlands will manage T&O and algal toxin events on Bacon and Webb Tract Islands. This plan must include a monitoring plan and management strategies such as algaecide treatment and discharge restrictions to avoid harming water agencies. The plan, licenses, and permits must be in place before water can be stored on the islands.

22-6

Impacts on Water Quality in the California Aqueduct

The DEIR does not Address the Water Quality Impacts of Storing Project Water in Groundwater Banks and Pumping into the California Aqueduct - The DEIR discussion of water quality is focused solely on the Delta. The proposed project includes storage of water exported from the Delta in various groundwater banks. There is no discussion in the DEIR about the water quality impacts of pumping groundwater into the California Aqueduct. This issue must be addressed so that water agencies downstream of the proposed pump-in locations can assess the water quality implications of the project. The storage of project water in groundwater banks

22-7

[8] *Ibid*.

[9] Taylor, W.D., 2005. Taste and Odor Events 2005: Report to Member Agency Water Quality Managers. Los Angeles, California.

and subsequent discharge to the California Aqueduct was not envisioned when the WQMP was negotiated. The Revised DEIR should contain provisions similar to those in the WQMP that allow for modeling of the water quality impacts when a discharge to the aqueduct is planned, and the opportunity for downstream water agencies to determine if the water supply benefits outweigh any potential water quality impacts of the discharge. 22-7 Cont

Water Quality Management Plan

The DEIR Should Provide an Explanation of the Statement that the WQMP Provisions will not Affect Monthly Operations – The statement on page 4.2-29 that the WQMP provisions will likely affect daily operations but may not change monthly operations is unsubstantiated. What is the basis for this claim? This statement cannot be evaluated based on information presented in the DEIR because the WQMP provisions were apparently not included in the modeling studies. 22-8

Organic Carbon Issues

The DEIR Contains Erroneous Information about the WQMP that Must be Corrected – The DEIR contains an analysis of dissolved organic carbon (DOC) and states incorrectly on page 4.2-38 that the WQMP allows an increase of 1.0 mg/L in DOC at the urban intakes. The WQMP allows an increase of 1.0 mg/L in TOC. This same error is repeated on page 4.2-43 in the evaluation of the impacts of the project. The DEIR must be corrected (on numerous pages) so that it is clear that the WQMP triggers are based on TOC.

In addition, the WQMP contains another criterion that is not discussed in the Significance Criteria discussion on pages 4.2-37 and 4.2-38. If the project operations cause TOC concentrations at the urban intakes to exceed 4.0 mg/L, Delta Wetlands must conduct further studies to determine whether one or more of the Drinking Water Quality Protection Principles would be threatened at an urban water treatment plant. 22-9

The statement on page 4.2-43, "The WQMP includes procedures for each treatment plant operator to evaluate the effects of project discharges and approve the annual operating plan…" is not correct. The WQMP requires the Water Quality Management Action Board to approve the annual operating plan. Water treatment plant owners have an opportunity to influence operations only when a Drinking Water Quality Protection Principle is threatened. Delta Wetlands must use hydrodynamic and particle-tracking models to predict whether project operations are likely to exceed one or more of the Operational Screening Criteria at urban intakes in the Delta prior to initiating diversions and discharges and weekly during diversions and discharges. If the model output indicates that project operations may exceed one or more of the Operational Screening Criteria, Delta Wetlands must conduct additional studies to determine if the Drinking Water Quality Protection Principles would be threatened. If project operations threaten one or more of the Drinking Water Quality Protection Principles, water treatment plant owners may determine if the benefits of the project outweigh the water quality impacts. If the project operations threaten a Drinking Water Quality Protection Principle at a water treatment plant without offsetting benefits

and the treatment plant owner has not waived its right to protection, project operations will be reduced, rescheduled or otherwise constrained to prevent the impact from occurring. 22-9 Cont

The Revised DEIR should Contain a Discussion of How the WQMP General Operating Principles will be Achieved – Water will be diverted onto the islands from December through March when TOC concentrations are highest in the Sacramento River and in the Delta. The Revised DEIR should contain a description of how Delta Wetlands will monitor the quality of diversions to comply with the WQMP General Operating Principle of avoiding diversions to storage during peak TOC periods. 22-10

The DEIR does not Address the Production of TOC by Algae – Algal production of TOC on flooded islands is not addressed in the DEIR. As discussed previously, there is tremendous potential for algal blooms to occur on the reservoir islands due to the high nutrient concentrations and shallow depth of water on the islands. 22-11

The Importance of Source Water TOC is Understated in the DEIR – The DEIR states in several places (e.g., page 4.2-43 and page 5-42) that TOC/DOC is decreasing in importance because many water agencies have added ozone disinfection to their treatment processes. This is patently wrong. First, a number of agencies have not added ozone disinfection, including several CUWA members and some small agencies that divert water directly from the California Aqueduct. When the requirements of the Stage 2 Disinfectants/Disinfection Byproducts (D/DBP) Rule become effective in 2012, compliance with the total trihalomethane (TTHM) maximum contaminant level (MCL) of 0.080 mg/L and the sum of five haloacetic acids (HAA5) MCL of 0.060 mg/L will be determined based on the locational running annual average, meaning that the MCLs must be met at each compliance monitoring location in the distribution system. This will increase the importance of source water TOC. Second, it disregards the fact that higher source water TOC levels will increase the required ozone dose at plants that have upgraded to ozone. In addition to higher treatment costs, higher levels of ozone in the presence of bromide can increase bromate concentrations. Bromate is a regulated DBP and a known human carcinogen. SWP water is high in bromide, and bromate can easily form at levels of health concern, even with well-managed treatment. Drinking water suppliers that treat SWP water with ozone already must take steps to ensure bromate levels do not exceed the bromate MCL. Finally, as specified in the Stage 1 D/DBP Rule, there are alternative compliance criteria that can be used to avoid enhanced coagulation and additional DBP removal. However, these compliance criteria cannot be used if the running annual average of TOC levels exceeds 4.0 mg/L, compromising the significant investments made by utilities in adding ozonation to water treatment plants. 22-12

Salinity

The DEIR salinity modeling contains erroneous assumptions that may lead to an underestimate of the requirements for conformance with the CCWD protest dismissal agreement and thus to an overly optimistic estimate of the proposed project's performance. Specific examples were submitted in CCWD's comment letter on the DEIR. CUWA concurs with the CCWD comments regarding the potential impacts of the project on Delta salinity. 22-13

Fisheries

EBMUD submitted comments on June 16, 2010 on the potential impacts of the project on fisheries and requested additional information about the implementation of a temperature assessment program and information about mortality assessments for various conditions. CUWA concurs with the EBMUD comments and requests that you address their concerns and questions in the revised DEIR. 22-14

Levee Erosion Control

CUWA concurs with the comments submitted by EBMUD requesting an analysis of the potential for high flow velocities to scour levees in the vicinity of the project islands. 22-15

Seepage Mitigation

CUWA requests that you address the EBMUD questions on funding of seepage mitigation projects. Additional information should be provided to respond to the EBMUD questions. 22-16

CUWA appreciates the opportunity to provide comments on the DEIR. As stated previously, there are many potential impacts on drinking water agencies that were not addressed in the DEIR and other impacts that were not fully addressed. We therefore request that a Revised DEIR be prepared and circulated for public review. If you have any questions on our comments or would like to meet with us to discuss these comments, please contact me at (916) 552-2929. 22-17

Sincerely,

Ernesto A. Avila, P.E.
Executive Director

EMA/mmt

Letter 22: Ernesto A. Avila, P.E., Executive Director, California Urban Water Agencies

22-1 The decision to certify the Environmental Impact Report (EIR) and approve the Project will be made by Semitropic in consideration of the whole of the record, including the responses to comments. At that time Semitropic will determine if the analysis contained in Chapter 4 of the Project Draft EIR (DEIR) adequately addresses the impacts of the Project as required by California Environmental Quality Act (CEQA). As presented in Responses to Comments 22-2 through 22-16, the analysis contained in Chapter 4 of the DEIR adequately addresses the impacts of the Project and no new or substantially more sever impacts would occur requiring recirculation (prior to certification).

22-2 As noted in the comment, the 2000 Agreement to Resolve Certain Delta Wetlands Permit Issues (Protest Dismissal Agreement or PDA) between the California Urban Water Agencies and the Delta Wetlands Properties included a Water Quality Management Plan (WQMP). The WQMP was also included as part of the PDA between Delta Wetlands Properties and Contra Costa Water District (CCWD). Subsequent to the 2001 Final Environmental Impact Report (2001 FEIR), the Project was modified to incorporate the WQMP as an environmental commitment of the Project under consideration in the Place of Use DEIR.

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

The comment states that the CCWD PDA includes some diversion terms that are more restrictive than the FOC. Comment noted. The DEIR did not include an analysis of each of the CCWD PDA diversion criteria because the Project's simplified operating criteria (e.g., December to March season of diversion and 11,400 cfs minimum outflow requirement) are more conservative (restrictive) than the CCWD PDA diversion criteria, rendering some CCWD PDA diversion criteria moot.

The comment states that the DEIR did not model the impacts of the WQMP requirements on Project yield and water quality. Presumably the commenter is noting that some of the WQMP measures were not parameters included in the Project's water supply simulation model, the In-Delta Simulation Model (IDSM). As noted on pages 3-9 to 3-10 of the DEIR, a number of the WQMP measures cannot be modeled in IDSM or other water supply simulation models because real-time data is necessary to ascertain compliance with these measures. The WQMP measures, referred to "operational screening criteria" in Section E of the WQMP, are intended to be monitored and complied with on a real-time, daily basis "to

prevent short term impacts to urban water utilities and to ensure [Project] adherence to the drinking water quality protection principles…." (WQMP, page 5). Compliance with the operational screening criteria will utilize real-time water quality data for the Project islands and urban intakes and wastewater treatment plants in the Delta and other information collected in accordance with the Comprehensive Monitoring Program described in Section D of the WQMP. IDSM results were assessed in the DEIR Section 4.6 evaluation of Project impacts on the water quality parameters, including TOC, TDS, bromide and chloride, as supplemented by Responses to Comments 22-2 to 2-13. Although it was not possible to model the WQMP operational screening criteria in IDSM, real-time compliance with WQMP operational screening criteria is not anticipated to substantially affect the Project yield and water quality estimated in the DEIR, or the DEIR conclusions that Project impacts on water supply and water quality will be less than significant.

22-3 The comment points out that new information has been made available since the analysis of nutrients was prepared in the 2001 FEIS and that now, nutrients and ammonium have elevated importance in the drinking water, ecosystem and regulatory environment. The comment further states that nutrient loads from the Project islands should be evaluated to determine if they are likely to be significantly higher than nutrient loads discharged from Project islands as currently operated.

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

Nitrate

Nitrate is commonly found in fertilizers. Further, ammonia, also commonly found in fertilizers, is converted into nitrate though oxidation (nitrification). The agricultural fields of Jones Tract may have been treated with ammonia and nitrate fertilizers prior to the June levee breach. Nitrate is also formed during decomposition of organic material. Nonetheless, as indicated in the comment, DWR found that "the average and the median nitrate levels in the Middle River were comparable to the concentrations found in the Jones Tract Floodwater" (DWR 2009; page 3-25). Further, with one exception, the concentrations of nitrate reported in surface water samples from Jones Tract ranged from non-detect to 3.2 milligrams per liter (mg/L), well below the established drinking water maximum contaminant level (MCL) for nitrate-N of 10 mg/l (DWR 2009; Figure 3.4.1).

Historic sampling of agricultural discharges from Bacon Island showed nitrate levels ranging from 0.4-14 mg/L, with a mean concentration of 3.8 mg/L (DWR 2003; Table 8-5).

Ammonia

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

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

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

Phosphate

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

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

The Jones Tract Report states:

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

As previously stated, the annual source of nutrients, including nitrates, ammonia, and phosphorus, from the Reservoir Islands would be less than the existing source from agricultural operations; therefore, concentrations of such nutrients from the Project Reservoir Islands will be lower than the existing concentrations from agricultural drainage. Specifically, as it relates to T&O, see Response to Comment 22-4.

Furthermore, as described in Response to Comment 22-2, the Project includes a WQMP. The WQMP requires that the Project (see page 2 of the WQMP): (1) cause no adverse health impacts to water users; (2) not cause or contribute to non-compliance with current or future drinking water regulations; (3) cause no increase in the cost of water treatment or operations; (4) contribute to CALFED's progress toward achieving continuous improvement of Delta drinking water quality; and (5) minimize and mitigate for any degradation in the quality of drinking water supplies. The WQMP establishes a Water Quality Management and Action Board (WQMAB) to implement the WQMP (see page 2 of the WQMP). In addition, the WQMP includes a monitoring program and operational constraints to prevent both short-term and long-term adverse effects to drinking water quality.

The approach presented in the WQMP allows for the adaptive management of the Project in response to real-time water quality data. An annual operating plan will be

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

In addition, The WQMP on page 5 states that "If Project operations threatened a drinking water quality protection principle at the water treatment plant without offsetting benefits and the treatment plant owner has not waived its right to protection, Project operations will be reduced, rescheduled or otherwise constrained as necessary to prevent the impact from occurring". An intent of this provision is to allow an urban water supplier to waive the treatment plant protections afforded by the WQMP if the value of the water outweighs the value of the WQMP protections (e.g., during severe drought conditions).

22-4 Algal/bacteria blooms occur when the population of a species of algae increases exponentially to dominate a water body. The species dominance that occurs during a bloom is generally temporary, lasting for a period of days to weeks, before the algae population crashes, returning to pre-bloom levels. Blooms are believed to be the result of environmental conditions that temporarily favor a particular species. Factors that favor individual species may include relative availability of nitrogen and phosphorus, temperature, and light conditions. Algal population dynamics are highly complex, and generally not predictable from basic environmental measurements. Instead, the effects of algae blooms on taste and odor (T&O) compounds are monitored and used as early warning for the treatment plant operators, because T&O compounds are not removed in conventional water treatment processes, but can be treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose).

As noted in the comment, T&O incidents in the SWP are commonly associated with geosmin and 2-methylisoborneol (MIB) that are produced by certain algae and

bacteria. The ability of individuals to detect these chemicals varies, but the general population can detect either compound at a concentration of about 10 ng/L (parts per trillion) and sensitive individuals can detect even lower concentrations.

The California Department of Water Resources (DWR) Division of O&M, Water Quality Section has analyzed samples from SWP facilities for T&O producing compounds, MIB and geosmin, since 2000. This monitoring provides a direct measurement of T&O potential in drinking water supplies. DWR O&M Division staff send out weekly email reports with the results from the previous week's monitoring to provide advanced notice of potential T&O problems to SWP Contractors. T&O issues are of greatest concern for CCWD intakes and the South Bay Aqueduct (SBA), due to relatively short travel times (i.e., days) from the Delta to the treatment plants. No T&O incidents from MIB or geosmin have been reported from North Bay Aqueduct (NBA) contractors. The algal blooms responsible for T&O incidents occur in the Delta channels, in Clifton Court Forebay (CCF) and the aqueducts and reservoirs of the SWP system. The rivers are not monitored for MIB and geosmin. Banks Pumping Plant and CCF are both monitored for MIB and geosmin.

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

The 2006 SWP Watershed Sanitary Survey indicates that peak MIB and geosmin concentrations found downstream in the California Aqueduct at O'Neil Forebay (Check 13) are generally lower than the peak concentrations at CCF and Banks. MIB and Geosmin concentrations in San Luis Reservoir (Pacheco intake) have

been very low. In contrast, Castaic Lake (terminal reservoir for SWP West Branch) has very high geosmin spikes occurring in June or July, apparently generated from algal blooms in the reservoir. In June 2004 (before Jones Tract flooding), geosmin was measured at 830 ng/L. The highest geosmin concentrations in the summer of 2002-2004 were between 200 and 830 ng/L.

MIB and geosmin are both measured at high concentrations in the East Branch of the aqueduct. The maximum concentrations recorded were 130 ng/L of MIB in September 2001 and 240 ng/L of geosmin in May 2003. DWR attributed the high levels of geosmin and moderate levels of MIB to benthic algae growing in the East Branch. Peaks of MIB in July 2004 and 2005 also appear to have been generated in the East Branch. Results of monitoring at the outlet to Silverwood Lake show that MIB and geosmin concentrations suggest the same general pattern as the aqueduct inflow location. These data indicate that the source of MIB and geosmin is the California Aqueduct rather than algal growth in Silverwood Lake. The Sanitary Survey also presents extremely high concentrations of MIB and geosmin in Lake Perris. These measurements (much higher than upstream locations) suggest significant production of T&O compounds in Lake Perris. These high T&O compounds are of particular interest because Lake Perris is a major source for Metropolitan Water District drinking water, although water is typically not drawn from Lake Perris when T&O conditions are adverse.

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

This summary of SWP measurements of the major T&O compounds, geosmin and MIB, indicates that T&O are generally associated with blue-green benthic algae in the CCF, along the aqueduct, and in the terminal reservoirs. There is no definitive information to conclude that these T&O compounds originated from the temporary discharge of water from Jones Tract in July and August 2004. There is no evidence to suspect that a major source of T&O compounds will be created on the Project Reservoir Islands because annual sources of nutrients, including nitrates and phosphorus, on the Reservoir Islands would be less than under existing agricultural operations. As a result, discharges from the Reservoir Islands are not expected to contribute to an increase in Delta channel nutrient concentrations over that which currently exists.

Furthermore, as discussed in Responses to Comments 22-2 and 22-3, the WQMP, which is part of the Project requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

22-5 Some blue-green algae (cyanobacteria) are capable of emitting potent toxins (microcystins) when cells die and release their contents. *Microcystis aeruginosa* is a common bloom-forming blue-green algae, but not all strains of *Microcystis aeruginosa* produce microcystin toxins. Blooms of *Microcystis aeruginosa* have occurred in the Delta each year between 2001-2005, but there have been no documented cases of humans or animals affected by the blooms in the Delta. There are currently no regulatory limits for algal toxins in drinking water supplies; however, other water quality criteria (e.g. chlorophyll *a* or dissolved oxygen) would likely be triggered during algal blooms and, as stated in the comment, treatment would be similar to treatment for T&O compounds which are treated with supplemental processes (e.g. powdered activated carbon, PAC, or increased ozone dose). As discussed in Responses to Comments 22-2 and 22-3, the WQMP, which is part of the Project, requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

22-6 See Responses to Comments 22-4 and 22-5.

22-7 As described in Chapter 1 of the DEIR on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The facilities, operations, and environmental effects of the groundwater banking components are separately described and analyzed in the respective environmental impact reports for those projects (see page 1-20). The original Semitropic Groundwater Storage Bank and Semitropic Stored Water Recovery Unit are approved and currently in operation. Implementation of the Project will not alter current approved operations or expand the capacity of those groundwater storage banks. No new construction would be required to convey Project water to the groundwater banks for recharge or for pumping and delivery from the groundwater banks (page 2-6 of the DEIR).

22-8 The statement on page 4.2-29 of the DEIR about WQMP not affecting monthly Project operations was meant to suggest that the monthly Delta water operations, which are simulated in the CALSIM model and Project monthly operations simulated with In-Delta Storage Model (IDSM), generally identified periods when Project diversions and discharges would be possible. The WQMP implementation would combine daily measurements and tracking to evaluate effects at the exports and might reduce discharges when concentrations of salt or TOC were relatively high, or when baseline exports were low. Therefore, adjustments in the day-to-day discharges might vary from monthly averages but would not change the overall project operations during a particular year; for example, diversions might be earlier or later because of Delta salinity levels, and discharges might be expedited or prolonged compared to the monthly average values simulated by IDSM. The approach of using monthly simulations to evaluate likely effects of daily Project operations was discussed on page 4.2-33 of the DEIR. The range of potential effects of Project discharges on export and municipal intake DOC concentrations also are given, based on the IDSM-simulated Project operations. These methods generally confirm that all potential impacts on water quality have been reduced to less-than-significant levels with the revised operations simulated with the IDSM model for this Place of Use EIR." The WQMP implementation will include accounting for daily effects and thereby provide assurance that actual effects would not be greater than the effects simulated for monthly operations.

See also Response to Comment 22-2.

22-9 The comment is correct that the variable described in the WQMP discussion of operating screening criteria and triggers is TOC. The first sentence on the top of page 4.2-38 is revised as follows:

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

The third sentence of the second paragraph of page 4.2-43 is revised as follows:

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

22-10 The amount of TOC/DOC anticipated as a result of Project operation was determined to not be significant. As described in Impact WQ-6 of the DEIR, discharges from Project islands could have relatively high DOC concentration that could result in significantly increase DOC levels in Delta exports. However, as discussed on page 4.2-43, implementation of the WQMP Comprehensive Monitoring Program would ensure that Project releases would be monitored to minimize DOC levels and would not adversely affect urban intakes. As described in Response to Comment 22-3, the WQMP requires the Project to be operated in a manner that would not cause adverse health impacts to water users; cause or

contribute to non-compliance with current or future drinking water regulations; or cause an increase in the cost of water treatment or operations.

As discussed in Response to Comment 22-3, the approach presented in the WQMP allows the Project to implement adaptive management in response to real-time water quality data. As discussed on page 11 of the WQMP, the use of real-time field measurements and computer modeling results are subject to uncertainties; therefore, an uncertainty of plus or minus 5 percent would be implemented. It is further stated that if more precise methods for measuring and calculating are developed that allow for an improved level of certainty that those methods would be used. Operational constraints include reducing, rescheduling or otherwise constraining reservoir discharges if they will exceed drinking water quality principles set forth in the WQMP.

See also Response to Comment 22-9.

22-11 Algae TOC is not likely to be an important component of the TOC discharged from Project storage islands. Most of the algae biomass that could grow in the Reservoir Islands would rapidly decay and only a small fraction of the algae carbon would remain as DOC. Most of the algae TOC would decay aerobically to CO2. See Response to Comment 22-4.

22-12 The comment suggests that TOC will remain an important precursor for THM and DBP at all treatment plants. The DEIR statement that the direct linkage between TOC and TMH and DBP may be reduced at plant with ozone disinfection is also correct. The Project would not change the basic character of the Delta water and would not cause the range of TOC experienced at each treatment plant using Delta water to be increased. The DEIR does not attempt to evaluate the changes in chemical use or treatment processes for treatment plant operators. The estimated change in TOC and salinity (EC, chloride and bromide) from the Project were evaluated and were found to be less than significant. As discussed in Impact WQ-6, discharges from Project islands could have relatively high DOC (which is the largest component of TOC) concentration that could result in significantly increase DOC levels in Delta exports. However, as discussed on page 4.2-43, implementation of the WQMP Comprehensive Monitoring Program would ensure that Project releases would be monitored to minimize DOC levels and would not adversely affect urban intakes. Because the WQMP is incorporated as part of the Project, as described in Responses to Comments 22-2 and 22-3, DOC concentrations resulting from Project operations would not be significant.

Each plant operator would continue to control their processes and practices with regard to TOC and/or bromide concentrations. The WQMP provides a framework for these future treatment plant evaluations and possible Project discharge reduction measures. The effects of Project operations on TOC and bromide have been fully evaluated, leaving the plant operators to evaluate their individual consequences and responses under the WQMP.

See also Response to Comment 22-9.

22-13 The comment states that the DEIR salinity modeling contains erroneous assumptions, and concurs with CCWD's specific comments regarding the potential impacts of the Project on Delta salinity. Responses to CCWD's comments follow.

The Project will operate in accordance with the terms and conditions set forth by the 2000 Agreement to Resolve Certain Delta Wetlands Permit Issues (Protest Dismissal Agreement) between CCWD and Delta Wetlands Properties. All CCWD operating conditions are included in either the FOC or the WQMP. Some terms are also satisfied by the new season of diversion and minimum outflow requirement. X2 conditions are fully satisfied by the minimum outflow requirement of 11,400 cubic feet per second (cfs) which maintains X2 beyond Chipps Islands (75 kilometers [km]). Maximum outflow percentages are included in the FOC measures. Salinity protections are included in the WQMP. Daily constraints are approximated by monthly averages. While not every term and condition is explicitly included in the operations modeling, the effort is an accurate representation of the terms and conditions set forth in the protest dismissal agreements and an adequate representation of the environmental impacts.

With respect to the CCWD comment letter Attachment – 1st Bullet: Comment noted. The Protest Dismissal Agreement includes diversion restrictions under Term 3.a that are based on actual position of X2 rather than equivalent flow. Daily Project operations will fully comply with the requirements of Term 3.a to address CCWD water quality concerns. The DEIR used equivalent flows and the Kimmerer-Monismith equation as a methodology to estimate changes in X2 associated with Project operations.

With respect to the CCWD comment letter Attachment – 2nd Bullet: The strong relationship between Delta outflow and Jersey Point salinity support the modeling assumptions included in the IDSM and the conclusions presented in the DEIR. As evidenced by Figure 4.2-7c of the DEIR and Figure 2.a of CCWD's comment letter, Jersey Point EC is very low at Delta outflows in excess of 11,400 cfs. In addition, Project diversions would occur only in the months of December to March when there are no established salinity objectives for Jersey Point.

With respect to the CCWD comment letter Attachment – 3rd Bullet: Comment noted. Table 4.2-6 was mislabeled. The Rock Slough chloride concentrations in the DEIR were estimated in the IDSM utilizing the CCWD G-model equation. Salinity changes were minor and never approached the 10 mg/L constraint included in Term 3.c of the protest dismissal agreement. Daily Project operations will fully comply the requirements of Term 3.c to address CCWD water quality concerns.

With respect to the CCWD comment letter Attachment – 4th Bullet: Comment noted. The improvements in Rock Slough chloride concentrations described on

page 3-27 oversimplified the relationship between outflow and Rock Slough salinity. The analysis in Chapter 4.2 did incorporate the CCWD G-model equation, including antecedent flow conditions and effective Delta outflow. The changes in Rock Slough chloride concentrations are presented in Table 4.2-6.

22-14 The commenter concurs with the comments of the East Bay Municipal Utility District (EBMUD) on the DEIR regarding the potential impacts of the project on fisheries and requested information about the implementation of a temperature assessment program and about mortality assessments for various conditions. Responses to EBMUD's comments follow.

With respect to the EBMUD comment under Fisheries, subsection "A": The Temperature Assessment Program and Project temperature discharge limits described on page 4.5-46 of the Draft Environmental Impact Report (DEIR) were derived from the terms in the State Water Resource Control Board's (SWRCB) Temperature Plan. Bullet a) states that the Project would not discharge reservoir water for export if the weekly average temperature differential between the discharge and the adjacent channel temperature is greater or equal to 20 degrees F. This 20 degree maximum places a maximum limit on the discharge temperature. The weekly limits require that mixing in the channel be sufficient to prevent the channel temperatures from being warmed as a result of reservoir discharge by more than the weekly temperature averages defined in bullet items b) through d).

With respect to the EBMUD comment under Fisheries, subsection "B": The equation presented on page 4.5-60 of the DEIR was used to estimate the mortality for fall-run Chinook salmon and steelhead juveniles originating in the Mokelumne River. Mokelumne fish mortality was estimated by adjusting the calculated mortality of Sacramento fish due to Project operations to take into account the percent of Sacramento fish that entered the central Delta channels. Specifically, the equation adjusts for the fraction of the Sacramento River fish that entered the central Delta channels because not all Sacramento River fish migrate through the central Delta pathways. Some of the Sacramento River fish migrate down the Sacramento River, some go through the Delta Cross Channel (DCC), if open), and some go down Georgiana Slough. For example, for fall-run Chinook salmon in 1980 (see Table B-103 in Appendix B of DEIR, page B-128), the percent mortality of the Sacramento population attributable to the Project was 0.01 percent. However, only 19.6 percent of the population went through the central Delta.

However, Mokelumne River fish are assumed to all migrate through central Delta pathways; therefore, mortality is always higher because the fish that migrate through the central Delta pathways are assumed to have a higher mortality rate. It was assumed that this central Delta mortality is applicable to the entire population of Mokelumne River fish. The equation is only valid for estimating Mokelumne River fish mortality from already calculated Sacramento River fish mortality, and percent fish entering the

central Delta and does not imply that survival of Mokelumne fish is better when the DCC gates are opened.

With respect to the EBMUD comment under Fisheries, subsection "C": The factors included in the migration loss calculations are presented on pages 4.5-58 through 4.5-60 of the DEIR and on pages. B-125 and B-126 of DEIR Appendix B. Main assumptions used include:

- Fish enter the Delta with the same monthly fraction of the population each year.
- Fish entering the Delta and migrating down the Sacramento River to Chipps Island survive at an assumed rate of 90 percent.
- Fish entering the Delta and migrating through the central Delta (having entered via the DCC or Georgiana Slough) survive at a maximum rate of 45 percent at low exports. This maximum survival declines with increasing exports in a similar manner to the relationship established by Brandes and McLain (2001) for Georgiana Slough survival compared to the survival on the Sacramento River. The maximum survival of 45 percent was based on Brandes and McLain's finding that survival through the Delta via Georgiana Slough at low exports was about half of the survival down the Sacramento River (i.e., based on coded wire-tag studies).
- Indirect mortality associated with Project intakes was assumed to be 50 percent of the effect of Central Valley Project / State Water Project (CVP/SWP) exports because of the smaller screened Project diversions and because the Project diversions would be closer to the salmonids' migration path through the Delta and would be less likely to divert fish away from that path.

Once annual mortality values were calculated for Sacramento River fish, an equation was used to adjust the mortality estimate for Mokelumne River fish (see Response to Comment 14-2). Tables B-103 and B-107 in Appendix B of the DEIR show the annual totals for all years for Sacramento River Chinook salmon and steelhead, respectively, that were used to derive the Mokelumne fish values. The Mokelumne River fish impacts are greater than the Sacramento River fish impacts as a percentage of the population because all Mokelumne fish were assumed to enter the Central Delta with higher migration mortality (see Response to Comment 14-2). Only central Delta migration mortality was increased by CVP and SWP exports and by Project diversions and by Project exports. Project diversions and exports would increase mortality whenever fish are migrating in the months when the Project diversion or export occurs.

With respect to the EBMUD comment under Fisheries, subsection "D": The calculations do include the percentage loss attributable to both Project diversions and Project exports. Project exports would increase the CVP and SWP exports and have both entrainment and migration mortality impacts, as described above and shown in Table 1. Project diversions were assumed to have less of an impact on

fish than the existing CVP and SWP exports because of their location in the central Delta and because the intakes would have fish screens. Impacts from Project exports were generally small because fish densities are generally lower in the summer and fall. Predation losses near the Project intakes are included in these general estimates of entrainment and migration mortality for the Project diversions and increased exports.

22-15 An analysis of the potential for high flow velocities with scouring potential was evaluated in the 2001 FEIR in Chapter 3B Hydrodynamics. The average and maximum discharge (568 and 2,847 cfs, respectively) rates evaluated for the Project in the DEIR are less than what was evaluated in the 2001 FEIR and 2001 Final Environmental Impact Statement (FEIS, 6,000 cfs). Both the 2001 FEIR and 2001 FEIS found that hydrodynamic effects on local channel velocities or stage were less than significant. Even with discharges of 6,000 cfs, the hydrodynamics in the Delta channels surrounding the proposed Reservoir Islands were within the normal range of stage and velocities resulting from tidal and seasonal fluctuations.

22-16 The Project is responsible for the cost of all mitigation and remedial actions resulting from proposed Reservoir Island operations. Financial assurances in the form of the Seepage and Monitoring Fund, Drawdown Fund, Remedial Action Fund, and Insurance are required under the terms of the EBMUD Protest Dismissal Agreement (PDA), Attachment C. The fund dollar amounts specified in the EBMUD PDA are the initial deposits estimated to cover the first year of Project diversions to storage. The fund amounts for each subsequent year will be determined by the Monitoring and Action Board ("MAB"), provided that the annual fund amounts cannot be less than the prior year's actual fund withdrawals. Each fund shall be replenished prior to that year's diversions to storage. Furthermore, as described in more detail in Section IV of Attachment C, the Diversion Suspension Limits require prompt remedial action by the Project if certain groundwater elevations are exceeded, including to suspend diversion of water and to lower reservoir pool (water storage) elevations. By restricting the diversion and export water, the financial assurances and diversion suspension limits will ensure that Project-related seepage impacts are remedied in a timely manner.

22-17 See Responses to Comments 22-1 through 22-16.

NORTH DELTA WATER AGENCY

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Melinda Terry, Manager

June 30, 2010

ICF International
630 K Street, Suite 400
Sacramento, CA 95814
Attn: Megan Smith, Project Manager

SUBJECT: Comments on the Draft Delta Wetlands Place of Use Environmental Impact Report

Dear Ms. Smith:

The North Delta Water Agency (NDWA) appreciates the opportunity to comment on the Draft Delta Wetlands Place of Use Environmental Impact Report (DEIR). NDWA does not oppose the project as long as it is operated in adherence with the June 4, 1997 Quality Assurance Agreement, which is appropriately referenced in the DEIR. However, the DEIR should provide an expanded description of potential impacts to water users and the Delta channels and levees on adjacent islands before it is certified. 23-1

First, the document should carefully assess the potential impact upon existing local water diverters' pumping operations. The Delta Wetlands Project will divert up to 100,000 acre-feet of water from the Delta channels each year for storage on Webb Tract. Water will also be diverted for habitat purposes onto Bouldin Island. These islands borders four islands within the boundaries of the North Delta Water Agency: Twitchell, Brannan, Staten, and Tyler. Although the EIR acknowledges the vast number of existing diversions in the Delta pursuant to riparian and appropriative rights, it does not identify or analyze the potential for the Project to locally draw down water surface elevations or reverse or alter flow directions in a way that may affect the ability of existing diverters on the neighboring islands to continue taking water without modifying their existing intakes. 23-2

Second, the document needs to more clearly describe the potential for stored water to cause a levee breach, with water flowing off the island and damaging the Delta channels and levees across from Webb Tract. The EIR describes modified improvements that will be made to the land side of the levees on Webb Tract to reduce the potential for stored water to seep or undermine levee integrity. The plans appear to call for maintaining a 2:1 slope on the channel side (the example cross-section, for Bacon Island, identifies the assumed water side slope as being 2:1, as shown on EIR Figure 4.3-1). This is ostensibly consistent with current Army Corps of Engineers standards requiring a 2:1 slope on the water side and at least 3:1 on the backside. 23-3

However, these levee geometry standards were developed to protect the lands behind the levee from being inundated by high flows in the adjacent water course, rather than the reverse situation where water is stored on the land side. How will this "reverse geometry" affect the stability of the levee in the case of erosional forces from the reservoir side? How will this design affect the likelihood for blisters and boils? Has the use of channel levees for water storage been evaluated by the Corps, and if so, has the Corps recommended an appropriate geometry?

Delta Wetlands has done analysis to show what the maximum rate of flow through a levee breach would be, but it does not appear that any technical work was done other than to conclude that these rates of flow (up to 123,000 cfs) would not be expected to result in damage to a rip-rapped levee. Has Delta Wetlands examined all adjacent island levee miles to determine the existing level of rip-rap on the levees? Has Delta Wetlands evaluated the effect of a breach on the channel banks opposite Webb Tract? These are not theoretical concerns, and should be more fully addressed. On at least two occasions during the last 15 years, water that overtopped and pooled up behind the levees on Prospect Island caused a breach, which resulted in water leaving the island and substantially eroding the neighboring levees across the channel.

23-3 Cont

If Webb Tract levees were to fail, what is the Project's contingency plan for preventing damage to levees, banks and waterside structures across the channel? What are the Project's plans for repairing damaged levees, banks, and waterside structures?

Please provide a more in-depth analysis of the potential for these types of impacts, and propose suitable mitigation to offset any identified impacts.

23-4

We appreciate the opportunity to comment on the DEIR. Thank you in advance for your attention to these comments.

Respectfully submitted,

Melinda Terry, Manager

Letter 23: Melinda Terry, Manager, North Delta Water Agency

23-1 The Draft Environmental Impact Report (DEIR) does evaluate the impacts of the construction and operation of the Project, including impacts to adjacent islands and Delta water supply throughout the technical sections of Chapter 4, as refined by this Final EIR (FEIR). See also Responses to Comments 23-2 and 23-3.

23-2 As discussed on page 4.1-10 of the DEIR, the Project operations would result in no water supply changes other than the proposed places of use. Therefore, the Project would not result in reduction in water surface elevations or reverse or altered flow that could affect the ability of existing diverters on neighboring islands to continue to divert water without modifying their existing intakes. Furthermore, as discussed on page 4.1-14, Project operations would not be permitted to interfere with senior appropriative rights or Delta riparian users. Following the 1997 water rights hearings, the Project applicant entered into stipulated agreements with a number of entities, including the North Delta Water Agency that affirmed the seniority of these entities rights; and outlined general conditions under which the Project would operate to preclude interference with those rights or ability for the entities to meet water quality objectives. See Chapter 2 Project Description of the DEIR for further discussion.

23-3 Levee stability is addressed in Section 4.3 of the DEIR. As described on page 4.3-12, the Project also includes an environmental commitment that requires compliance with the recommendations in the *Preliminary Design Report: Reservoir Island Levees, Delta Wetlands Project* which would provide increased stability. On page 4.3-5 it is stated that final levee design will be subject to engineering review. Project levee design will improve the slope stability and reduce the through-seepage for static loading conditions.

Project levees would have a larger footprint than current levees; therefore, they would be more stable and the risk of failure during a seismic event would likely be less when compared to existing conditions. In addition, the Project Reservoir Islands maximum storage elevation was reduced by two feet. As a result, total storage capacity would be reduced by 23 thousand acre feet (taf) and the flows that could affect neighboring levees would be less.

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

In the unlikely event of an outward Project levee failure that affects neighboring levees, the Project would be responsible for the cost of all mitigation and remedial actions; however, the effects of an outward breach were evaluated in the 2000

Revised EIR/Environmental Impact Statement (EIS) (see Appendix H, page 3-18) and were found to be short-term and minor in nature.

Specifically, the Project is responsible for the cost of all mitigation and remedial actions resulting from proposed Reservoir Island operations. Financial assurances in the form of the Seepage and Monitoring Fund, Drawdown Fund, Remedial Action Fund, and Insurance are required under the terms of the EBMUD PDA, Attachment C. The fund dollar amounts specified in the EBMUD PDA are the initial deposits estimated to cover the first year of Project diversions to storage. The fund amounts for each subsequent year will be determined by the Monitoring and Action Board (MAB), provided that the annual fund amounts cannot be less than the prior year's actual fund withdrawals. Each fund shall be replenished prior to that year's diversions to storage. Furthermore, as described in more detail in Section IV of Attachment C, the Diversion Suspension Limits require prompt remedial action by the Project if certain groundwater elevations are exceeded, including to suspend diversion of water and to lower reservoir pool (water storage) elevations. By restricting the diversion and export water, the financial assurances and diversion suspension limits will ensure that Project-related seepage impacts are remedied in a timely manner.

23-4 See Response to Comments 23-1 through 23-3.

5-13-10

Dear Megan Hello!

I am a concerned citizen within the Draft EIR announced in the La. times on 5-12-10. I would also wish to make comments on the draft and its proposed project.

I Do Not use the web. So can you please send me Paper information to me through the mail address I am providing?

#1. Please Send the "Place of Use Environmental Impact Report"

#2 The Outlook that is called: "The Delta Wetlands Project"

#3 AND the Additional Documents that R' referenced in the DEIR available at ICF

#4 I Would also wish 2 KNOW @ the A.V. Water Bank

PLEASE SEND the INFORMATION So I can Return Comment BY the June Comment end date Thank-You

Nicole L. Parson
11705 S. ALAMEDA St
LYNWOOD CA 90262

☺- NICOLE L. PARSON

Letter 24: Nicole L. Parson

24-1 The comments are noted.

15 May '10 (A.D.)

Ms. Megan Smith (& Cliff Burger)
RE Delta Wetlands, & R.E., Etc
@ Offices of: ICF Int'l #400
Sacramento Calif.

Greetings.

And may I add, on this "What A Day For A Daydream", to kick back on a new mowed lawn, retro ing on The Lovin' Spoonful songs, or "Things like a walk in the park" — ; by the way, how is the NASCAR Duo from Washington State doing these days? (Biffle & Kahne) — and Cliff — I was mentioning the Coliseum songs probably of a Canada to Spokane band with 1 Spokane member, Ben Staley, of the Staley Oil Company family (big) of Greenacres — "Locksley Hall", in talks with noted record producer, Mike Flicker (HEART's first album with my lead singer Zmangel — Ann Wilson — of yep — Yakima — not Seattle. 15 then; we are on Monroe St, office just past Hoffman's p.

// RE Pepper house Co. 70's ?
Megan Hel/me, Shak ... ?... L.A. ... Here
... ... Pred

Chair Meagher, Anaconda leader, was my lesson to her — until the draft dodger in B.C. then, called me — we'd a lead singer — top 40 — I think D.J. — have an original songs, HELL, plus hot play on guitar too — her songs — she should all the band royalty credits — 1st album — Flicker produced (a draft dodger too from L.A.) in Vanc, B.C. — Well in 2006 or 07, Flicker — after saying — they were the NW band? I replied yes — he said I heckled & knocked on every band, artist in NW scene then — never never heard of them — did he know of Cheyenne? — said "no" — I laughed — did he know big labels were calling me about Anaconda — fact!! — they had totally original style & sound — the band members went in my guidance — kept ignoring the labels who called — hey bucko — wanna see & hear these musicians — get off your LA or NYC butts — fly here to NW, to clubs, etc. Enjoy!! Otherwise we don't hear you calling — Flicker — he finally called me one day — said Ramsey I'll never doubt your knowledge of music biz again, OK?; I was in L.A., got Columbia to let me pull the L.t. Master out of their old vaults. And? wow!! I don't know why they were not

Rather in the biz — He wouldn't imagine on their No restless ... except our own ... heard ... then?

By the way, HEART best album in Canada music scene — Grammys — the Juno. Well, HEART album was ... my band Flicker ... later.

15 May 2010 (A.D.)

FOR: Megan Smith & Cliff Burgee, Stockt. Bndr. & Financial Services in Sacramento
The Dynamic Duo

I. The Wolf Family, Irv, of CAN/UVA
REQUEST thorough "into" the bios of owners, buyers there and similar in Calif. Back to grade schools — class members of. Jobs me & Pa held. References of parents. R.E. owned then. Heritage, Church, where married? why in Calif now?. On & On. Rec? where buy groceries? where dine out? nite life?

II. Same-O on: Piyra Mathur
board member from San Francisco on State's CALPERS group. She continually flips off those state depts that order board members to prepare, timely file their financial report. She refuses mail from, hangs up on callers, etc. She works as a Finance Analyst in Sacramento. Is her job a menial or intense responsibility one? Check closely. May be a sweetheart job for

Some male (or female) applicant. (Bryner)
Is he all [illegible] [illegible] MBA, CEO,
C. Burger, etc? Or is she on her back from
daytime, working her way up the ladder.

Take your time. Need reply, definite,
all items — by 4 July 2010.
Send copy, these pages to —
please, today —
and final typed report — detailed —
to:

A) Mr. Happy
c/o Kelly
207 1st Ave, South
Seattle, Wash. 98101

B) S. C. Feldman & Sara M.
c/o Feldman office
Vancouver, B.C. Canada

Exclusively to C) Green Day band & Pearl Jam band
members
(not to their agents, publicists or managers)

D) Mike Cavender & Larry Brown Excavating
Spokane, Wash.

E) Mary Kay Becker Judge
Court of Appeals, Washington, Division 1
in Seattle, Wash.

F) Jeff Ma[illegible] c/o The Tepper School, Carnegie-Mellon University [illegible]

Letter 25: Marc Scot Ramsey

25-1 The comments are noted.

I will Make Addition Questions when I recieve the Requested Accomadation To Review your Project.

* I am a Disabled American!

Todays Date 6-4-10

To whom it May Concern:

Please Enclose these commits, question and inquiries. To Be Answered as well. In the Final EIR - OR DRAFT

question #1. < project conform to Federal Standard of Participation For Americans with a disability Act?

question #2. I Need accommadations Because I Am a person Descibed AND Protecten By that (A.D.Act) I need the special accomadation to Be Able to Partcipate.

I am unable to use Due 2 one of my Disabilities an Electronic Computer. Sooo.. Need You all 2 Make Available to Me an Alternate Form of Review method IF You dont Mail to Me A HARD Paper Copy. I will also Be Barred Because of my disability. Due 2 My Disability can I continue to participate thru the Federal Postal Mail?

question #3 & Request: I Need A Alternative Accomadations, I would like to Recieve the Paper Copy of "The Delta WetLands Project #1 Its Alternative #2 The Proposed Draft EIR #3 the Analysis #4 and Supporting Document #5 Sent... 2 Me OK?

Thank you
MS. N. PARSON

question #4 When or what Date Are you Sending My Special Accomodations to Me requested to me? Doesn't Federal Regulation Require within 72hrs FROM Reciept OF this Letter request?

Please Keep My Address(es) CONFIDENTIAL

Please Mail My Request As Soon As Possible IF Within 72hrs OK too!

N.L. Parson
11705 S. Alameda st.
Lynwood Ca 90262
Mail stop:
2265114 2600 20U

CARBOIN COPIED SIDE

SEND TO:
Delta Wetlands-Comments

Letter 26: Nicole L. Parson

26 The comments are noted.

Peter Kiel

From: jjames@renewablegroup.com
Sent: Wednesday, June 09, 2010 10:29 AM
To: Peter Kiel; Dave Forkel; Andy Moran
Cc: Cole Frates
Subject: Fw: Delta Wetlands Project - Semitropic Water Storage District -Bay Delta Estuary - CEQA Process

Importance: High

Should we try to meet with him?

Sent via BlackBerry from T-Mobile

From: Marsha Payne <mpayne@semitropic.com>
Date: Wed, 9 Jun 2010 10:11:22 -0700
To: Jim James<jjames@westerndev.com>
Subject: FW: Delta Wetlands Project - Semitropic Water Storage District - Bay Delta Estuary - CEQA Process

Jim – this just arrived. I will send CD out immediately.

Marsha Payne, Exec. Secretary
Semitropic Water Storage District
1101 Central Avenue, P.O. Box 8043
Wasco, CA 93280
(661) 758-5113
mpayne@semitropic.com
www.semitropic.com

From: Bob Baiocchi [mailto:rbaiocchi@gotsky.com]
Sent: Wednesday, June 09, 2010 10:05 AM
To: Frederick Weigis; mail
Cc: Rod McInnus; James Kassel; Steve Herrera; Roos-Collins, Richard; Chuck Bonham; Bill Jennings; Jim Crenshaw; Dan Bacher; Percy Banks; Chris Shutes; Roy Thomas; Hank Smith; Mark Rockwell; Doug Lovell; Tom Lane; Trent Orr; Allen Harthorn; Mike Kossow; Ed Henke; Nell Langford; Samantha; Brian Johnson; Curtis Knight; George Sutherland; Jerry Neuburger; John O'Hagan; David White
Subject: Delta Wetlands Project - Semitropic Water Storage District - Bay Delta Estuary - CEQA Process
Importance: High


California Fisheries & Water Unlimited


June 9. 2010

Mr. Frederick Weigis
Board of Director

Semitropic Water Storage District
1101 Central Avenue
Wasco, CA 93280-0877

Re: Delta Wetlands Project; Semitropic Water Storage District Proposed EIR for the Delta Westland Project

Mr. Weigis:

Forward to me a copy of the Delta Wetlands Project CEQA document being prepared by the Semitropic Water Storage District for the proposed highly controversial Delta Wetlands Project. The Semitropic Water Shortage District is the lead agency under CEQA and its Guidelines for the preparation of the CEQA document for this project. It is my understanding the District issued the CEQA document about 14 days ago with only a 45-day period for the public to submit comments from the date of submittal.

Forward the draft CEQA document to me at the following address:

Robert J. Baiocchi, President
California Fisheries and Water Unlimited
California Non-Profit Corporation
P.O. Box 1035
Graeagle, CA 96103

For the record, the Semitropic Water Storage District (aka District) does have not a water right permit to store and use one (1) million acre-feet of the surface waters of the Bay Delta Estuary at the District storage facility. Consequently, the District must file a water right application and obtain a water right permit from the State Water Board to divert, store, use, and sell the people's Bay Delta Estuary water to other places of use. 27-1

For the records, there are adverse effects to endangered juvenile salmon and non-listed salmon juvenile fish, threatened steelhead juvenile fish, and juvenile striped bass at the State Pumps. Millions of these fish have been lost at the State Pumps due to pumping. The CEQA document must disclose, evaluate, and mitigate the direct, indirect, and cumulative effects to endangered salmon and non-listed juvenile fish, threatened steelhead juvenile fish, and juvenile striped bass at the the State Pumps resulting from pumping Delta Wetlands Project waters from the Bay Delta Estuary using the State Pumps to the place of storage and use, and also to the places of use. 27-2

For the record, the District et al must obtain a "Take Permit" from the US NOAA Fisheries for the taking of juvenile endangered salmon and juvenile threatened steelhead at the State Pumps pursuant to the provisions of the federal ESA.

For the record, the District et al must obtain a "Take Permit" from the California Department of Fish and Game for the taking of juvenile endangered salmon and juvenile threatened steelhead at the State Pumps pursuant to the provisions of the State of California ESA.

For the record, the District et al must obtain a "Take Permit" from the US NOAA Fisheries for the taking of endangered fish species at the Federal Pumps pursuant to the provisions of the federal ESA.

For the record, the District et al must obtain a "Take Permit" from the California Department of Fish and Game for the taking of endangered fish species at the Federal Pumps pursuant to the provisions of the State of California ESA.

27-2 Cont

For the record, there may not be capacity to pump Delta Wetlands water from the Bay Delta Estuary using the state and federal pumps. The CEQA document must disclose, evaluate, and mitigate the direct, indirect, and cumulative effects to the federal and state pumps pumping capacity. Further, because using the federal pumps requires a NEPA document, there must be a NEPA document prepared to disclose, evaluate, and mitigate the direct, indirect, and cumulative effects to people's environment resulting from said Delta Wetlands Project. Further, for the record, the District does not have federal authority to prepare and complete the NEPA document for the proposed project because the District is not a federal agency.

27-3

For the record, the District must obtain the expressed approval from the US Bureau of Reclamation to transfer the Delta Wetlands water from the Bay Delta Estuary to the places of storage and use using the federal pumps. The agreement between the USBR and the District must be part of the NEPA document as well as the CEQA document for the proposed project. The agreement must comply with all state and federal statutes and regulations, and also must be subject to public review and comment.

For the record, the District must obtain the expressed approval from the California Department of Water Resources to transfer the Delta Wetlands water from the Bay Delta Estuary to the places of storage and use using the State Pumps. The agreement between the CDWR and the District must be part of the NEPA document as well as the CEQA document for the proposed project. The agreement must comply with all state and federal statutes and regulations, and also must be subject to public review and comment.

For the record, the District must obtain the approval of the proposed Delta Wetlands Project from the State Water Board, subject to a full public hearing before the State Water Board and the public.

For the record, water quality from the Delta Wetlands Project is poor. The CEQA document must disclose, evaluate, and mitigate the direct, indirect, and cumulative effects resulting from poor water quality to the places of use where the water transferred will be used.

27-4

For the record, the California Department of Water Resources must obtain water quality cortication from the State Water Board pursuant to the provisions of the federal Clean Water Act to divert water of poor water quality from the State Pumps from the Delta Wetlands Project to the place of store and places of use. The State Pumps are licensed with the Federal Energy Regulatory Commission as the California Aqueduct FERC Project 2426.

Water transfers have been approved by the State Water Board from the Bay Delta Estuary surface water to be stored and used at the District storage facility without the District having a water right permit to store the water, use the water, and sell the water to other places of use. i.e. San Diego Water District. It is illegal to divert, store, and use the people's surface water without a conditioned water right permit to do so. Consequently the proposed project is illegal and violates a host of state statutes., including Article X,

Section 2, of the California Constitution because it is the unreasonable diversion and use of the state's water. 27-4 Cont

For the record, because the damage to the Bay Delta Estuary is significant and very controversial resulting from water projects and also because the Delta Wetlands Project is highly controversial among the people, the District must extend the deadline date of 45 days and allow for full public participation in commenting on the draft CEQA document. 27-5

For the record, we request that the CEQA document and the proposed Delta Wetlands Project is in full compliance with all applicable state and federal statutes and regulations. 27-6

Finally a review of the District website does not disclose to the public that the District is the lead agency for the draft CEQA document for the proposed Delta Wetlands water. Provide notice of the proposed CEQA document on the website managed by the District. That would be fair, reasonable, and in the greater public interest because hiding this fact would be unreasonable and not in the greater public interest. 27-7

Place these written comments into the records for the draft CEQA document for the proposed Delta Wetlands Project. Further, respond to these written comments and provide copies to the responsible agencies under CEQA, including the USBR, CDWR, State Water Board, and the US NOAA Fisheries. 27-8

Acknowledge receiving these written comments.

Respectfully Submitted

Signed by Robert J. Baiocchi

Robert J. Baiocchi, President
California Fisheries and Water Unlimited
California Non-Profit Corporation
E-Mail Address: rbaiocchi@gotsky.com

Service List

Regional Director Rod McInnus, US NOAA Fisheries
US NOAA Fisheries Office, Sacramento, California
John McCamman, Director, California Department of Water Resources
Mr. James Kassel, Asst Deputy Director, Division of Water Rights
Mr. John O'Hagan, Enforcement Unit, Division of Water Rights
Mr. Steve Herrera, Application Unit, Division of Water Rights
Mr. Richard Roos Collins, Esquire, Delta Stewardship Council
Mr. Chuck Bonham, Esquire, Delta Conservancy
Interested Parties (see e-mail)

Letter 27: Robert J. Baiocchi, President, California Fisheries and Water Unlimited, California Non-Profit Corporation

27-1 As described in Chapter 1 of the Draft Environmental Impact Report (DEIR) on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The facilities, operations, and environmental effects of the groundwater banking components are separately described and analyzed in the respective environmental impact reports for those projects (see page 1-20). The original Semitropic Groundwater Storage Bank and Semitropic Stored Water Recovery Unit are approved and currently in operation. Implementation of the Project will not alter current approved operations or expand the capacity of those groundwater storage banks. No new construction would be required to convey Project water to the groundwater banks for recharge or for pumping and delivery from the groundwater banks (page 2-6 of the DEIR).

The Project applicant will be required to apply for and obtain all applicable permits to construction and operate the Project. Table 7-1 in Chapter 7 of the DEIR presents the permit requirements and environmental review and consultation requirements for the Project. Requirements of the State Water Resources Control Board (SWRCB) are presented on pages 7-4 and 7-5.

27-2 As described in Response to Comment 27-1, the Project will be required to apply for and obtain all applicable permits to construct and operate the Project. The Semitropic Groundwater Storage Bank is approved and currently in operation. The comment's discussion of water rights for the Semitropic Groundwater Storage Bank does not pertain to the project evaluated in the DEIR.

Impacts to fisheries were addressed in Section 4.5 Fisheries Resources of the DEIR.

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

27-3 Fishery resources are addressed in Section 4.5 of the DEIR. Direct and indirect impacts of the Project on larval (page 4.5-53) as well as juvenile and adult fish (page 4.5-54) are addressed. Species covered in the impact analyses include listed species (Chinook salmon [Fall Run, Late Fall Run, Winter Run, and Spring Run], steelhead, Delta smelt, longfin smelt, and green sturgeon) as well as non-listed species (striped bass, white catfish, and shad).

The United States Fish and Wildlife Service (USFWS), the National Marine

Fisheries Service (NMFS), and the CDFG issued biological opinions for the Project previously. The Project is currently consulting with those agencies to update the biological opinions to reflect current conditions. USFWS and NMFS also have issued biological opinions to the California Department of Water Resources (DWR) and the United States Bureau of Reclamation (Reclamation) for operations of the export pumps at Clifton Court (page 4.5-20).

27-4 As discussed in Response to Comment 27-2, the Project applicant will be required to apply for and obtain all applicable permits to construct and operate the Project. Table 7-1 in Chapter 7 of the DEIR presents the permit requirements and environmental review and consultation requirements for the Project.

CALSIM was used to model Central Valley Project (CVP) and State Water Project (SWP) operations and available pumping capacity (page 3-18). The Project developed another model (In-Delta Storage Model, or IDSM) to evaluate Project operations (page 3-23). The places of use defined in the 2010 DEIR do not include CVP contractors. Additionally, because the CVP seldom has excess pumping capacity, the IDSM model assumed that the CVP pumps would not be used to export Project water (Table 3-16). Further, as part of earlier State Water Board water right hearing, Reclamation and the Project entered into a Protest Dismissal Agreement (page 1-14). Nonetheless, the Project contemplates entering into an operations agreement with Reclamation to assure that the Project does not have adverse indirect effects on CVP operations. With respect to National Environmental Protection Act (NEPA), the US Army Corps of Engineers (Corps) completed in 2001 an Environmental Impact Statement (2001 FEIS) for the project and issued a Record of Decision. The Project is in the process of updating its federal authorizations and anticipates that the Corps will remain the Lead Agency for NEPA compliance.

As part of the earlier State Water Board water right hearing, the DWR and the Project entered into a Protest Dismissal Agreement (page 1-14). Nonetheless, the Project contemplates entering into an operations agreement with the DWR to assure that the Project does not have significant indirect impacts on SWP operations. Construction and operation of the Project is required by law to comply with all applicable permit requirements, statutes and laws.

27-5 Project-specific water quality impacts are evaluated in Section 4.2 and cumulative impacts are evaluated in Chapter 5. As described in Response to Comment 27-1, and as stated in Chapter 1 of the DEIR on page 1-19, the Project will be operated in conjunction with the Semitropic Groundwater Storage Bank and the Antelope Valley Water Bank to maximize export of water to the identified places of use. The facilities, operations, and environmental effects of the groundwater banking components are separately described and analyzed in the respective environmental impact reports for those projects (see page 1-20). The Semitropic Groundwater Storage Bank is approved and currently in operation. Implementation of the Project will not alter current approved operations.

The comment regarding DWR obtaining a water quality certification is noted.

The comment regarding water transfers approved by the State Water Resources Control Board (SWRCB) that have utilized the Semitropic Groundwater Bank is noted. Such transfers are not a part of the Project.

The comment regarding the need for a water right permit is noted.

The Project has submitted applications for appropriative water right permits to divert and use water.

27-6 The review period for the DEIR was longer than that required by California Environmental Quality Act (CEQA). The DEIR was received by the State Clearing House on May 6, 2010, and the review period was extended to June 28, 2010. The public review period for the DEIR exceeded 45 days.

27-7 The Project will be implemented in compliance with all applicable state and federal statutes and regulations.

27-8 Identification of Semitropic Water Storage District as the Lead Agency for preparation of the Project EIR in accordance with the requirements of CEQA is part of the public record and is stated in the DEIR (page 1-7), Notice of Completion and Notice of Availability for the DEIR. The DEIR is posted on the Delta Wetlands Project website located at http://www.deltawetlandsproject.com along with identification of the Semitropic Water Storage District as the Lead Agency. The website also contains a list of the locations where copies of the DEIR were made available for public review. These locations included the Semitropic office and 27 libraries.

27-9 All comments received on the DEIR become part of the record for the Project and the comments, along with the responses, will be taken into consideration by Semitropic in its decision to certify the EIR as adequate under CEQA and whether or not to approve the project. As required by the CEQA Guidelines (Section 15088b), Semitropic will send the responses to comment letters provided by public agencies to those agencies at least 10 days prior to certification.

Appendix A
Water Quality Management Plan

ESA

EXHIBIT A

WATER QUALITY MANAGEMENT PLAN

October 9, 2000

Preamble

Delta Wetlands Properties ("DW") proposed a water storage project on four islands in the Sacramento-San Joaquin Delta ("Delta"). The project would involve diverting and storing water on two of the islands (Bacon Island and Webb Tract, or "reservoir islands") and seasonally diverting water to create and enhance wetlands and to manage wildlife habitat on the other two islands (Bouldin Island and Holland Tract, or "habitat islands").

The purpose of the Delta Wetlands Project ("Project") is to divert surplus Delta inflows, transferred water or banked water for later sale and/or release for Delta export or to meet water quality or flow requirements for the Delta. To operate the Project, DW would strengthen the levees and install additional siphons and water pumps on the perimeters of the reservoir islands. The Project is undergoing environmental review (CEQA and NEPA), water rights permitting (State Water Resources Control Board), and an appraisal level study of the Project by the U.S. Bureau of Reclamation ("USBR").

California Urban Water Agencies[1] ("CUWA") and its member agencies have been participating in the public review of the Project since 1997 and are parties to the water rights proceedings for the Project. The primary focus of CUWA's participation in the review of the Project has been to seek a commitment from the Project proponents to minimize and mitigate drinking water quality impacts due to Project operations. Because of the close proximity of the reservoir islands to the Banks Pumping Plant, Tracy Pumping Plant, Contra Costa Canal at Pumping Plant #1, Contra Costa Water District's ("CCWD") Los Vaqueros intake on Old River and CCWD's Mallard Slough intake (hereafter "urban intakes"), CUWA is concerned that there is a potential for DW operations to result in increased total organic carbon ("TOC"), bromide, total dissolved solids ("TDS"), and chloride concentrations in urban water supplies.

In an effort to address CUWA's water quality concerns, Delta Wetlands Properties proposes to implement a water quality management plan ("WQMP"). The WQMP includes drinking water quality protection principles, an annual operating plan, general operating principles, a comprehensive monitoring program, screening procedures and operational constraints, and mitigation of water quality impacts. Collectively, the elements of the WQMP are intended to provide the urban water utilities with the necessary assurances that the Project will be operated in a manner that will ensure the protection of public health and long-term integrity of drinking water supplies diverted from the Sacramento-San Joaquin Delta.

The WQMP was developed through a negotiated process to resolve issues that are specific to the Project. The terms and conditions of the WQMP are intended to address the potential for injury to senior water rights holders associated with water quality degradation caused by the Project.

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[1] All references to CUWA shall mean CUWA, its current member agencies and those member agencies of record as of the date of this agreement.

The impacts caused by the Project are unique because of its proximity to urban water agencies' intakes and the high rates of discharge from the reservoir islands. The Project, without the protections provided by the WQMP, has the potential to adversely impact human health by increasing disinfection by-products ("DBP") and to increase the overall cost of water utility operations. The Project could also lead to long-term degradation in drinking water quality. Because the WQMP includes distinctive features that are specific to DW, it should not be construed as setting a precedent that would be applicable to other dissimilar projects subject to State Water Resources Control Board jurisdiction.

A. Drinking Water Quality Protection Principles

The Project will adhere to the drinking water quality protection principles described below through the implementation of the terms and conditions of this WQMP.

1. Project operations shall cause no adverse health impacts to water users;

2. Project operations shall not cause nor contribute to non-compliance with current or future drinking water regulations;

3. Project operations shall cause no increases in the cost of water treatment or operations;

4. Project operations shall contribute to CALFED's progress toward achieving continuous improvement of Delta drinking water source quality; and

5. Project operations shall minimize and mitigate for any degradation in the quality of drinking water supplies.

B. Water Quality Management and Action Board and Annual Operating Plan

The Water Quality Management and Action Board and the Annual Operating Plan outlined below are intended to support the administration and implementation of the WQMP.

1. Prior to initiating or continuing Project operations, a Water Quality Management and Action Board ("WQMAB") shall be appointed to oversee the implementation of the WQMP for the Project subject to the procedures, duties and requirements set forth in Attachment 1.

2. Prior to February 15 of each year, DW will propose an Annual Operating Plan for approval by the WQMAB. The Annual Operating Plan will be updated monthly and coordinated with Central Valley Project, State Water Project, and CCWD operations. The Annual Operating Plan will include:

   a. Schedules and estimated quantities for diversions to the Project islands and discharges from the Project islands.

   b. Water quality goals and objectives, including the estimated concentration of TOC, bromide, chloride, and TDS for the diversions to the Project islands and discharges from the Project islands.

c. An estimate of the projected change in the concentration of TOC, bromide, chloride, and TDS at the urban diversion locations due to scheduled Project operations.

d. Maximum allowable concentrations of the water quality constituents of concern (TOC, bromide, TDS, and chloride) for water stored on the reservoir islands, above which it will be necessary for DW to pursue remedial actions pursuant to the Emergency Operating Plan. The maximum allowable concentrations are upper limits above which discharge of water from the reservoir islands may cause a violation of one or more of the drinking water quality protection principles.

e. An Emergency Operating Plan describing remedial actions to be taken by DW in the event the water stored on the reservoir islands exceed the maximum allowable concentrations for the constituents of concern, including a procedure for discharge of the water from the reservoir islands that will minimize the potential for impacts to urban water utilities.

f. A schedule for habitat island operations, including diversion and discharge rates.

g. A schedule for reservoir island operations for non-storage periods.

h. A description of the monitoring program, hydrodynamic models, and particle-tracking models pursuant to Section D.

i. A description of mitigation measures to be implemented by DW to offset any long-term net increase in TOC, TDS, bromide or chloride loading pursuant to Section F.

C. General Operating Principles

The general operating principles outlined below are intended to support implementation of the WQMP.

1. To maintain low TOC, bromide and salinity levels to the fullest extent practicable, DW will:

   a. Avoid practices that will result in high TOC productivity during non-storage periods;

   b. Avoid diversions to storage during peak TOC periods;

   c. Avoid diversions to storage during high bromide and high salinity periods; and

   d. Manage vegetative growth on the reservoir islands to minimize TOC production.

2. To avoid degradation in water quality at the urban intakes in the Delta, DW will develop operational procedures to:

   a. Reduce the rate of discharge from the reservoir islands as appropriate;

b. Coordinate discharges between reservoir islands; and

c. Adjust discharges for exports in accordance with Delta hydrodynamic (e.g., tides, pulse flows).

3. To avoid excessive TOC, bromide and salinity levels, DW will:

a. Pursue remedial actions or acquire offsets before initiating further diversions to storage if TOC, bromide or salinity concentrations on reservoir islands regularly exceed 80% of the maximum allowable concentrations set forth in the Annual Operating Plan.

D. Comprehensive Monitoring Program

The comprehensive monitoring program outlined below will be developed and in place prior to initiating Project operations. The monitoring program provides for the collection of data to support the screening of Project operations and for imposition of operational constraints pursuant to Section E and the identification of mitigation requirements pursuant to Section F.

1. DW will conduct real-time water quality monitoring on the reservoir and habitat islands and in the Delta channels at the discharge locations of the reservoirs and habitat islands prior to and during all discharge periods.

2. The State Department of Water Resources ("DWR"), USBR and CCWD will provide real-time water quality monitoring data at urban intakes in the Delta.

3. The owners of urban water treatment facilities will provide water quality monitoring and operational data at water treatment plants.

4. The water quality monitoring program shall include quality assurance and quality control provisions.

5. Monitoring parameters will include TOC, bromide, TDS, chloride, UVA, DO, turbidity, and temperature.

6. DW will post monthly summaries of the data collected pursuant to subsections 1 through 3 above on the DW web site or adopt an alternative means of disseminating this information to the WQMAB and interested parties that provides an equivalent degree of accessibility.

7. Hydrodynamic and particle-tracking models will be used to predict both baseline conditions (without Project) and real-time changes at the urban intakes in the Delta prior to, during and after a Project operation. DW will submit a proposed monitoring and modeling program for approval by the WQMAB prior to operating the reservoir islands with annual updates and approvals of the modeling program thereafter (through the Annual Operating Plan review process) to reflect advances in science and technology.

Water quality constituent predictions required by the WQMP shall be calculated in accordance with the initial models and modeling assumptions set forth in Attachment 3, unless otherwise approved by the WQMAB.

E. Screening Procedures and Operational Constraints to Prevent Short-Term Impacts

The process outlined below for screening of Project operations and imposition of operational constraints is intended to prevent short-term impacts to urban water utilities and to ensure adherence to the drinking water quality protection principles 1 through 3 set forth in Section A.

1. Operational screening criteria will be used to identify Project operations that may threaten adherence to one or more of the drinking water quality protection principles. The operational screening criteria are set forth in Attachment 2 and implemented as described below.

2. Prior to DW initiating each diversion to the reservoir islands and each discharge from the reservoir islands and weekly thereafter during continuing diversions and discharges, the hydrodynamic and particle-tracking models will be used to predict whether Project operations (including operations of the habitat islands) are likely to exceed one or more of the operational screening criteria at the urban intakes in the Delta. (See Attachment 2, criteria A1, A2, B1, B2, C1, and C2.)

3. If the model output indicates that Project operations may exceed one or more of the operational screening criteria at one or more of the urban intakes in the Delta, DW will conduct further studies (prior to initiating a diversion to the reservoir islands or a discharge from the reservoir islands) to determine whether one or more of the drinking water quality protection principles would be threatened at an urban water treatment plant. (See Attachment 2, criteria A3, B3, and B4.)

4. If, upon further study, it appears that Project operations may threaten one or more of the drinking water protection principles at an urban water treatment plant, a determination will be made whether the threat would be offset by a Project-induced water quality or water supply improvement. If the owner of the impacted water treatment plant agrees that the threat would be offset or agrees to waive its right to protection under the WQMP, DW may initiate the diversion to the reservoir islands or discharge from the reservoir islands.

5. If Project operations threaten a drinking water quality protection principle at the water treatment plant without offsetting benefits and the treatment plant owner has not waived its right to protection, Project operations will be reduced, rescheduled or otherwise constrained as necessary to prevent the impact from occurring.

6. If an urban water treatment plant owner presents a complaint to DW and the WQMAB that: (1) a violation of a drinking water quality protection principle has occurred or is likely to occur in the absence of remedial action, or (2) one of the Project screening criteria set forth in Attachment 2 has been exceeded or is likely to be exceeded in the absence of remedial action, and (3) the WQMAB finds that the complaint has sufficient

merit to warrant an investigation; the WQMAB shall proceed with an investigation of the complaint. Throughout the duration of the WQMAB's investigation of the complaint and until the matter is resolved by the WQMAB, Project operations shall be restricted such that the maximum discharge rate from a reservoir island shall not exceed the schedule set forth in Table 1. Alternatively, the Project operations may proceed pursuant to the terms of an Emergency Operating Plan that has been approved by the WQMAB. DW shall cooperate with the WQMAB throughout the duration of the investigation.

7. If the WQMAB pursuant to the investigations set forth in paragraph E.6 make a finding that monitoring, modeling, and/or operational constraints fail to prevent a violation of a drinking water quality protection principle resulting from Project operations, or fail to prevent an exceedance of one of the operational screening criteria set forth in Attachment 2 due to Project operations, the WQMAB shall require DW to initiate emergency operations or take remedial actions to correct the problems.

Table 1[1]

TOC Concentration on Bacon Island Minus That of Ambient Water (mg/L)[2]	Maximum Discharge Rate from Bacon Island (cfs)[2]	TOC Concentration on Webb Tract Minus That of Ambient Water (mg/L)	Maximum Discharge Rate from Webb Tract (cfs)[2]	Chloride Concentration on a Reservoir Island (mg/L)	Maximum Combined Discharge Rate from Bacon Island and Webb Tract (cfs)[2]
0 to 1.0	1,500	0 to 3.0	1,500	0 to 50	3,000
1.1 to 2.0	1,250	3.1 to 4.0	1,250	51 to 70	2,500
2.1 to 3.0	1,000	4.1 to 5.0	1,000	71 to 90	2,000
3.1 to 4.0	750	5.1 to 6.0	750	91 to 110	1,500
4.1 to 5.0	500	6.1 to 7.0	500	111 to 130	1,000
5.1 to 6.0	250	7.1 to 8.0	250	131 to 150	500
6.1 to 7.0	125	8.1 to 9.0	125	151 to 170	250
Greater than 7.0	40	Greater than 9.0	40	171 to 250	80

Table 1 footnotes:

[1] The restrictions on discharges from the reservoir islands contained in Table 1 for various concentrations of TOC and chloride are not applicable if the TOC and chloride concentrations on a reservoir island are less than or equal to the average TOC and chloride measured in the channels adjacent to the reservoir islands for the 7-day period prior to initiating the discharge.

[2] The maximum discharge rate means the average discharge rate over a 14-day period or the duration of the discharge, whichever time period is less. The maximum discharge rate shall be further constrained, as necessary, to limit the total contribution from the reservoir islands at the urban intakes to 25% of the combined export pumping at the Banks and Tracy pumping plants.

F. Mitigation of Long-Term Water Quality Impacts.

The process outlined below for mitigation of long-term water quality impacts due to Project operations is intended to prevent long-term impacts to urban water utilities and ensure adherence to the drinking water quality protection principles 3 and 4 set forth in Section A. Should Project operations produce a long-term net increase in TOC, TDS, bromide or chloride loading in the urban diversions, mitigation may be necessary, as described below:

1. During the course of the 12-month operating plan, DW shall maintain a running account of the changes in TOC, TDS, bromide and chloride in the water diverted from the Delta for urban use due to Project operations.

2. Once every three years, DW shall submit an accounting of the net increase or decrease in TOC, TDS, bromide and chloride loading in the water diverted from the Delta for urban use due to Project operations (including habitat island operations).

3. DW shall be required to acquire offsets or otherwise mitigate 150% of the net increase in TOC, TDS, bromide and chloride loading greater than 5% in the urban diversions due to Project operations.

4. DW must acquire the offsets or complete the mitigation at its expense within 24 months after the submission of the accounting set forth in 2 above. Any offset or mitigation that is provided in the current accounting period that is due to a mitigation requirement that accrued during a previous accounting period shall be excluded from the calculation of the net increase for the current accounting period.

5. In recognition of initial Project start-up, long-term mitigation requirements for TOC loading shall be waived for the first year of reservoir operation; however, the screening procedures and operational constraints to prevent short-term impacts set forth in Section E shall still apply.

ATTACHMENT 1
WATER QUALITY MANAGEMENT AND ACTION BOARD

1. **Purpose**: A Water Quality Management and Action Board ("WQMAB"), or an equivalent mutually acceptable authority, shall be appointed to oversee the implementation of the Water Quality Management Plan ("WQMP") for the Delta Wetlands Project ("Project").

2. **Members**:

   a. **Qualifications**: The three members and three alternates shall be registered professional engineers, public health professionals or scientists possessing a thorough understanding of Delta operations and recognized for their expertise in organic and inorganic water chemistry and drinking water treatment.

   b. **Appointment Process**: The State Water Resources Control Board ("SWRCB"), California Urban Water Agencies ("CUWA"), and Delta Wetlands Properties ("DW") shall each appoint one member and one alternate. Each prospective member of the WQMAB shall be required to disclose any past or current conflicts of interest that may affect their ability to serve as impartial members of the WQMAB. Appointment of prospective members with past or current conflicts of interest must be approved by the mutual consent of CUWA and DW. In the event that the SWRCB does not appoint its member or alternate to the WQMAB, CUWA and DW shall appoint the SWRCB's member or alternate member. Each of the WQMAB members shall be appointed for a term of four years. At the end of the 4-year term, the same selection process will be used to select the new WQMAB.

3. **Term**: The WQMAB shall be established prior to the first diversions to storage on Bacon Island or Webb Tract ("initial operations") and shall continue thereafter for the duration of Project reservoir operations.

4. **Compensation**: Members of the WQMAB are to be compensated by DW for their time on an hourly basis. Such costs, including costs of reports which may be prepared and studies which may be undertaken by the WQMAB shall be part of the annual operation and maintenance costs of the Project.

5. **Duties**:

   a. The WQMAB shall serve as a neutral water quality advisory panel, hearing and investigating formally identified problems purportedly caused by Project reservoir operations, including but not limited to nonconformance with the Annual Operating Plan and violations of the Drinking Water Quality Protection Principles.

   b. Prior to initial operations and annually thereafter, DW shall submit a proposed Annual Operating Plan for approval by the WQMAB pursuant to Section B of the WQMP.

i. Prior to approving the Annual Operating Plan, the WQMAB shall provide an opportunity to comment on the draft Annual Operating Plan to the SWRCB, CUWA, and all other parties who have notified the WQMAB of their interest to comment on the draft Annual Operating Plan ("Interested Parties").

ii. In the event of any objection by CUWA or an Interested Party, the WQMAB may only approve the Annual Operating Plan after holding a noticed hearing on the proposed operating plan.

iii. If the WQMAB approves the Annual Operating Plan, the WQMAB shall immediately so advise DW.

iv. If the WQMAB does not approve an Annual Operating Plan, the WQMAB shall, within 10 days, provide a report explaining its decision to DW and to the Executive Director of the SWRCB. DW may provide a response to the WQMAB report to the Executive Director.

v. The issue of adequacy of the Annual Operating Plan will be decided by the Executive Director of the SWRCB as soon as possible upon receipt of such report.

vi. If the WQMAB does not approve the Annual Operating Plan for any reason, DW may continue its reservoir operations pursuant to the previously approved Annual Operating Plan or pursuant to paragraph E.6 of the WQMP, if applicable.

c. DW shall make available water quality monitoring and modeling data to the WQMAB pursuant to Sections D and E of the WQMP.

d. During the first two years following initial operations, the WQMAB shall review water quality monitoring data at each stage of filling and discharge of the reservoir islands.

e. At the end of the third year of operations and every three years thereafter, DW shall submit to the WQMAB an accounting of the net increase or decrease in water quality parameters of concern in the water diverted from the Delta for urban use due to Project operations pursuant to Section F of the WQMP. Prior to initiating the fourth year of operations and each year thereafter, the Annual Operating Plan shall include a plan to offset or otherwise mitigate any net increase in water quality parameters of concern pursuant to Section F of the WQMP.

f. If the WQMAB determines that the Project operations are not in conformance with the Annual Operating Plan, the WQMAB shall require the permittee to initiate emergency operations or take remedial actions to correct problems as provided for in paragraph E.7 of the WQMP.

g. The terms of the WQMP may be adjusted over time by the SWRCB as set forth below. The SWRCB reserves jurisdiction over changes in the WQMP to coordinate or modify its terms for the protection of other legal users of water and the public interest as future

conditions may warrant. The SWRCB delegates authority to the Executive Director of the SWRCB to take actions under this reservation of jurisdiction as set forth below.

i. During the third year of Project operations, the WQMAB shall review the WQMP to determine if changes in any of the WQMP terms are advisable. In its review, the WQMAB shall examine actual operation of the Project to date and any adverse effects of Project reservoir operations, including impacts to urban water agencies, degradation of drinking water quality, overall progress toward achieving continuous improvement of drinking water source quality, and any recent changes in state and federal drinking water regulations. The WQMAB will base each of its recommended changes to WQMP terms, if any, on its independent, professional judgment. At the conclusion of its review, the WQMAB shall issue a written list of its recommended changes, if any. The list shall be sent by the WQMAB to the SWRCB, DW, CUWA, and all other Interested Parties.

ii. If no party raises a reasonable objection to a change recommended by the WQMAB within 30 days of service of any proposed change, then the Executive Director of the SWRCB may approve the change without the need for a comment period or hearing. In the event of any objection, the SWRCB may only approve the change after it provides notice of and an opportunity to comment on the proposed change. If requested by an DW, CUWA, or any Interested Party, the SWRCB may hold a hearing on the proposed change.

h. After its initial 3-year review of the WQMP as set forth above, the WQMAB may thereafter periodically review and change the terms of the WQMP so long as the SWRCB review and approval process set forth above is followed.

ATTACHMENT 2
OPERATIONAL SCREENING CRITERIA

Operational Constraints

The operational screening criteria outlined in this attachment were developed to support the process outlined in Section E of the Water Quality Management Plan ("WQMP") for screening of Delta Wetlands Project ("Project") operations and imposition of operational constraints. This process is intended to support Delta Wetlands' ("DW") adherence to the drinking water quality protection principles 1 through 3 described in Section A of the WQMP.

These screening criteria are based on existing state and federal standards for disinfection by-products and their precursors. Should drinking water DBPs, contaminants or precursors, or any other drinking water contaminants be further regulated under state or federal law, the WQMAB shall recommend that the SWRCB amend the screening criteria to ensure that the intent of the drinking water quality protection principles continues to be met.

Evaluation of Project operations using these screening criteria will be based on real-time field measurements and computer modeling results, both of which are subject to uncertainties. For purposes of determining whether the Project has caused an exceedance of one or more of the operational screen criteria, an uncertainty of ±5% of the screening criteria will be assumed.[2] Should greater precision in measurements and calculations be developed, the improved level of confidence will be used as appropriate for each individual parameter.

An exceedance of the operational screening criteria set forth in Sections A, B and C below shall be calculated as a 14-day average, or the average for duration of the discharge, whichever time period is less.

A. TOC Loading

The criteria below will be used in the screening procedures set forth in paragraphs E2 and E3 of the WQMP and in the imposition of operational constraints in paragraph E5 of the WQMP. The criteria are intended to prevent an impact due to Project-related TOC loading that may cause an increase in water treatment costs.

1. Project operations that cause an increase in TOC of more than 1.0 mg/L at the urban intakes; or

2. Project operations that cause TOC concentrations at the urban intakes to exceed 4.0 mg/L; and

[2] An uncertainty of ±5% shall mean that an exceedance of an operational screen criteria does not occur until the Project causes the following values to be exceeded: condition A.1 not applicable; conditions A.2 and A.3 = 0.2 mg/L TOC; conditions B.1 and B.3 = 3.2 µg/L TTHM; conditions B2 and B4 = 0.4 µg/L bromate; conditions C1 and C2 not applicable.

3. Project operations that cause TOC concentrations at a water treatment plant to exceed 4.0 mg/L.

B. DBP Formation

The criteria below will be used in the screening procedures set forth in paragraphs E.2 and E.3 of the WQMP and in the imposition of operational constraints in paragraph E.5 of the WQMP. The criteria are intended to prevent an impact due to Project-related DBP precursor loading that may cause health impacts to water users or may cause or contribute to a water treatment plant violation of a health regulation:

1. Project operations that cause or contribute to modeled Total Trihalomethanes ("TTHM") concentrations in drinking water in excess of 64 µg/L, as calculated in the raw water of an urban intake in the Delta;
2. Project operations that cause or contribute to modeled bromate concentrations in drinking water in excess of 8 µg/L, as calculated in the raw water of an urban intake in the Delta;
3. Project operations that cause or contribute to predicted TTHM concentrations in drinking water in excess of 64 µg/L, as calculated from measurements at the outlet of a water treatment plant; or
4. Project operations that cause or contribute to predicted bromate concentrations in drinking water in excess of 8 µg/L, as calculated from measurements at the outlet of a water treatment plant.

C. Salinity Impacts Resulting from Project Operations

The criteria below will be used in the screening procedures set forth in paragraphs E.2 and E.3 of the WQMP and in the imposition of operational constraints in paragraph E.5 of the WQMP. The criteria are intended to promote Project operations that select the highest water quality for diversion to the islands and minimize salinity impacts associated with discharges from the reservoir islands:

1. Project operations that cause an increase in salinity of more than 10 mg/L chloride at one or more of the urban intakes; or
2. Project operations that cause or contribute any salinity increase at the urban intakes in the Delta exceeding 90% of an adopted salinity standard (e.g., Rock Slough chloride standard defined in SWRCB Decision 1641).

ATTACHMENT 3
INITIAL MODELING ASSUMPTIONS

The screening procedures and long-term mitigation requirements of the Water Quality Management Plan ("WQMP") require several analytical tools to predict water quality and disinfection by-products ("DBP") changes or Total Trihalomethanes ("TTHM"). Three models will be required to implement the WQMP: 1) a water quality model, 2) a particle-tracking model, and 3) a water treatment model for DBPs. The Annual Operating Plan sets forth periodic update and approval requirements of the final modeling program; however, the initial modeling assumptions included in the evaluations for the WQMP have been included below:

1. Initial modeling assumptions
   a. Baseline hydrology: existing conditions and short-term forecasts (50% exceedence) of future conditions
   b. Baseline water quality: Fischer Delta Model Version 10 with real tide simulations

2. Initial land use assumptions
   a. No-Project irrigation and drainage quantities: DWR DICU historic rates
   b. No-Project agricultural drainage quality:
      i. Ag bromide to channel bromide ratio (Ag/Ch Ratio) = max ($65.597 * Ch^{-0.6436}$ or 125%)
      ii. Ag TOC = Average of west and south Delta MWD assumptions

3. TTHM Model (Malcolm Pirnie)

$$TTHM = 7.21 \times TOC^{0.004} \times UVA_{254}{}^{0.534} \times (Cl_{DOSE} - 7.6 \times NH_3N)^{0.224} \times Cl_{TIME}{}^{0.255} \times (Br+1)^{2.01} \times (pH-2.6)^{0.719} \times T^{0.48}$$

Where:

TOC = raw water TOC (mg/l) x (0.75 if TOC<4 or 0.65 if TOC>4)

$UVA_{254} = 0.033 \times TOC + 0.010$

Cl_{DOSE} (Cl:TOC ratio) = 1.0

NH_3N = Not Applicable

Cl_{TIME} (contact time) = 1.0 hour

Br = raw water bromide (mg/l)

$pH = 7.0$

T = Monthly average raw water temperature (9-24°C)

4. Bromate Model (Ozekin)

$BRM = [1.63\ E\text{-}06 \times TOC^{-1.26} \times pH^{5.82} \times O3_{DOSE}^{1.57} \times Br^{0.73} \times O3_{TIME}^{0.28}] \times BRMCF$

Where:

TOC = raw water TOC (mg/l) x (0.75 if TOC<4 or 0.65 if TOC>4)

pH = 7.0

$O3_{DOSE}$ (O3:TOC ratio) = 0.6

Br = raw water bromide (µg/l)

$O3_{TIME}$ (contact time) = 12 minutes

BRMCF (bromate correction factor) = 0.56

Appendix B
Mitigation Monitoring and Reporting Program

ESA

APPENDIX B

Delta Wetlands Place of Use Project Mitigation Monitoring and Reporting Program

Public Resources Code Section 21081.6, subdivision (a)(1) requires lead agencies to, "adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation". This Mitigation Monitoring and Reporting Program (MMRP) identifies mitigation measures adopted by the Semitropic Water Storage District (Semitropic) as conditions for approval of the proposed project, timing of action, and parties responsible for implementation and monitoring. Mitigation measures are numbered consistent with the numbering included in the April 2010 Delta Wetlands Place of Use Draft Environmental Impact Report (DEIR) (State Clearinghouse No. 1988020824), as updated by responses to comments included in the Delta Wetlands Place of Use Final Environmental Impact Report (FEIR).

The MMRP table includes the following:

- **Mitigation Measures** – adopted mitigation measures from the DEIR.
- **Implementation Responsibility** – this column identifies who is responsible for implementing the actions described in the mitigation measures.
- **Monitoring Responsibility** – identifies who is responsible for monitoring implementation of the mitigation requirements.
- **Monitoring and Reporting Actions** – describes what actions are to be taken to monitor and report on implementing the mitigation measures.
- **Timing**– identifies the timing of implementation of the mitigation requirements.
- **Verification of Compliance** – a column to note completion of mitigation measure implementation.

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Water Quality					
Mitigation Measure WQ-MM-1: Follow Guidelines from Proposed Delta TMDL for Methylmercury The proposed TMDL Basin Plan amendments for mercury contain requirements for organizations that propose to create wetlands within the Delta. After the mercury TMDL is finalized, the Project applicant would follow the requirements of the TMDL, which likely will include: • Participate in a management effort to evaluate and minimize health risks associated with eating fish contaminated with mercury (Wood et al. 2010b: BPA-15, BPA-16). • For phase 1 of the TMDL, participate in a monitoring program to evaluate methylmercury loading and procedures to minimize methylmercury loading from wetlands (Wood et al. 2010b: BPA-3). • For phase 2 of the TMDL, implement approved methylmercury control actions. These potential actions and their effectiveness are uncertain at this time. Other possible mitigation might involve an offset program (Wood et al. 2010b: ES-3, BPA-13).	Project applicant	Semitropic	Confirm that Project discharges do not increase methylmercury loading above the adopted mercury TMDL limits	On-going: operation	
Mitigation Measure WQ-MM-2: Incorporate Mercury Methylation Control Measures in Wetland Design Certain actions such as permanent inundation or fall/winter inundation may help to reduce the formation of methylmercury in wetlands. As phase 1 of the TMDL is being implemented, knowledge about procedures to reduce methylmercury formation may improve. The Project applicant would use any feasible procedures to reduce methyl mercury formation on the reservoir or habitat islands. This could include modifying the final HMP design or making changes later in response to new information. Proposed techniques (Wood et al. 2010a: 31; Wood et al. 2010b: 108) include taking the following actions: • modify wetland design (e.g., depth, period of inundation, and vegetation), • reduce discharge of water with high concentrations of methylmercury, and • trap sediment with actions such as creating settling basins or planting appropriate types of vegetation (in order to reduce discharge of methylmercury attached to sediment).	Project applicant	Semitropic	Confirm the incorporation of feasible methods into Project wetland design to reduce methylmercury formation	Prior to final wetland design On-going: operation	
Mitigation Measure WQ-MM-3: Conduct Assessments of Potential Contamination Sites and Remediate as Necessary The Project applicant will conduct site assessments at potential contamination sites, including sites associated with agricultural airstrip operations. If the results of a site assessment indicate that contamination is likely to mobilize into the stored water, the Project applicant shall develop plans for site remediation. Such site assessments and remediation typically would be performed under the supervision of the RWQCB. All required assessments and remediation would be completed prior to the beginning of Project water storage.	Project applicant	Semitropic	Confirm that assessment of potential contamination sites and any necessary remediation is completed	Prior to operation	
Mitigation Measure WQ-MM-4: Clearly Post Waste Discharge Requirements, Provide Waste Collection Facilities, and Educate Recreationists Regarding Illegal Discharges of Waste Prior to operation of the Project recreation facilities, post notices at all Project recreation facilities describing proper methods of disposing of waste. WDRs will be posted and enforced in accordance with local and state laws and ordinances. Prior to operation of the Project recreation facilities, provide waste collection receptacles on and around the boat docks for the boaters using the Project recreation facilities. Prior to operation of the Project recreation facilities, provide educational materials to inform recreationists about the deleterious effects of illegal waste discharges and the location of waste disposal facilities throughout the Delta.	Project applicant	Semitropic	Confirm posting of waste discharge requirements; placement of waste collection receptacles; and availability of education materials describing illegal discharges of waste	Prior to operation On-going: operation	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Utilities, Public Services, and Highways					
Mitigation Measure UT-MM-1: Monitor Locations Where Gas Pipelines Cross Bacon Island Levees during and after Levee Construction During levee strengthening, the Project applicant engineers will install equipment to monitor levee settlement and subsidence rates. After levee completion, the Project applicant will conduct weekly inspections to check for potential problems at the gas pipeline crossings, including concerns about levee stability, settlement, and subsidence If the weekly inspection indicates that settlement, erosion, or slumping at the gas pipelines has occurred, the Project applicant will notify PG&E and will implement corrective measures to mitigate any decrease in levee stability near the gas lines.	Project applicant	Semitropic	Confirm the installation of equipment to monitor levee settlement and subsidence rates and that weekly inspections are conducted to check for potential problems at the gas pipeline crossings	On-going: operation	
Mitigation Measure UT-MM-2: Relocate Electrical Distribution Lines to the Perimeter Levee around Webb Tract The Project, in coordination with PG&E, will permanently relocate the existing electrical distribution lines on Webb Tract to the improved perimeter levees during Project construction. The new or relocated distribution lines will be located along perimeter levees and will be installed overhead, similar to existing installations. Before temporarily or permanently modifying or relocating existing electrical lines, the Project will conduct special-status plant surveys (Mitigation Measure VEG-MM-1) in areas that could be affected by the proposed modifications. If threatened or endangered plant species are found, the Project will avoid disturbing those plants when making changes to existing electrical lines.	Project applicant	Semitropic	Confirm completion of special-status plant surveys before temporarily or permanently modifying or relocating existing electrical lines. Confirm that project design relocates existing electrical distribution to improved perimeter levees and are installed overhead. Confirm that if endangered plant species are found that the Project avoids them when making changes to existing electrical lines.	Prior to final design approval Prior to construction	
Mitigation Measure UT-MM-3: Extend Electrical Distribution Lines to Serve New Siphon and Pump Stations and Recreation Facilities The Project, in coordination with PG&E, will extend existing electrical distribution lines on the Reservoir Islands where needed to serve new siphon and pump stations and recreation facilities. Before modifying existing electrical lines, the Project will conduct special-status plant surveys (Mitigation Measure VEGMM-1) in areas that could be affected by the proposed modifications. If threatened or endangered plant species are found, the Project will avoid disturbing those plants when making changes to existing electrical lines.	Project applicant	Semitropic	Confirm completion of special-status plant surveys prior to modifying existing electrical lines. Confirm the extension of existing electrical distribution to serve new siphon and pump stations and recreation facilities. Confirm that if endangered plant species are found that the Project avoids them when making changes to existing electrical lines.	Prior to final design approval Prior to construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure UT-MM-4: Provide Adequate Lighting in and around Buildings, Walkways, Parking Areas, and Boat Berths The Project will provide illumination, in compliance with the recommendations of the Contra Costa County Sheriff's Department and the San Joaquin County Sheriff's Department, in and around recreation facilities, walkways, parking areas, and boat berths on all the Project islands. Also, the Project will consult with both sheriff departments for building design recommendations in order to avoid features that may promote criminal activity.	Project applicant	Semitropic	Confirm that project design provides illumination in complaince with reccomendations in and around recreation facilities, walkways, parking areas, and boat berths on all the Project islands. Confirm consultation with both sheriff departments for building design recommendations to reduce potential criminal activity.	Prior to final design approval	
Mitigation Measure UT-MM-5: Provide Private Security Services for Recreation Facilities and Boat Docks The Project will provide 24-hour on-site private security for the recreation facilities and boat docks on all four Project islands. The security service would assist the San Joaquin County Sheriff's Department and Contra Costa County Sheriff's Department in deterring criminal activity.	Project applicant	Semitropic	Confirm that 24-hour on-site security is provided for at recreation facilities and boat docks on all four Project islands.	On-going: operation	
Mitigation Measure UT-MM-6: Incorporate Fire Protection Features into Recreation Facility Design The Project will require recreation facilities to incorporate the Uniform Building Codes and the Uniform Fire Codes into the design of the recreation facilities and boat docks.	Project applicant	Semitropic	Confirm that the Project facilities incorporate the Uniform Building Codes and the Uniform Fire Codes into the design of the recreation facilities and boat docks.	Prior to final design approval	
Mitigation Measure UT-MM-7: Provide Fire Protection Services to Webb Tract and Bacon Island The Project, in coordination with the county and the Local Agency Formation Commission (LAFCO), will incorporate Webb Tract and Bacon Island into an existing fire protection district.	Project applicant	Semitropic	Confirm that through coordination with the county and the LAFCO, the Webb Tract and Bacon Island are incorporated into an existing fire protection district or that a new fire protection district is created to serve these islands upon full development of the recreation facilities.	Prior to operation	
Mitigation Measure UT-MM-8: Obtain Appropriate Local and State Permits for Recreation Facility Services and Utilities Before construction of the proposed recreation facilities, the Project will obtain all required permits and approvals from local and state agencies for the design and construction of utilities and services, including, but not limited to, water supply, sewage disposal, and solid waste disposal on the Project islands. In order to obtain a sewage permit in San Joaquin County, the Project will submit an application along with a work plan for the recreation facilities to the San Joaquin County Environmental Health Department. The work plan will be reviewed by the Environmental Health Department to ensure compliance with all county requirements, and a permit will be issued or denied based on the findings of the review (Jones & Stokes 2001).	Project applicant	Semitropic	Confirm that all required permits and approvals from local and state agencies have been obtained before construction begins for the design and construction of utilities and services.	Prior to construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Contra Costa County Environmental Health Division issues sewage permits in Contra Costa County. As with San Joaquin County, the Project will be required to submit an application. In addition, the Project will be required to submit three sets of plans for the recreation facilities along with a site map depicting existing structures and resources on the islands, and a safety plan. Issuance of the permit will be based on compliance with all County requirements, review of the application, and site visit information obtained by the health inspector (Jones & Stokes 2001). If, when specific design details are submitted to the appropriate regulating agencies, the agency determines that site-specific environmental impacts are not covered in enough detail by the NEPA and CEQA documentation already completed for the Project, additional environmental documentation may be required prior to approval of permits, entitlements, or alternative treatment methods.					
Fishery Resources					
Mitigation Measure FISH-MM-1: Conservation of Shallow-Water Vegetated Habitat The Project facilities will be designed to minimize impacts to shallow-water vegetated habitat. The Project will conserve such habitat affected by construction of Project facilities at a ratio of 3:1. The acreage affected will be determined based on the final construction footprint acreage and surveys of the affected area. The Project will compensate for the affected shallow-water vegetated habitat by placement of a conservation easement on tidal habitat at the Chipps Island site owned by the Project applicant prior to construction.	Project applicant	Semitropic	Confirm the Project facilities are designed to minimize impacts to shallow-water vegetated habitat and that habitat is conserved at a 3:1 ratio. Confirm that the Project compensates for the affected shallow-water habitat by placement od a conservation easement on tidal habitat at the Chipps Island site.	Prior to final design approval	
Mitigation Measure FISH-MM-2: Site Project Facilities to Avoid Existing Shallow-Water Vegetated Habitat Project facilities will be sited at locations that avoid existing shallow-water vegetated habitat. Surveys of vegetation in shallow-water habitat will be undertaken by qualified botanists to determine appropriate locations to minimize impacts.	Project applicant	Semitropic	Confirm completion of surveys of vegetation in shallow-water habitat by a qualified biologist to determine appropriate locations to minimize impacts. Confirm that Project facilities are located at locations that avoid existing shallow-water vegetated habitat.	Prior to final design approval	
Mitigation Measure FISH-MM-3: Limit Waterside Construction to Less- Sensitive Time Periods Waterside construction of Project facilities will be restricted to the July–October period. This will minimize exposure of sensitive species such as delta smelt, longfin smelt, Chinook salmon and steelhead to the possible negative effects of construction activities.	Project applicant	Semitropic	Confirm that waterside construction is restricted to the July-October period.	On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure FISH-MM-4: Implement Best Management Practices for Waterside Construction Construction activities for the Project facilities will have BMPs implemented to minimize habitat alteration. A stormwater pollution prevention plan will be developed for use during construction, following guidelines provided by the California Stormwater Quality Association (2003). BMPs will be documented and adhered to and will be based on guidelines provided in the California Stormwater BMP Handbook for Construction (California Stormwater Quality Association 2003). The following elements will be covered by the BMPs: • erosion control, • sediment control, • wind erosion control, • tracking control, • non-stormwater management, • waste management and materials pollution control. In addition, underwater sound pressure change impacts from pile driving and related activities will be reduced by employing appropriate technology to avoid sound threshold exceedance. Vibration hammers or percussive hammers with bubble curtains may be used during in-water work.	Project applicant	Semitropic	Confirm the implementation of BMPs and a stormwater pollution prevention plan during construction of the Project facilities. Confirm the use of appropriate technology to avoid sound threshold exceedance from pile driving and related activities..	On-going: construction	
Mitigation Measure FISH-MM-5: Implement a Fishery Improvement Mitigation Fund The Project applicant will implement a fishery improvement mitigation fund that will provide monetary compensation to support habitat enhancement and conservation of fish populations. Annual fund contributions will be based on the annual quantity of water diverted to the Project Reservoir Islands, the amount of this water exported, and Project effects. Previously, DFG and NMFS imposed permit terms that called for between $750–1,250/TAF for diversions during October through August and $2,250/TAF for export discharges. Revised permit terms may be established by USFWS, DFG, and NMFS. Initial funding will be provided prior to implementing the Project. Use of the monies from the fund will be at the discretion of the resource agencies that will implement actions to improve habitat conditions and decrease mortality for species impacted by the Project; it is expected that money from the fund will be contributed to several of the following improvement actions: • Augmentation of spawning and rearing habitat for salmonids in tributaries of the Central Valley. A good example is opportunities to provide funding toward the Battle Creek Salmon and Steelhead Restoration Project implemented by DWR, Reclamation, USFWS, DFG, and NMFS. • Restoration of habitat within the Delta. There are opportunities to contribute funds to the Delta Pumping Plant Fish Protection Agreement (i.e., Four Pumps Agreement) which calls for cost-sharing and has successfully conducted restoration projects, installed screens and barriers, and increased enforcement in the Delta. • Rearing and releasing additional fish. There is an opportunity to contribute to the UC Davis/USFWS Fish Conservation and Culture Facility that is currently rearing delta smelt as a safeguard against further declines in the wild population but requires additional facilities to maintain sufficient family groups to maintain genetic diversity. • Improving fish salvage operations. There is an opportunity to contribute to DWR and Reclamation's efforts to improve salvage techniques at the SWP and CVP fish facilities in accordance with the NMFS (2009) OCAP BO.	Project applicant	Semitropic	Confirm that a fishery improvement mitigation fund has been implemented and that annual fund contributions are made.	Prior to operation	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure FISH-MM-6: Establish a Shallow-Water Aquatic Habitat Conservation Easement Prior to construction, the Project will secure a perpetual conservation easement (easement) for 200 acres of shallow-water aquatic habitat on Chipps Island that are owned by the Project applicant but not currently protected by easement or covenant. The easement will fully protect in perpetuity the shallow-water aquatic habitat. A management plan for the easement area will be developed by the Project within the first year of Project operation for the habitat covered by the easement, and will be incorporated as an exhibit to the easement. Additionally, the Project will demonstrate to the USFWS documentation that there is adequate financing for the perpetual management of the habitat protected by the conservation easement consistent with the management plan including that (1) adequate funds for the management of habitat in perpetuity protected by the conservation easement have been transferred to an appropriate third-party, and (2) the third party has accepted the funds and (3) such funds have been deposited in an interest-bearing account intended for the sole purpose of carrying out the purposes of this easement. The easement (along with a title report for the easement area) and management plan will be approved by the USFWS prior to recordation. After approval, the easement and management plan will be recorded in the appropriate County Recorder's Office(s). A true copy of the recorded easement will be provided to the USFWS within 30 days after recordation. The conservation easement will mitigate for potential losses of larval/early juvenile smelt rearing habitat. For delta smelt, the average impact in terms of the loss of optimal salinity habitat was actually a very slight benefit of 0.04 km2 increased area (9.9 acres per year). The maximum impact was a decrease of 0.79 km2 (195 acres). This is approximately the size of the proposed conservation easement of 200 acres of habitat at Chipps Island.	Project applicant	Semitropic	Confirm that a shallow-water aquatic habitat conservation easement on Chipps Island owned by the Project applicant but not currently protected by easement or covenant has been secured. Confirm that a management plan for the easement area has been developed within the first year of Project operation. Confirm that the Project demonstrates to the USFWS that there is adequate financing for the perpetual management of the habitat protected by the conservation easement consistent with the management plan.	Prior to construction Within one year of operation	
Vegetation and Wetlands					
Mitigation Measure VEG-MM-1: Site Project Facilities to Avoid Special- Status Plant Populations The Project applicant will conduct special-status plant surveys before construction of Project facilities and will site facilities to avoid special-status plant populations. If special-status plant species are discovered, Mitigation Measures VEG-MM-2 and VEG-MM-3 will be required.	Project applicant	Semitropic	Confirm completion of special-status plant surveys before construction of Project facilities and siting of facilities to avoid special-status plant populations. Confirm the implementation of Mitigation Measures VEG-MM-2 and VEG-MM-3 if special-status plant species are discovered.	Prior to final design approval	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure VEG-MM-2: Protect Special-Status Plant Populations from Construction and Recreation Activities To mitigate potential indirect impacts of construction, the Project will use several measures to protect special-status plants that are within 200 feet of Project facility sites. First, the boundaries of each population will be determined and marked with surveyor's flagging. Second, special-status plants within 100 feet of Project facility sites will be protected by temporary barricades erected 50 feet from the edge of the population nearest the facility site. Plants 100–200 feet from the construction sites will be identified with brightly colored flagging on vegetation and/or surveyor's stakes that are plainly visible to construction personnel approaching the area occupied by the plants. Flagging will not be obscured by vegetation. Construction crews and Project maintenance personnel will be informed of the presence of the plants, the function of the barricades and flagging, and the strict avoidance requirements. If special-status plant populations are inadvertently affected by construction, the Project applicant will contact DFG and discuss appropriate mitigation to offset impacts, including development of a mitigation monitoring program and performance standards. Areas that support special-status plant populations will be posted as sensitive and public access limited. If special-status plant populations are inadvertently affected by recreational uses, per Mitigation Measure VEG-MM-3 the Project will contact DFG and discuss appropriate mitigation to offset impacts, including development of a mitigation monitoring program and performance standards.	Project applicant	Semitropic	Confirm the protection of special-status plants through the implementation of measures, including marking the boundaries of special-status plant populations with surveyor's flags, protecting special-status plants within 100 feet of Project facility sites with barricades, identifying special-status plants 100-200 feet from the construction sites with surveyor's flags and contacting CDFG if special-status plants are inadvertently affected by construction.	On-going: construction	
Mitigation Measure VEG-MM-3: Develop and Implement a Special-Status Plant Species Monitoring and Mitigation Plan The Project applicant, in consultation with DFG and USFWS, will develop and implement a plan for mitigating unavoidable impacts on special-status plant populations. At a minimum, this plan will include: • guidelines for conducting preconstruction surveys, • avoidance and protection guidelines for individual species, and • measures that promote the protection and enhancement of existing populations. Although the protection and enhancement of existing habitat will be the primary focus of the plan, it may also include the transplantation of individuals or colonies, collection and planting of seeds or nursery grown plants, and creation of new habitat, provided such mitigation has a high potential for success. Additionally, the plan will include monitoring guidelines to ensure the successful protection, avoidance, and/or establishment of special-status plants.	Project applicant	Semitropic	Confirm the development and implementation of a special-status plant species monitoring and mitigation plan in consultation with CDFG and USFWS. Confirm that the plan includes guidelines for conducting preconstruction surveys, avoidance and protection guidelines for individual species and measures that promote the protection and enhancement of existing populations.	Prior to construction	
Wildlife					
Mitigation Measure W-MM-1: Monitor Effects of Aircraft Flights on Greater Sandhill Cranes and Wintering Waterfowl and Implement Actions to Reduce Aircraft Disturbances of Wildlife The Project applicant will develop a monitoring program in consultation with DFG and the Habitat Management Advisory Committee (HMAC) and implement the program to determine whether airstrip use on hunt days has a deleterious impact on greater sandhill cranes or waterfowl. The plan will be submitted to the State Water Board's Chief of the Division of Water Rights within 1 year of issuance of Project operation permits. The following will be the major elements of the monitoring plan: • criteria for evaluating monitoring data that would be used to determine whether use of the airstrip on hunt days is having a significant impact on greater sandhill cranes and waterfowl (i.e., more	Project applicant	Semitropic	Confirm the development and implementation of a sandhill crane and waterfowl monitoring program in consultation with CDFG and HMAC. Confirm the submission of the plan to the State Water Board's Chief of the Division of Water Rights within 1 year of issuance of Project operation permits.	Within 1 year of issuance of Project operation permits	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
than 1 greater sandhill crane collision per year and greater than 5 waterfowl collisions per year), • criteria for determining appropriate mitigation requirements for offsetting significant impacts based on the level of impact airstrip use has on these species (i.e., restricting flights to day-time hours and clear conditions), • a detailed description of monitoring protocols, and • a monitoring schedule that estimates when data would be sufficient to determine whether airstrip use on hunt days has significant impacts on greater sandhill cranes or waterfowl. If, based on monitoring results, airstrip use on hunt days is found to have a significant impact on greater sandhill cranes or waterfowl, DFG, in consultation with the HMAC, may recommend to the State Water Board's Chief of the Division of Water Rights that airstrip use be modified to ensure that the goals for establishment of the closed hunting zone are met. Depending on the level of impact, recommendations could include closing hunting on Bouldin Island during the landing and takeoff period, restricting the number of flights permitted per day, changing the landing and takeoff period to reduce impacts, or closing the use of the airstrip on hunt days. Conversely, if monitoring indicates that there is no significant impact on greater sandhill cranes or wintering waterfowl, DFG, in consultation with the HMAC, could recommend that the proposed initial aircraft use restrictions remain in place or be reduced.					
Mitigation Measure W-MM-2: Monitor Waterfowl Populations for Incidence of Disease and Implement Actions to Reduce Waterfowl Mortality The Project applicant will retain a qualified biologist to monitor waterfowl use areas on the Project islands to locate incidences of waterfowl disease mortalities. The Project applicant, in cooperation with DFG and USFWS, will develop management strategies to be employed in the event of disease outbreaks. On identification of a disease outbreak, the Project applicant will notify DFG and, in cooperation with DFG biologists, implement management strategies to reduce waterfowl mortality. Management actions may include removing carcasses from the Project islands, hazing waterfowl from the islands, or draining waterfowl habitats. Management strategies will include descriptions of: • methods used to monitor waterfowl to detect disease outbreaks, • protocols for determining when and what types of management actions to reduce the incidence of disease would be implemented, • methods for collecting carcasses and removing them from affected areas, • potential locations and methods for disposal of collected carcasses, and • methods to haze waterfowl from Reservoir Islands.	Project applicant	Semitropic	Confirm that waterfowl use areas on the Project islands are being monitored by a qualified biologist to locate incidences of waterfowl disease mortalities. Confirm the development, in cooperation with CDFG and USFWS, of management strategies to be employed in the event of disease outbreak. Confirm that the notification of CDFG and implementation of management strategies upon identification of a disease outbreak.	On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Land Use and Agriculture					
Mitigation Measure LU-MM-1: Provide Funding to Semitropic to Further District Goals of Sustaining Agriculture. During each of the first 10 years of the Project operations, Delta Wetlands will provide to the Semitropic Water Storage District $500,000, for a total of $5,000,000. The funding is intended to further the Semitropic's goals of sustaining agriculture through the provision of agricultural surface water to farmers within its boundaries at least cost and provide long term reliability. It would be used for the following purposes: • Purchase of voluntary conservation easements over prime farmland in Semitropic. • Purchase of imported water by the Semitropic. • Development and operation of infrastructure needed to deliver water to and within Semitropic. • Other purposes consistent with the Semitropic's mission.	Project applicant (funding) Semitropic (identification of and disbursement of funds for specific activities)	Semitropic	Confirm that $500,000 per year for the first 10 years of the project, for a total of $5,000,000 is provided to Semitropic for purpose of sustaining agriculture in Semitropic service area; identify and distribute funds for specific activities	First year of Project operation and every year for the next 9years	
Recreation and Visual Resources					
Mitigation Measure REC-MM-1: Reduce the Size or Number of Recreation Facilities The Project will reduce the total number or size of recreation facilities proposed by removing all 22 facilities proposed for construction from Bacon Island and Webb Tract, and reducing the number or size of proposed facilities on Bouldin Island and Holland Tract by 70%. This will reduce the number of permanent boat docking spaces provided by the recreation facilities from 2,508 to 330 slips, and will result in an approximately 86% reduction in Project recreation facilities.	Project applicant	Semitropic	Confirm the removal of all 22 facilities proposed for construction from Bacon Island and Webb Tract and a reduction of the number or size of proposed facilities on Bouldin Island and Holland Tract by 70%.	Prior to final design approval	
Mitigation Measure REC-MM-2: Partially Screen Proposed Recreation Facilities and Pump and Siphon Stations from Important Viewing Areas The Project will, consistent with flood control and levee or facility maintenance requirements, establish screening that could consist of native trees, shrubs, landscape berms, and ground covers between the Project facilities and designated scenic waterways. Landscape berms near structures will provide partial screening and will better connect the buildings visually to the site and the area. Screening vegetation will be planted in locations and at a density that would provide at least a 50% visual screen after 5 years.	Project applicant	Semitropic	Confirm that proposed recreation facilities and pump and siphon stations are screened with native trees, shrubs, landscape berms, and ground covers between the Project facilities and designated scenic waterways. Confirm that vegetation provides at least a 50% visual screen after 5 years.	On-going: construction	
Mitigation Measure REC-MM-3: Design Levee Improvements, Siphon and Pump Stations, and Recreation Facilities and Boat Docks to Be Consistent with the Surrounding Landscape The Project will require that pump and siphon station structures and recreation facilities be painted in earth tones to blend with the surrounding landscape. Rock revetment material will be selected to blend with the surrounding landscape. The Project will limit structure heights and emphasize horizontal features in its design. Boat docks and related structures will be constructed of natural appearing materials with subdued, earth-tone colors to blend in with the surrounding environment.	Project applicant	Semitropic	Confirm that levee improvements, siphon and pump stations, recreation facilities and boat docks are designed to be consistent with the surrounding environment and use paints and materials to blend with the surrounding landscape.	Prior to final design approval	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Traffic and Navigation					
Mitigation Measure TRA-MM-1: Develop and Implement a Traffic Control Plan In keeping with standard practice, prior to beginning construction of any portion of the proposed Project, the contractor will develop and implement a Traffic Control Plan (TCP). The TCP will be implemented throughout the course of Project construction and will: a. contain a plan for communicating construction plans with transit providers, emergency service providers, residences, and businesses located in the Project vicinity and anyone else who may be affected by Project construction; b. identify roadway segments or intersections that are at or approaching an LOS that exceeds local standards and provide a means for construction-generated traffic to avoid these locations at the peak periods either by traveling different routes or by traveling at nonpeak times of day; c. contain an access and circulation plan for use by emergency vehicles when lane closures and/or detours are in effect; if lane closures occur, provide advance notice to local fire and police departments to ensure that alternative evacuation and emergency routes are designed to maintain response times; d. maintain access to existing residences in the area at all times; e. provide adequate parking for construction trucks and equipment within the designated staging areas throughout the construction period; f. provide adequate parking for construction workers within the designated staging areas; g. require traffic controls on roadways adjacent to the proposed Project, including flag persons wearing bright orange or red vests and using a "Stop/Slow" paddle to control oncoming traffic; construction warning signs should be posted in accordance with local standards or those set forth in the Manual on Uniform Traffic Control Devices (Federal Highway Administration 2003) in advance of the construction area and at any intersection that provides access to the construction area; h. require that written notification be provided to contractors regarding appropriate routes to and from the construction site and the weight and speed limits on local roads used to access the construction site; and i. specify that a sign be posted at all active construction areas giving the name and telephone number or email address of the County staff person designated to receive complaints regarding construction traffic. In addition, the following notes will be placed on all grading and building permits: "No construction equipment will be transported or materials delivered between the hours of 6:00 a.m. and 9:00 a.m. or 4:00 p.m. and 6:00 p.m. Monday through Friday (traffic peak hours)." "No local roads traversing a nearby neighborhood may be used as access to the project site by construction equipment or delivery equipment." Upon application of Mitigation Measure TRA-MM-1, all Project impacts on roadway LOS during construction of Alternative 2 would be reduced to a lessthan-significant level.	Project applicant		Confirm the development and implementation of a traffic control plan.	Prior to construction On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure TRA-MM-2: Clearly Mark Intersections with Poor Visibility in the Project Vicinity Before beginning construction at any of the Project sites, visibility at intersections in the Project vicinity will be assessed visually. If visibility is poor at any intersection, highly visible signs will be posted at all approaches to the intersection stating that construction activity is taking place and that drivers should be aware of construction vehicles traveling on roads in the area. A construction contractor and a representative of the San Joaquin County Department of Public Works will visually assess visibility at intersections along Bacon Island Road, SR 4 from I-5 to Bacon Island Road, SR 4 from Bacon Island Road to the San Joaquin County line, and SR 12 from I-5 to the west end of Bouldin Island. A construction contractor and a representative of the Contra Costa County Department of Public Works will visually assess visibility at intersections along SR 4 from the Contra Costa County line to SR 160, Jersey Island Road from Cypress Road to the Jersey-Bradford-Webb ferry, Cypress Road from SR 4 to Jersey Island Road, Delta Road from SR 4 to Holland Tract Road, Holland Tract Road from Delta Road to its end, Byron Highway from SR 4 to Delta Road, and SR 12 from the west end of Bouldin Island to SR 160.	Project applicant	Semitropic	Confirm that visibility at intersections in the Project vicinity will be assessed visually. Confirm that highly visible signs are posted at intersections with poor visibility.	Prior to Construction On-going: construction	
Mitigation Measure TRA-MM-3: Clearly Mark the Barge and Notify the U.S. Coast Guard of Construction Activities The construction contractor will ensure that the barge is well marked and lit in accordance with Title 14 of the California Code of Regulations, Section 7000 *et seq*. Additionally, the construction contractor will contact the U.S. Coast Guard 2 weeks before construction begins so that the Coast Guard can issue a notice to mariners alerting them to the presence of the barge and to construction activities occurring in the area. The contractor must inform the Coast Guard of the location and type of activity, whether night operations will be taking place, and whether there will be lights and buoys (Jones & Stokes 2001). These safety measures are common practice for contractors performing work in marine environments (Jones & Stokes 2001).	Project applicant	Semitropic	Confirm that the barge has been clearly marked and lit in accordance with Title 14 of the California Code of Regulations. Confirm that the construction contractor has notified the U.S. Coast Guard 2 weeks before beginning construction of the location and type of activity, whether night operations will be taking place, and whether there will be lights and buoys.	Prior to Construction On-going: construction	
Mitigation Measure TRA-MM-4: Clearly Post Waterway Intersections, Speed Zones, and Potential Hazards in the Project Vicinity Prior to operation of the Project recreation facilities, intersections will be assessed for speed requirements, poor visibility, and any unposted areas or potential hazards with respect to boating. If poor visibility or any potential boating hazards exist, these areas will be marked with buoys, waterway markers, and information signs in accordance with the California uniform waterway marking system or federal lateral waterway system. Speed requirements will be posted and enforced in accordance with local and state laws and ordinances. Regulations for boating activities proposed by local agencies must be submitted to, reviewed, and approved by the California Department of Boating and Waterways in accordance with the California Harbors and Navigation Code before they are adopted and implemented.	Project applicant	Semitropic	Confirm the assessment of intersections for speed requirements, poor visibility, and any unposted areas or potential hazards with respect to boating and where necessary the marking of intersections for safety in accordance with the California uniform waterway marking system or federal lateral waterway system. Confirm that speed requirements are posted and enforced in accordance with local and state laws and ordinances.	Prior to operation	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Cultural Resources					
Mitigation Measure CUL-MM-1: Prepare and Implement a Historic Properties Treatment Plan Prior to implementation of any Project activities, the lead agency will ensure that a Historic Properties Treatment Plan (HPTP) is prepared and implemented by individuals who meet the Secretary of Interior's Standards for Archaeology, History, and Architectural History. This HPTP will include specific detailed guidance and methods to mitigate impacts to a less-than-significant level. The HPTP will include the following components: **Mitigation Measure CUL-MM-1a:** Complete Historic Research, Measured Drawings, and Photographic Documentation of the Bacon Island Rural Historic District. This documentation will meet the minimum requirements of the Historic American Building Survey/Historic American Engineering Record/Historic American Landscape Survey for resources with national significance. This component of the HPTP will be completed before components CUL-MM-1c and CUL-MM-1d so the results may be integrated into the products required by those components. **Mitigation Measure CUL-MM-1b:** Prepare and Implement an Archaeological Resources Data Recovery Plan. This plan will specify how significant archaeological data will be recovered from the Bacon Island Rural Historic District, analyzed, and reported to professionals and the public. This component of the HPTP will be completed before components CUL-MM-1c and CUL-MM- 1d so the results may be integrated into the products required by those components. **Mitigation Measure CUL-MM-1c:** Produce a Publication to Disseminate Historical Information regarding the Bacon Island Rural Historic District to the Public. This document should combine historical photographs with information gathered from historical research and interviews to describe the history of Bacon Island and its relevance to modern society. The publication should be prepared for use by schools, historical societies, local museums, and the general public. **Mitigation Measure CUL-MM-1d:** Prepare a Video That Disseminates Historical Information and Explains the Character-Defining Features of the Bacon Island Rural Historic District to the Public. This production should be prepared to meet the technical requirements for airing on the Public Broadcasting System (PBS), as specified in the PBS producers' handbook.	Project applicant	Semitropic	Confirm the preparation and implementation of a historic properties treatment plan (HPTP) by individuals who meet the Secretary of Interior's Standards for Archaeology, History, and Architectural History. Confirm that the HPTP includes detailed guidance and methods to mitigate impacts to a less-than-significant level and includes the listed components.	Prior to construction On-going: construction	
Mitigation Measure CUL-MM-1e: Provide Methods and Guidance for Subsurface Testing in the Form of Remote Sensing and Excavation. This testing will determine the presence or absence of significant archaeological remains within Piper soils in the Project area. If significant archaeological resources are identified, prepare and implement an archaeological resources data recovery plan that specifies how significant archaeological data will be recovered from the Piper soils in the Project area, analyzed, and reported to professionals and the public. Specify notification procedures in the event of discovery of cultural materials in the archaeologically sensitive Piper sand deposits. The HPMP will include a monitoring plan to address impacts resulting from inadvertent discovery of cultural resources during ongoing Project operations and will outline treatment and management requirements for these resources.	Project applicant	Semitropic	Confirm that methods and guidance for subsurface testing in the form of remote sensing and excavation has been provided. Confirm that if significant archaeological resources are identified that an archaeological resources data recovery plan is prepared and implemented. Confirm that the HPMP includes a monitoring plan to address impacts resulting from inadvertent discovery of cultural resources during ongoing Project operations.	Prior to construction On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure CUL-MM-1f: Negotiate, Prepare, and Implement a Preburial Agreement with the Most Likely Descendant (as Determined by the Native American Heritage Commission) of Potential Native American Interments Located in Webb Tract Piper Sands in the Project Area. Specific mitigation and/or treatment in relation to the potential for burials will be dependent upon this negotiation. Mitigation and/or treatment typically includes adoption of project design guidelines that minimize disturbance to sensitive areas as well as methods and guidance for: identifying intact interments; recovery, treatment, and reburial of interments; and the ultimate ownership of human remains and burial items. Mitigation and/or treatment also typically includes methods and guidance in the event of an inadvertent discovery of human remains.	Project applicant	Semitropic	Confirm the negotiation, preparation and implementation of a preburial agreement with the Most Likely Descendant of Potential Native American Interments Located in Webb Tract Piper Sands in the Project Areas has been completed.	Prior to final design On-going: construction	
Mosquitoes and Public Health					
Mitigation Measure PH-MM-1: Develop an Integrated Pest Management Program and Coordinate Project Activities with SJCMVCD and CCCMVCD This mitigation measure has been updated to incorporate new information that has become available since the publication of the 2001 FEIR and 2001 FEIS— specifically, new guidelines for wetland design and management, described above in the New Information discussion. Implementation of this mitigation measure will reduce the likelihood that Project operations will require an increase in abatement activities by the local MVCDs. The Project applicant, DFG, and the Habitat Management Advisory Council (HMAC) will consult and coordinate with the SJCMVCD and CCCMVCD during all phases of the Project, including design, implementation, and operations, and the Habitat Management Plan will be updated in accordance with the best management practices identified in the Central Valley Joint Venture's Technical guide to *Best Management Practices for Mosquito Control in Managed Wetlands* (Kwasny et al. 2004) and other guidelines listed above in the "New Information" discussion. The Project applicant will be responsible for coordination with SJCMVCD and CCCMVCD regarding mosquito control measures for the Reservoir Islands, and the Project applicant, DFG, and the HMAC will be responsible for coordination regarding the Habitat Islands. Consultation and coordination with SJCMVCD and CCCMVCD will include the development of an IPM plan for mosquitoes that follows the guidelines of the *Best Management Practices for Mosquito Control in Managed Wetlands* (Kwasny et al. 2004) and other guidelines listed in the New Information section above, and contains a continual maintenance program. An example list of the types of BMPs that should be considered in the IPM plan follows. *Wetland Design Features* • Design water delivery and drainage systems to allow for rapid manipulation of water levels within the wetlands. This could include construction of swales sloped from inlet to outlet to allow the majority of the wetland to be drawn down quickly, and independent inlets and outlets for each wetland unit. • Ensure that shorelines, which may be vacillating, do not isolate from the main body of water sections that create pockets where mosquitoes would be free of competition and predation. • Create basins with a high slope index, variable depths, and shallow and deep regions that provide open water zones adjacent to shallow vegetated zones. • Install cross-levees to facilitate more rapid flood-up. • Excavate deep channels or basins to maintain permanent water areas (deeper than 2.5 feet) within a portion of seasonal wetlands to provide year-round habitat for mosquito predators that can inoculate seasonal wetlands when flooded. *Water Management Practices*	Project applicant	Semitropic	Confirm preparation and compliance with an Integrated Pest Management Program and coordination of Project activities through coordination with CDFG, HMAC, SJCMVCD and CCCMVCD. Confirm that the Habitat Management Plan is updated accordingly.	Prior to operation On-going: operation	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
• Delay flooding of some wetland units until later in the fall, and delay flooding units with greatest historical mosquito production and/or those closest to urban areas. • Flood wetland units as quickly as possible. • Ensure constant flow of water into wetlands to reduce water fluctuation from evaporation, transpiration, outflow, and seepage. • Flood wetland as deep as possible at initial flood-up. • Flood wetlands with water sources containing mosquitofish or other invertebrate predators. Water from permanent ponds can be used to passively introduce mosquito predators. • Drain any irrigation water into locations with mosquito predators as opposed to adjacent seasonal wetland or dry fields. • Avoid "pulses" of increased organic load to inhibit episodic fluctuation in mosquito population numbers during the months of April–October. • Use flood and drain techniques as a method to eliminate larvae. *Vegetation Management Practices* • Avoid continuous stands of emergent vegetation. These stands generate microhabitats that support mosquito productivity by providing refuge from predation, accumulation and concentration of organic foods, and interference with water circulation and wave action. • Maintain aquatic vegetation in islands surrounded by deeper water. This breaks up the uniform microhabitat and provides variable physical and biological constraints on the mosquito population. • Avoid plants that tend to mat the water surface. Promote plants in islands such as bulrush and cattails, which function as substrate for mosquito predators. Plants such as sago pondweed for example, are completely submergent and contribute little to mosquito refuge while providing good predator refuge and even waterfowl food. *Wetlands Maintenance* • Maintain levees, water control structures, and ditches regularly. • Manage vegetation through periodic harvesting, thinning, discing, or burning to maintain open areas. • Remove silt and detritus periodically to maintain regular wetland depth. *Biological Controls* • Encourage on-site predator populations by providing permanent water sources for mosquitofish. Such "dry season" predator reservoirs should be 18 inches or more in depth to reduce predation of mosquitofish by herons and egrets. • Avoid use of broad spectrum insecticides that not only kill mosquitoes, but also eliminate their natural predators. Ensure mosquitofish have access to each basin. *Consultation with CCCMVCD and SJCMVCD* • Consult with CCCMVCD and SJCMVCD during the Project design phase to incorporate design and operational elements of the reservoir and Habitat Islands to reduce the mosquito production potential of the Project. • Consult with CCCMVCD and SJCMVCD on the timing of wetland flooding.					

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
• Regularly consult with SJCMVCD and CCCMVCD to identify mosquito management problems, mosquito monitoring and abatement procedures, and opportunities to adjust operations to reduce mosquito production during problem periods. • Develop an access plan with the CCCMVCD and SJCMVCD to allow for monitoring and control of mosquito populations on the Project islands. • Work with CCCMVCD and SJCMVCD to understand pesticides used for mosquito abatement, and their costs and environmental impacts. If it is necessary for SJCMVCD and CCCMVCD to increase mosquito monitoring and control programs beyond pre-Project levels, the Project applicant will share costs with CCCMVCD and SJCMVCD or otherwise participate in implementing mosquito abatement programs.					
Air Quality					
Mitigation Measure Air-MM-1: Perform Routine Maintenance of Construction Equipment During construction under Alternative 2, the primary source of CO emissions and other pollutants, including ROG and NOX, is the exhaust generated by earthmoving equipment and other construction and transport vehicles. Therefore, construction crews will be required to perform routine maintenance of earthmoving equipment, as well as all other construction and transport vehicles. Routine maintenance involves oil changes and tune-ups performed at least as frequently as recommended by the manufacturers. This measure will be included as a condition of the construction contract and will be enforced through weekly inspection by the Project proponent.	Project applicant	Semitropic	Confirm that construction crews perform routine maintenance on all construction and transport vehicles per manufacturer's recommendation.	On-going: construction	
Mitigation Measure Air-MM-2: Choose Borrow Sites Close to Fill Locations Construction crews will be required to take borrow material from appropriate sites located closest to intended fill locations. This measure would reduce the overall amount of equipment and vehicle operation, thereby reducing exhaust emissions of CO and other pollutants, including ROG, NOX, and PM10. This measure also would reduce the amount of PM10 emitted into the air by vehicles traveling over unpaved or dusty surfaces, the main source of PM10 emissions during construction. This measure will be included as a condition of the construction contract and will be enforced through weekly inspection.	Project applicant	Semitropic	Confirm that construction crews take borrow material from appropriate sites located closest to intended fill locations.	On-going: construction	
Mitigation Measure Air-MM-3: Prohibit Unnecessary Idling of Construction Equipment Engines Construction crews will be prohibited from leaving construction equipment or other vehicle engines idling when not in use for more than 5 minutes. This measure would reduce the amount of CO and other pollutants, including ROG, NOX, and PM10, emitted in engine exhaust. This measure will be included as a condition of the construction contract and will be enforced through weekly inspection.	Project applicant	Semitropic	Confirm that construction equipment or other vehicles are not idling when not in use for more than 5 minutes.	On-going: construction	
Mitigation Measure Air-MM-4: Coordinate with the SJVAPCD and BAAQMD to Reduce or Offset Emissions The Project will coordinate with the SJVAPCD and the BAAQMD to implement measures to reduce or offset ROG and NOX emissions of the Project operations. These measures may include implementing a voluntary emission reduction agreement (VERA). The SJVAPCD has encouraged use of a VERA as a means to reduce emissions from CEQA projects.	Project applicant	Semitropic	Confirm the coordination with the SJVAPCD and BAAQMD to implement measures to reduce or offset ROG and NOX emissions of the Project operations.	Prior to construction On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Mitigation Measure Air-MM-5: Use Electrically Powered Pumps in Lieu of Diesel Powered Pumps In the event that Mitigation Measure Air-MM-4 is not sufficient to reduce emissions to less than significant, electrically powered pumps will be used in lieu of diesel-powered pumps, which would reduce the increase in operational NOX emissions to less than the daily and annual significance thresholds.	Project applicant	Semitropic	Confirm that in the event that Mitigation Measure Air-MM-4 is not sufficient to reduce emissions to less than significant, electrically powered pumps are used in lieu of diesel-powered pumps.	On-going: operation	
Mitigation Measure Air-MM-6: Implement Construction Practices that Reduce Generation of Particulate Matter Construction crews will be required to implement the following measures throughout the construction period to reduce generation of particulate matter in the vicinity of construction sites: • Pave, apply water three times daily, or apply soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. • Use appropriate dust control measures, including effective application of water or presoaking, during land preparation and excavation. • Cover or water all soil transported offsite to prevent excessive dust release. • Sprinkle all disturbed areas, including soil piles left for more than 2 days, onsite unpaved roads, and offsite unpaved access roads, with water to sufficiently control windblown dust and dirt. • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Hydroseed or apply soil stabilizers to inactive construction area (previously graded areas inactive for ten days or more). • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. • Install wheel washers for all exiting trucks or wash off the tires or tracks of all trucks and equipment leaving the site. • Install wind breaks or plant trees/vegetation wind breaks at windward side(s) of construction areas. • Limit construction vehicle speeds to 15 mph on unpaved surfaces. • Prohibit dust-producing construction activities when wind speeds reach or exceed 20 mph. • All areas used for storage of construction vehicles, equipment, and materials will comply with the measures described above. • Comply with all relevant components of the SJVAPCD's Regulation 8. These measures will be included as a condition of the construction contract and will be enforced through weekly inspection by the Project proponent.	Project applicant	Semitropic	Confirm that construction crews implement the listed measures to reduce the generation of particulate matter in the vicinity of construction sites.	On-going: construction	

DELTA WETLANDS PLACE OF USE PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Monitoring and Reporting Actions	Timing	Verification of Compliance
Noise					
Mitigation Measure NOI-MM-1: Limit Construction Hours and Comply with all Applicable Local Noise Standards In addition to complying with all applicable local noise standards, the Project applicant will limit construction activities that create noise near sensitive use areas to the hours between 7:00 a.m. and 8:00 p.m.	Project applicant	Semitropic	Confirm that construction activities that create noise near sensitive use areas are limited to the hours between 7:00 a.m. and 8:00 p.m.	On-going: construction	
Cumulative Impacts					
Mitigation Measure CUM-MM-1: Operate the Project to Prevent Unacceptable Hydrodynamic Effects in the Middle River and Old River Channels during Flows That Are Higher Than Historical Flows This mitigation measure has not changed since the 2001 FEIR and 2001 FEIS. USGS and DWR tidal flow measurements (i.e., velocities and stages) in south Delta channels, as well as tidal hydrodynamic model simulations, should be used to determine the effects of Project operations, and Project operations should be controlled to prevent unacceptable hydrodynamic conditions in south Delta channels. Measures that may be used to prevent unacceptable hydrodynamic effects include establishing minimum tidal stages and maximum channel velocities. Project operations would be reduced or eliminated during these extreme tidal conditions.	Project applicant	Semitropic	Confirm the Project is being operated to prevent unacceptable hydrodynamic effects. Confirm the implementation of measures to prevent unacceptable hydrodynamic effects if necessary.	Prior to operation	
Mitigation Measure CUM-MM-2: Clearly Post Waste Discharge Requirements, Provide Waste Collection Facilities, and Educate Recreationists regarding Illegal Discharges of Waste This mitigation measure has not changed since the 2001 FEIR and 2001 FEIS. Prior to operation of the Project recreation facilities, the Project applicant shall: • Post notices at all Project recreation facilities describing proper methods of disposing of waste. Waste discharge requirements shall be posted and enforced in accordance with local and state laws and ordinances. • Provide waste collection receptacles on and around the boat docks for the boaters using the Project recreation facilities. • Provide educational materials to inform recreationists about the deleterious effects of illegal waste discharges and the location of waste disposal facilities throughout the Delta.	Project applicant	Semitropic	Confirm posting of notices describing proper methods of disposing of waste; posting and enforcement of waste discharge requirements; placement of waste collection receptacles; and availability of education materials describing illegal discharges of waste	Prior to operation	

Addendum

DELTA WETLANDS PROJECT PLACE OF USE

Final Environmental Impact Report

Prepared for
Semitropic Water Storage District

September 2011

ESA

Addendum

DELTA WETLANDS PROJECT PLACE OF USE

Final Environmental Impact Report

Prepared for
Semitropic Water Storage District

September 2011

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ADDENDUM TO CHAPTER 3
Responses to Comments

The Semitropic Water Storage District (Semitropic) circulated the Delta Wetlands Project Place of Use Draft Environmental Impact Report (DEIR) for public and agency review and comment between May 11, 2010 and June 28, 2010. At the end of the comment period, a total of 27 written letters were received addressing the content and analysis in the DEIR. The letters and responses to comments received during the public comment period are included in Chapter 3 of the Final EIR (FEIR). Subsequent to the close of the public comment period (June 28, 2010), a letter was received on August 24, 2011, which was dated June 28, 2010 (Letter 28). Semitropic has no record of having received this letter during the public comment period for the DEIR. Nevertheless, that letter and responses to the comments contained in the letter are attached as an addendum to Chapter 3, Responses to Comments, of the FEIR.

The responses are clarifications or amplification of the information and analysis contained in the DEIR. None of the information included in the responses to Letter 28 requires recirculation of the DEIR per California Environmental Quality Act (CEQA) Guidelines Section 15088.5.

CENTRAL DELTA WATER AGENCY
235 East Weber Avenue • P.O. Box 1461 • Stockton, CA 95201
Phone 209/465-5883 • Fax 209/465-3956

June 28, 2010

Via Email: DeltaWetlandsComments@icfi.com

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

Re: Comments on the Draft Delta Wetlands Place of Use EIR.

Dear Ms. Smith:

Thank you for the opportunity to comment on this matter.

1. **Request for Notification.**

The CDWA hereby formally requests to be placed on the mailing list for any and all mailings associated with this project.

The CDWA also hereby requests to be given advance notice of Semitropic Water Storage District's public meeting or meetings wherein it will decide whether to certify this EIR and/or adopt the project and/or make any other determinations regarding this project.

28-1

Please use the following address for such mailings/notices:

Attn: Dante John Nomellini, Jr.
Central Delta Water Agency
P.O. Box 1461
Stockton, CA 95201-1461

2. **Consultation with Public Agencies.**

Public Resources Code section 21153 provides:

> Prior to completing an environmental impact report, every local lead agency shall consult with, and obtain comments from, each responsible agency, trustee agency, any public agency that has jurisdiction by law with respect to the

28-2

> project, and any city or county that borders on a city or county within which the project is located unless otherwise designated annually by agreement between the local lead agency and the city or county, and may consult with any person who has special expertise with respect to any environmental impact involved.

(See also Guidelines, § 15086.)

In light of the enormous scope of the project, including the expansive places of use, complying with section 21153 is a tall order. For example, CDWA is informed and believes that the lead agency has failed to so consult with all of the reclamation districts that have "jurisdiction by law" "over resources which may be affected by the project" (Guidelines, § 15366), e.g., jurisdiction over the levees, drainage systems and other reclamation works which may be affected by the project. It is also highly likely that the lead agency failed to consult with many other types of public agencies defined in section 21153 that are affected by either the operation of the project and/or the delivery and ultimate use of the project water, etc.

28-2 Cont'd

To the extent the lead agency has failed to consult with all such agencies, the lead agency must do so prior to completion of the EIR. To ensure compliance with section 21153, the lead agency should include a list in the Final EIR of all the agencies with whom it consulted.

3. **Incorporation by Reference.**

In numerous places throughout the DEIR, the DEIR incorporates other documents by reference. However, the DEIR fails to comply with Guidelines section 15150 which requires the following, with emphasis added:

> (b) Where part of another document is incorporated by reference, such other document shall be made available to the public for inspection at a public place or public building. The EIR or negative declaration shall state where the incorporated documents will be available for inspection. At a minimum, the incorporated document shall be made available to the public in an office of the lead agency in the county where the project would be carried out or in one or more public buildings such as county offices or public libraries if the lead agency does not have an office in the county.
>
> (c) Where an EIR or negative declaration uses incorporation by reference, the incorporated part of the referenced document shall be briefly summarized where possible or briefly described if the data or information cannot be summarized. The relationship between the incorporated part of the referenced document and the EIR shall be described.

28-3

Examples of such incorporations which apparently have not been so "made available to the public" nor "briefly summarized [or described]" include the following:

Page 4.9-1: "There are no major unanalyzed impacts on these resources at the places of use; although any minor changes in the affected environmental and regulatory setting since the 2001 FEIR and 2001 FEIS do not alter the prior document's conclusions, such changes are addressed by the urban water management plan EIR of each affected place of use."

Page 4.13-1: "Indirect effects on air quality at the places of use may result from increased energy used as a result of removing a barrier to growth in the places of use. Such effects are fully analyzed by the urban water management plan EIR of each affected place of use, the analysis of which has been incorporated herein, where necessary."

Page 2-5: "Additional information about Western's service area, operations, use, deliveries, and planning objectives can be found in Metropolitan's Regional Urban Water Management Plan, dated November 2005."

28-3 Cont'd

4. **Growth Inducing Impacts.**

While the DEIR has identified some enormous places of use, and acknowledges that "the additional water supply provided by the Project may remove an obstacle to a portion of the planned growth in the identified places of use, which may result in secondary environmental impacts . . . ," the DEIR fails to provide any meaningful analysis of such impacts and, instead, states:

> the environmental documentation prepared by local, state, and federal agencies that approve and provide permits for residential, commercial, and industrial projects in the places of use would identify site- and resource-specific impacts of this growth. Mitigation measures implemented by agencies with jurisdiction over urban development projects would address many of the secondary impacts of this growth.

(DEIR, p. 6-9.)

28-4

The DEIR should make it clear which places of use have already addressed such "site- and resource-specific impacts" and which have not. For the places of use that have, the DEIR should reference the particular environmental document, indicated where the document is available for public review within the affected counties, summarize the referenced parts, etc. in compliance with Guidelines section 15150, which the DEIR has thus far failed to do.

For the places of use that have not already addressed such impacts, it is clear that water cannot be delivered to those areas until such impacts are first addressed. The DEIR should make this clear and make it an express condition of the project that water cannot be delivered to such areas until such impacts have been thoroughly addressed in compliance with CEQA.

5. **Other Areas Affected by Delivery of Project Water.**

While the DEIR has seemingly identified areas where the project water will be delivered, it appears the DEIR has failed to properly identify *all* areas potentially affected by the project and, accordingly, failed to properly evaluate the potential environmental impacts in such areas. For example, the use of project water for Delta outflow may have the result of freeing up water that would otherwise have been used for Delta outflow in the absence of the project. Such freed up water could thereafter be put to use for some other purpose in some other place. Accordingly, it is easy to see that merely identifying the places of use for receipt of the actual molecules of water stored in the project's reservoirs does not sufficiently identify all of the areas potentially affected by the project. 28-5

The same is true if, for example, the delivery of the actual molecules of the project's water to a particular identified place of use means that water that would have otherwise been delivered to that place of use in the absence of the project water can, as a result, be delivered and used elsewhere (including areas outside the identified places of use). 28-6

All of these types of areas potentially affected by the project must be identified and the potential environmental impacts in those areas must be properly evaluated. The DEIR should thoroughly explain the nature of such "redirected uses" and the extent to which they are foreseeably expected to occur.[1]

Among the particular concerns of the CDWA is whether the project's delivery of water to any particular identified user or to outflow will result in "freeing up" water that could be used on lands in areas which directly drain surface and/or subsurface waters, and, hence, the various pollutants contained in such waters, into the San Joaquin River or delivered to upslope areas which generate hydraulic pressure which thereby increases the drainage of waters from the downslope lands into the San Joaquin River. The potential for such impacts from water use in such areas is widely recognized and well-established.[2] 28-7

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[1] All of these types of areas must also be identified at the outset in the Notice of Preparation "either by street address and cross street . . . or by attaching a specific map . . ." (Guidelines, 15082, subd. (a)(1)). Accordingly, to correct this deficiency, the Notice of Preparation must be re-noticed and the Draft EIR must be recirculated.

[2] See e.g., SWRCB's Decision 1641 at page 83 wherein the SWRCB states with regard to salinity: "[T]he SWRCB finds that the actions of the CVP are the principal cause of the salinity concentrations exceeding the objectives at Vernalis. The salinity problem at Vernalis is the result of saline discharges to the river, principally from irrigated agriculture, combined with low flows in the river due to upstream water development. The source of much of the saline discharge to the San Joaquin River is from lands on the west side of the San Joaquin Valley which are irrigated with water provided from the Delta by the CVP, primarily through the Delta-Mendota Canal and the San Luis Unit. The capacity of the lower San Joaquin River to

Any such deliveries to such areas facilitated or otherwise resulting from the project must be thoroughly discussed and examined in the DEIR and any degradation to the San Joaquin River resulting therefrom must be discussed, analyzed and avoided or mitigated to the extent feasible. 28-7 Cont'd

Moreover, it is also not clear whether persons or entities within the identified places of use can transfer project water to areas outside the identified places of use. While such transfers would be prohibited under CEQA since the DEIR does not examine the impacts of such transfers, an express condition should nevertheless be imposed to prohibit any such transfers. (Note: since temporary [one year or less] water transfers are exempt from CEQA, in the absence of an express prohibition against such transfers and a meaningful mechanism to monitor and enforce such a prohibition, the environmental impacts of all such transfers must be addressed in the instant EIR.) 28-8

6. **Improper Deferral of Mitigation Measures.**

For numerous potentially significant impacts the DEIR includes the future "development" of a particular plan as a mitigation measure. Such deferral to a future yet-to-be-developed plan constitutes the improper deferral of the formulation of mitigation measures. Moreover, even if deferral could theoretically be tolerated, the DEIR lacks meaningful performance standards which are a prerequisite to any such deferral. 28-9

7. **NEPA.**

The DEIR must better explain why this particular project does not have to comply with NEPA while the prior Delta Wetlands Project did have to comply with NEPA. Since it is the same underlying project as before, it would appear NEPA compliance is indeed required. 28-10

8. **Alternatives.**

The DEIR states at page 1-7:

> The overall purpose of the Project is to increase the availability of high-quality water in the Delta for export or outflow by storing water on two Reservoir Islands (Webb Tract and Bacon Island) and by doing so, increase the reliability of water supplies for Semitropic and other places of use including Golden State, Metropolitan, Western, and Valley District. 28-11

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assimilate the agricultural drainage has been significantly reduced through the diversion of high quality flows from the upper San Joaquin River by the CVP at Friant. The USBR, through its activities associated with operating the CVP in the San Joaquin River Basin, is responsible for significant deterioration of water quality in the southern Delta." (See http://www.waterrights.ca.gov/ hearings/decisions/WRD1641.pdf at "pdf" p. 95.)

The foregoing may be the "preferred project," however, it is far too narrow to constitute the "basic objectives of the project." The basic objectives must be considerably broader, e.g., "to improve the reliability of water for Semitropic et al." As a result of the unduly narrow project objectives, the DEIR lacks a meaningful range of alternatives to the project. Assuming one of the basic objectives is to improve the reliability of water for Semitropic et al., then the range of alternatives should include one or more alternatives that do not involve the export of water from the Delta but, instead, provide increased reliability through conservation, recycling, or other non-Delta export means.

28-11 Cont'd

Also, the DEIR's range of alternatives should include alternative places of use including, in particular, a 100% in-Delta use alternative where 100% of the project water is used for in-Delta needs (outflow, water quality and other in-Delta beneficial uses).

28-12

Overall, the project suffers from a basic failure to provide a meaningful and sufficiently broad statement of the project's objectives. Once the objectives are properly described, the public can more meaningfully comment on the range of alternatives which should be discussed in the EIR to meet those objectives.

28-13

9. **Direct Conversion of Farmland.**

The DEIR concludes that the project will result in the direct conversion of agricultural land and that such conversion is "[s]ignificant and unavoidable." (See e.g., DEIR, p. ES-26.) While there may or may not be feasible mitigation measures which can altogether "avoid" or reduce that conversion to a "less-than-significant level," the DEIR has, thus far, failed to demonstrate that all feasible measures to so avoid or reduce such impacts have been identified/proposed.

28-14

Guidelines section 15370 sets forth five categories of mitigation measures which, among others, are available to public agencies. Examples of potentially feasible mitigation measures that should be discussed in DEIR include measures that fall under category "(b)" which consists of measures that "Minimiz[e] impacts by limiting the degree or magnitude of the action and its implementation." (Guidelines § 15370(b)). Such measures would include measures along the lines of the following: (1) limiting the project to only one reservoir island and maintaining the other proposed reservoir island in agricultural production; and/or (2) maintaining more land in agricultural production on the two habitat islands, etc.

Other examples of potentially feasible mitigation measures which should similarly be discussed include those falling under category "(e)" which consists of measures that "Compensat[e] for the impact by replacing or providing substitute resources or environments." (Guidelines § 15370(e)). The most obvious example would involve requiring the project proponent to purchase sufficient agricultural easements elsewhere throughout the affected counties and thereby compensate for the loss of agricultural land by ensuring that sufficient amounts of other lands in those counties would be maintained in agricultural production.

Similarly, other land throughout the affected counties could be ought right purchased and brought into agricultural production thereby minimizing or offsetting the losses from the project.

The DEIR should thoroughly describe and discuss such measures, and CEQA requires the lead agency to ultimately adopt all feasible measures to the extent they can help reduce the significance of the so-called "significant and unavoidable" loss of agricultural land.

28-14 Cont'd

10. **Fishery Impacts.**

As with the direct conversion of agricultural land, the DEIR similarly concludes that the project's impacts on Juvenile Chinook Salmon, Juvenile Steelhead, Delta smelt, Longfin smelt and Green Sturgeon are "[s]ignificant and unavoidable." (See e.g., DEIR, p. ES-19 & 20.) It is once again by no means clear that such impacts have been mitigated to the maximum extent feasible. Thus far, the DEIR fails to provide any meaningful discussion or explanation of why the project cannot be feasibly scaled back in size, amount or timing of diversions, etc. to provide increased mitigation of such impacts. The DEIR must be revised to provide such a discussion and explanation and *all* feasible mitigation measures must be adopted to the extent they help reduce such impacts.[3]

28-15

11. **Inconsistency with General Plans and the Delta Protection Commission's Land Use Plan.**

The DEIR states at page 4.8-44 that the project's "[i]nconsistency with Contra Costa County General Plan Policy for Agricultural Lands and Delta Protection Commission Land Use Plan Principles for Agriculture and Recreation" is "significant and unavoidable" and that "[n]o mitigation is available to reduce this impact to a less-than-significant level." Once again, the DEIR fails to provide any meaningful discussion or explanation of why the project cannot be feasibly altered to provide increased mitigation of such impacts, even if that mitigation does not reduce this impact to a "less-than-significant level." Accordingly, the DEIR must be revised to provide such a discussion and explanation and *all* feasible mitigation measures must be adopted to the extent they help reduce such impacts.

28-16

12. **Consistency with the Watershed Protection Act and Delta Protection Act of 1959.**

While the DEIR briefly discusses the project's consistency with the Delta Protection Act of *1992*, the DEIR apparently fails to discuss the project's consistency with the Delta Protection Act of *1959* (Wat. Code, § 12200 et seq.) as well as with the Watershed Protection Act (Wat. Code, § 11460 et seq.). As explained in CDWA's comments on the NOP for this EIR (a copy of which are enclosed herewith):

28-17

[3] The same is true for all other impacts the DEIR has likewise identified as "[s]ignificant and unavoidable" or "[c]umulatively considerable and unavoidable."

The [D]EIR should analyze and explain why the proposed export of water to the newly identified places of use south of the Delta is not water to which the users within [the] Delta are entitled" and/or "necessary to meet the requirements of [Water Code] Sections 12202 and 12203 . . . ."

To the extent state or federal export facilities are utilized to export water from the Delta pursuant to the proposed project (which indeed appears to be the intent), the EIR should analyze and explain why such water is not "reasonably required to adequately supply the beneficial needs [human or otherwise] of the watershed, area, or any of the inhabitants or property owners therein."

28-17 Cont'd

13. **Levee Stability and Seepage Concerns.**

a. Lack of Final Levee Design and Seepage Control System.

The DEIR states in numerous places that "[f]inal levee designs are subject to engineering review before construction." (See e.g., DEIR 4.3-2 & 4.3-3.) It also appears that the final design of the seepage control system is not yet available for review. The project cannot be approved in advance of such designs. Instead, such designs must be fully described and analyzed in the DEIR and the public, accordingly, must have the opportunity to comment on those designs. Moreover, since the final designs of the levees and seepage control system are essential mitigation measures for the project, the deferral of the final designs constitutes the unwarranted deferral of the formulation of mitigation measures.

28-18

b. Downgrade in Levee Standards.

The DEIR fails to adequately explain why the Habitat Island levees are no longer being designed to the higher Bulletin 192-82 standards. (See e.g., 4.3-4.) The DEIR should fully explain the initial basis for adopting the higher standards for such levees and the basis for downgrading the standards.

28-19

c. Sea Level Rise.

The DEIR states at page 4.3-5, "Future sea level predictions are not included in water surface calculations used in development of the proposed levee design." The DEIR should fully explain why such predictions, or a range of such predictions, are not so used. It seems obvious that they should be used in such development as well as thoroughly discussed in the DEIR.

28-20

d. Underseepage.

The DEIR fails to acknowledge or discuss the heightened concerns over so-called "under-seepage" since the prior EIR. Enclosed herewith is a copy of the U.S. Army Corps of Engineers' "ETL 1110-2-569" entitled, "Design Guidance for Levee Underseepage" which evidences such

28-21

heightened concerns. In light of the well-recognized, heightened concern and understanding of underseepage, the DEIR should fully discuss and analyze the implications of such concern and understanding. As it stands the DEIR's discussion and analysis of underseepage is woefully inadequate and virtually non-existent.

28-21 Cont'd

14. **Incorporation of prior comments**.

The CDWA hereby incorporates the documents listed in the "enclosure" section below and continues to maintain that the environmental and other issues/deficiencies raised therein have not yet been adequately addressed in either the prior EIR nor in the instant DEIR. Said issues/deficiencies render the instant DEIR and prior EIR legally deficient as a matter of law, and the information set forth therein constitutes substantial evidence that the lead agency has, thus far, failed to properly discuss, identify, analyze and mitigate or avoid to extent feasible the project's potentially significant impacts. Moreover, the lead agency's findings in the instant DEIR and prior EIR pertaining to such issues/deficiencies, and to the issues/deficiencies set forth in the instant comments, are not supported by substantial evidence and suffer from the omission of relevant information that is essential to informed decision making which is one of the hallmarks of CEQA.

28-22

The CDWA respectfully requests and urges the lead agency to thoroughly address and correct all such issues/deficiencies.

Very truly yours,

Dante John Nomellini, Jr.

DJR/djr
Enclosures (provided via attachments to the above email)

a. Corps ETL1110-2-569 Design Guidance for Levee Underseepage (May 1, 2005).
b. CDWA's Comments on the NOP for the Delta Wetlands Place of Use EIR.
c. CDWA's Comments on the Supplement to the NOP for the Delta Wetlands Place of Use EIR.
d. CDWA's Comments on the 1995 Draft EIR for the Delta Wetlands Project.
e. CDWA's Comments on the 2000 Draft EIR for the Delta Wetlands Project.
f. CDWA et al.'s 2009, 1993 & 1988 SWRCB Protests to the Delta Wetlands Project.
g. CDWA et al's Closing Brief in the SWRCB's Admin Proceedings for the Delta Wetlands Project.
h. CDWA et al's Reply Brief in the SWRCB's Admin Proceedings for the Delta Wetlands Project.
i. Volume No. 27 from the administrative record of the SWRCB's Admin Proceedings for the Delta Wetlands Project.

Letter 28: Dante John Nomellini, Jr., Central Delta Water Agency

28-1 Comment noted. Semitropic will place CDWA on the mailing list and will provide notice of meetings to CDWA pertaining to this project.

28-2 Semitropic has complied with CEQA for consultation with responsible agencies, trustee agencies and federal agencies through the publication of a notice of preparation and supplemental notice of preparation and provision of three public scoping meetings, notices of which were published in newspapers of general circulation in the region. The mailing lists for notices of preparation are available at http://www.deltawetlandsproject.com/.

28-3 Incorporation by reference is a tool to include all or part of another document as part of the text of the EIR without the need to repeat the entirety of the incorporated text (Guidelines Section 15150). The EIR expressly incorporates by reference only a handful of documents, including the 2001 FEIR and 2001 FEIS that have been made available for public review at Semitropic and http://www.deltawetlandsproject.com/. An EIR need not incorporate into an EIR all documents that are relied upon. Guidelines Section 15148 provides that generally, "These documents should be cited but not included in the EIR":

> Preparation of EIRs is dependent upon information from many sources, including engineering project reports and many scientific documents relating to environmental features. These documents should be cited but not included in the EIR. The EIR shall cite all documents used in its preparation including, where possible, the page and section number of any technical reports which were used as the basis for any statements in the EIR.

The three cited excerpts on pages 4.9-1, 4.13-1, and 2-5 from the Draft EIR are examples of documents cited but not incorporated by reference into the EIR.

28-4 Page 6-7 of the DEIR discloses the specific locations and types of growth that may occur within the places of use. It also describes that these areas have their own plans that "address the specific amount and location of growth, as well as possible environmental impacts associated with this growth." Section 15150 of the Guidelines does not apply as the analysis is not incorporating these documents by reference.

As discussed on page 6-9 of the DEIR, additional water supply provided by the Project could remove an obstacle to a portion of the planned growth in the identified places of use, which could result in secondary environmental effects; however, the responsibility to approve such growth and mitigate potential significant impacts is not in the jurisdiction of the Lead Agency or the project applicant. Individual jurisdictions within the places of use have the authority to

approve, condition, or deny individual development projects and make growth decisions. Accordingly, no further growth-related impact analyses are necessary to provide Project water to the places of use.

28-5 The DEIR assumes that there will be no change in the operation of the CVP and SWP as a result of Project releases for water quality or outflow enhancement (DEIR pages 3-12 and 4.1-6). Because the Project would be operated independently of the CVP and SWP, there were assumed to be no changes in upstream reservoir operations, no changes in Delta inflows, and no changes is CVP and SWP exports caused by Project releases. The possibility that Project releases for outflow could replace SWP/CVP upstream releases and free up water for use elsewhere is considered very unlikely. Under the Project, releases generally occur during wetter years when there is little or no unused export capacity at the Banks or Tracy pumping plants. During late fall periods of wetter years, the SWP/CVP have little or no ability to reduce upstream reservoir releases to capture this water for later use. If upstream requirements are controlling (e.g., instream flow, flood pool), there is no flexibility to alter reservoir releases. If Delta E/I requirements are controlling, there is no flexibility to alter reservoir releases. Due to the relatively small quantity, variable availability, and unpredictable nature of Project releases, it is unlikely that CVP/SWP operations would change from current conditions as a result of the Project.

28-6 All Project water will be delivered and used in the designated places of use. Each place of use has an established need for water, and Project water will be used to improve the reliability of existing supplies that have been reduced. Furthermore, because the Project water will satisfy only a portion of the demand created by reductions in CVP, SWP, and Colorado River water supply, this reliability water is not expected to free up other sources of supply for transfer.

28-7 The places of use identified in the Draft Place of Use EIR do not include lands that drain to the San Joaquin River. Accordingly, no Project water is proposed to be delivered to lands that drain the San Joaquin River. In addition, as discussed above, it is not anticipated that CVP or SWP operations would change as a result of the Project releases. Accordingly, the Project would not contribute to salinity and pollutant load in the San Joaquin River.

28-8 The Project does not propose any water transfers beyond the deliveries analyzed in the DEIR. Any subsequent transfers of Project water would be speculative at this time, and the Lead Agency for any such subsequent transfer would be required to comply with CEQA.

28-9 All mitigation measures proposed within the DEIR include performance standards to ensure that once implemented, potential impacts are avoided, minimized, or mitigated. For example, the Water Quality Management Plan includes performance criteria such as “once every three years the Project would submit an accounting of the net increase or decrease in TOC, TDS, bromide and chloride loading in the

water diverted from the Delta for urban use due to Project operations (including habitat island operations)."

28-10 As the Lead Agency, Semitropic intends the Place of Use EIR comply with CEQA. Federal agencies that may have authority over Project activities would be responsible for compliance with NEPA.

28-11 As discussed in the 2001 Final EIS, several alternatives were considered but rejected for further evaluation. These included an alternative that involved reoperation of the CVP and SWP, a water conservation alternative, a water transfer alternative, a non-delta water storage or conjunctive use alternative and an alternative involving water storage on other Delta islands. All of these alternatives were deemed infeasible, impracticable, or unable to fully meet the stated needs.

In *Central Delta Water Agency v. State Water Resources Control Bd.* (2002) Sacramento County Superior Court Case No. 01CS00345, the trial court upheld the range of alternatives considered for this Project and held that out-of-Delta reservoir alternatives were not required to be considered. (*Id*. on page. 9, lns. 21-24 ["In light of the unique operational flexibility offered by this project due to its location, respondent did not abuse its discretion in failing to further consider out-of-Delta alternatives."].) The trial court's conclusion was not overturned on appeal in *Central Delta Water Agency v. State Water Resources Control Bd.* (2004) 124 Cal.App. 4th 245.

28-12 The DEIR does not consider a 100% in-Delta use alternative as that alternative would fail to meet the stated purpose and needs and project objectives, which includes "increase the reliability of water supplies for Semitropic and other places of use including Golden State, Metropolitan, Western, and Valley District."

28-13 Project objectives are stated on page 1-7 of the DEIR, and include increasing the reliability of water supplies for Semitropic and other entities within the defined places of use, reducing groundwater overdraft, and providing additional dry year water supply reliability for Project users.

28-14 The DEIR evaluated a range of alternatives that would have varying effects on land conversion while still meeting the basic project objectives. As originally conceived, the Project included four reservoirs islands and year-round operations. In consultation with federal, state, and local agencies, the water operations been reduced to: two reservoir islands (with Bouldin and Holland reserved for agriculture and habitat); a reduction in the maximum allowable elevation of stored water; and, constrained diversion and discharge windows. Taken together, such changes have reduced the yield of the Project by approximately 70%. Any further reduction in the size of the Project would not allow it to substantially meet its objectives. Further, the sustainability of agriculture in the Delta as it has been practiced historically is very much in doubt due to ongoing subsidence, regulatory constraints related to both federal and state endangered species acts and the Clean

Water Act, and the uncertainty in continued public funding for levee maintenance. Nonetheless, conservation easements will be placed on Bouldin and Holland, and agricultural conservation work will be completed within the boundaries of Semitropic. Agriculture will continue on the Habitat Islands to extent allowed by the Habitat Management Plan.

The FEIR adopted the following mitigation measure LU-MM-1 to lessen the Project impacts associated with agricultural land conversion:

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

28-15 In consultation with DFG, FWS and NMFS, the Project water storage capacity and water diversion criteria have been modified where feasible to reduce impacts to fishery resources. These criteria, coupled with the FOC and measures outlined in the Project BOs, would minimize potential effects to fisheries resources, including potential entrainment impacts. As described in response to Comment 28-14, above, environmental constraints have reduced the yield of the Project by approximately 70%; any further reduction in the size of the Project would not allow it to substantially meet its objectives.

28-16 Any conversion of prime and unique farmland and farmland of statewide and local importance is inconsistent with County General Plans and the DPC Land Use Plan; therefore, reducing the extent to which the Project changes agricultural use would not alter the significance of the impact. As discussed on page 4.8-23 of the DEIR, the Project will record conservation easements over Bouldin Island and Holland Tract lands controlled by DW Properties. The easements will be developed to be consistent with the HMP and will be recorded in San Joaquin County and Contra Costa County, respectively. In addition, the FEIR includes LU-MM-1 to reduce the Project's impacts on land use and agriculture. However, even with these measures,

the Project would still be inconsistent with plans listed above, and therefore this impact remains significant and unavoidable.

28-17 The Delta Protection Act of 1959 (Water Code section 12200, *et seq*.) and Watershed Protection Act (Water Code section 11460, *et seq*.) are summarized below.

The Delta Protection Act contains various findings and policies regarding in-Delta water supply, salinity control, and export of water from the Delta. Section 12200 contains findings by the Legislature regarding the salinity problem in the Delta and the role of the Delta in providing a supply of fresh water for water-deficient areas to the south and west, and a declaration of the need for a special law "for the protection, conservation, development, control and use of the waters in the Delta for the public good." Section 12201 contains findings by the Legislature of the need to maintain "an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban, and recreational development in the Delta . . . and to provide a common source of fresh water for export to areas of water deficiency." Section 12202 provides: "Among the functions to be provided by the State Water Resources Development System, [i.e., the facilities of the CVP and SWP] in coordination with the activities of the United States in providing salinity control for the Delta through operation of the Federal Central Valley Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta" or provision of an alternative supply in lieu of the water to be provided for salinity control. Section 12203 provides: "It is hereby declared to be the policy of the State that no person, corporation or public or private agency or the State or the United States should divert water from the channels of the Sacramento-San Joaquin Delta to which the users within said Delta are entitled." Section 12204 provides: "In determining the availability of water for export from the Sacramento-San Joaquin Delta no water shall be exported which is necessary to meet the requirements of Sections 12202 and 12203 of this chapter."

The Delta Protection Act was analyzed in the recent Third District Court of Appeal decision, *State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674. *State Water Resources Control Bd. Cases* states that the Act "seeks to serve the dual goals: (1) maintaining and expanding agriculture, industry, urban, and recreational development in the Delta; and (2) providing fresh water for export to areas of water deficiency." *Id*. at 771. *State Water Resources Control Bd. Cases* clarifies that the Act requires the State Water Resources Control Board to "balance 'in-Delta needs and export needs' and to determine whether in-Delta needs receive an adequate supply of water" when it establishes water quality and flow standards in the Bay-Delta Water Quality Control Plan. *Id.* The decision further states that "it is for the Board to decide, in the exercise of its judgment, what level of salinity control should be provided and what is an adequate supply of water for users in the Delta." *Id*. at 772. Bay-Delta water quality and flow standards applicable to the Project are discussed in Section 4.2 of the DEIR. The Project does not involve a

change to any Bay-Delta water quality and flow standards.

Water Code section 11460, *et seq*., Article 3 of Chapter 3 of Part 3 of the Water Code, commonly referred to as the "Watershed Protection Act", was originally enacted as part of the Central Valley Project Act of 1933. (29 Ops.Cal.Atty.Gen. 136, 137 (1957).) Section 11460 provides: "In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein." Section 11461 provides: "In no other way than by purchase or otherwise as provided in this part shall water rights of a watershed, area, or the inhabitants be impaired or curtailed by the department, but the provisions of this article shall be strictly limited to the acts and proceedings of the department, as such, and shall not apply to any persons or state agencies."

The Watershed Protection Act applies only to DWR and other state and federal agencies operating units of the Central Valley Project. (Water Code §§ 11460, 11128.) Accordingly, the Watershed Protection Act does not apply directly to the Project or Semitropic. The Project will be operated in accordance with applicable Bay-Delta water quality and flow standards (DEIR Section 4.2). As stated in Response to Comment 28-5, the Project is unlikely to change the operation of the CVP and SWP. Because the operation of the CVP and SWP is not expected to change as a result of the Project, the Project will not affect DWR or Reclamation's compliance with the Watershed Project Act.

28-18 Final levee design is not necessary to complete CEQA. Guidelines section 15124 state:

> "The description of the project … should not supply extensive detail beyond that needed for evaluation and review of the environmental impact."

The conceptual design provided in the DEIR is sufficient to evaluate project impacts.

28-19 The levee standards for the Habitat Islands have not been downgraded. The Habitat Island levees will be constructed to meet the Corps' Delta Specific PL 84-99 standards, which is functionally equivalent to the Bulletin 192-82 standard. The Delta Specific PL 84-99 standards have been formally adopted by DWR for "non-project" Delta levees; the DWR Bulletin 192-82 draft report was never finalized nor adopted.

28-20 Sea level rise was considered in sections 4.3 and 4.14 of the DEIR. For clarification, the sentence referred to in the comment was intended to describe that the elevation of the levees as initially constructed would not accommodate

predicted sea level rise. The proposed levee design would, however, accommodate potential rises in sea level, as stated on page 2-19:

> "The proposed Reservoir Island levee design now includes a more stable and flat reservoir-side slope, with a wider top width and a vertical cutoff trench to reduce seepage. The wider top width will allow future maintenance activities to place additional fill as needed to make up for any post-construction settling or sea-level rise while still providing minimum top widths and acceptable slopes after fill placement."

The above design update includes a 45-foot crest width for the Reservoir Island levees to accommodate anticipated sea level rise. As stated on page 4.3-4 of the DEIR, routine maintenance activities were identified to add material to the levee crown in response to actual sea level rise over time.

28-21 All forms of seepage, including underseepage, were analyzed in the DEIR, including pages 2-19 through 2-20 and throughout section 4.3. The addition of the core trench to the levee design will reduce through-seepage and underseepage as well as increase the seismic stability of the reservoir island levees. The Project includes a comprehensive Seepage Monitoring and Control System, as summarized on pages 2-19 and 2-20 of the DEIR and described in detail in the Protest Dismissal Agreement between Delta Wetlands Properties and the East Bay Municipal Utility District, included as an appendix to the 2001 FEIR. The Seepage Monitoring and Control System will monitor and protect neighboring islands from any potential underseepage impacts of the Reservoir Islands. The Project also includes an interceptor well system to capture and control underseepage to avoid impacts to adjacent islands. These analyses and measures are consistent with the Corps ETL 1110-2-569 requirements.

28-22 The referenced enclosures are comments on past project environmental documents and do not contain comments that are specifically directed at the DEIR impact analysis. Without additional clarification of how information within each document is relevant to the impact analysis conducted within the DEIR, a detailed response to all documents referenced is not required (*Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) 196 Cal.App.4th 515).