

California Bay-Delta Authority
In-Delta Storage Program
State Feasibility Study

PUBLIC COMMENT LETTERS

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Abbreviations and Acronyms

B

BAWSCA Bay Area Water Supply & Conservation Agency

C

CALTRANS California Department of Transportation
CBPA California Business Properties Association
CCWD Contra Costa Water District
CDWA Central Delta Water Agency
CUWA California Urban Water Agencies
CWA California Waterfowl Association

E

EBMUD East Bay Municipal Utility District

N

NCWA Northern California Water Association

P

PCWA Placer County Water Agency
PG&E Pacific Gas and Electric Company

R

RBOC Recreational Boaters of California

S

SCVWD Santa Clara Valley Water District
SDWA South Delta Water Agency
SJRGA San Joaquin River Group Authority
SVMG Silicon Valley Manufacturing Group
SWC State Water Contractors

BAWSCA

Bay Area Water Supply & Conservation Agency

March 22, 2004

Jeremy Arrich
DWR, DPLA
PO Box 942836
Sacramento, CA, 94236-0001

Subject: Comments on 2004 Draft In-Delta Storage Feasibility Study

Dear Mr. Arrich:

We have reviewed the 2004 Draft In-Delta Storage State Feasibility Study and appreciate this opportunity to submit comments. In-Delta Storage is the first CALFED surface water storage project to achieve this level of analysis and a finding of technical feasibility. Combined with the project's pre-existing permits and completed environmental review, it presents an important and credible opportunity to advance balanced implementation of the CALFED Record of Decision.

However, the economic analysis is based on a faulty assumption or understanding of Bay Area water systems and their operating limitations. The economic analysis assumes that:

Regionally, the San Francisco Bay Region is expected to be at a relatively high level of reliability in 2020 after the assumed adoption of economically justified local water conservation and supply augmentation measures in the context of the assumed availability of local carryover storage. Consequently, State Water Project deliveries available under contract and interruptible deliveries that were not of net economic value to the region (hereafter referred to as unallocated deliveries) were assumed to be available to augment SWP South Coast Region urban deliveries.

(Draft Report on Economic Analysis p.8, and Draft Summary Report, Section 7.4.2.1, page 106)

This assumption could underestimate the project's value and erroneously suggest where benefits from this or other projects should accrue.

Combined, BAWSCA's 28 cities, water districts and water companies rely on the San Francisco regional water system for only two-thirds of their current water supply needs. While BAWSCA agencies are committed to local water conservation and supply augmentation measures, and while such measures are an important part of our long range water supply planning, our analyses show that they are not sufficient in themselves to result in a "high level of reliability in 2020..." We recommend that the report's assumption be re-evaluated and the model and the conclusions be revised appropriately.

Jeremy Arrich
March 22, 2004
Page 2 of 2

Bay Area plans and studies identify a need for additional imported water supply and there is a general need to improve water supply reliability and water quality in the region. Storage projects that can increase yield, improve water quality, facilitate water transfers and provide environmental benefits could be valuable to the region. The feasibility study indicates the In-Delta Storage Project could produce a variety of benefits under various operating scenarios.

Because this project is of potential value to our agencies, or the Bay Area region as a whole, we recommend that the project move forward, contingent upon completion of the analyses recommended above.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur R. Jensen", with a long horizontal flourish extending to the right.

Arthur R. Jensen
General Manager



CALIFORNIA BUSINESS PROPERTIES ASSOCIATION

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EVE STWORA-HAIL, Downey, Brand, Seymour & Rohwer

WILLIAM TOOLEY, Trammell Crow Company

ROBERT WEBSTER, Bohannon Development Company

March 10, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Dear Authority Members,

California Business Properties Association (CBPA) supports the balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision, which was supported by a broad coalition of interests including CBPA, was the development and construction of new surface water storage projects, which could increase new water supplies and provide much-needed additional storage for California.

The business community has long supported the entire CalFed program and has specifically advocated that increased water supply reliability and new storage is required to manage the demands of a rapidly growing population and support California's vibrant economy. As you know, most, if not all, core business sectors in California cannot succeed without a stable and reliable source of water.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. While an economic analysis is yet to be complete, DWR's report found the project technically feasible and opined the project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004)

This announcement is an important step forward for the state and the water industry at large as any real progress in constructing new surface water storage facilities has yet to materialize, despite the constant calls for action. We understand all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation. To date, the In-Delta Storage Project is the only proposed water storage and supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that

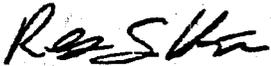
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can also provide complimentary benefits in water quality, ecosystem restoration and levee stability, and provide operational flexibility for the state and federal water projects.

Therefore, we strongly encourage the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

Thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



Rex S. Hime
President and CEO

cc: Jeremy Arrich

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Richard M. Kovacevich
R. William Hauck

March 2, 2004

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California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, California 95814

Re: Delta Wetlands Project/In-Delta Storage Project

Dear Authority Members:

On behalf of the California Business Roundtable, I write to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision was the development and construction of new surface water storage projects, which would increase new water supplies and provide the state with much-needed water storage.

The Roundtable has long advocated that increased water supply reliability and new water storage is essential to meeting the demands of California's rapidly growing population and to sustaining a vibrant economy.

The California Department of Water Resources (DWR) recently released a feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. To date, the In-Delta Storage Project is the only proposed water storage and water supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that can also provide complimentary benefits in water quality, ecosystem restoration, levee stability, and one that will provide operational flexibility for state and federal water projects.

Therefore, the California Business Roundtable strongly encourages the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews.

Sincerely,

WILLIAM HAUCK
President

cc: Patrick Wright, Director, California Bay-Delta Authority
Jeremy Arrich, California Department of Water Resources
Dan Skopec, Office of the Governor
Dennis Albani, Office of the Governor
Bay Delta Public Advisory Committee
Members, California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Honorable Dianne Feinstein
Honorable Richard Pombo

1215 K Street, Suite 1570
Sacramento, CA 95814

916.553.4093
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CALIFORNIA BUSINESS ROUNDTABLE

February 13, 2004

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Verizon
Washington Mutual
Wellpoint
Wells Fargo & Company

Mr. Patrick Wright
Director
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, California 95814

Re: Support Delta Improvements Package

Dear Mr. Wright:

On behalf of the California Business Roundtable, I write to express our organization's strong support for the ongoing implementation of the CALFED Bay-Delta Program (CALFED) and more specifically, our support for developing the Delta Improvements Package which we believe will improve water supply reliability, ecosystem health and water quality in the Delta.

The Roundtable has long believed the success of the CALFED Program is essential to the wellbeing of California's economy and environment. Only a decade ago, the California water system was in chaos and businesses were questioning whether to expand or locate plants in California because of concerns regarding unreliable water supplies. Through the CALFED Program, California has stabilized this situation and embarked on a road to economic and environmental recovery.

While we understand the final components of the Delta Improvements Package are being negotiated and need to be vetted through the appropriate public review process, we believe the Package will help create a much needed framework for advancing CALFED in the coming months and year and builds upon CALFED's core objectives.

The California Business Roundtable applauds you for your leadership in furthering CALFED principles and ensuring sound and effective management of California's critical water resources.

Sincerely,



WILLIAM HAUCK
President

cc: Members, California Bay-Delta Authority
Dan Skopec, Office of the Governor
Dennis Albiani, Office of the Governor
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Honorable Dianne Feinstein
Honorable Richard Pombo

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Sacramento, CA 95814 916.553.4097 (fax)



CALIFORNIA CHAMBER of COMMERCE

March 16, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Dear Authority Members,

On behalf of the California Chamber of Commerce, I am writing to express support for the balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision, which was supported by a broad coalition of interests, was the development and construction of new surface water storage projects, which could increase new water supplies and provide much-needed additional storage for California.

The business community has long supported the entire CalFed program and has specifically advocated that increased water supply reliability and new storage is required to manage the demands of a rapidly growing population and support California's vibrant economy. As you know, most, if not all, core business sectors in California cannot succeed without a stable and reliable source of water.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. While an economic analysis is yet to be complete, DWR's report found the project technically feasible and opined the project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004)

This announcement is an important step forward for the State and the water industry at large as any real progress in constructing new surface water storage facilities has yet to materialize, despite the constant calls for action. We understand all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation. To date, the In-Delta Storage Project is the only proposed water storage and supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that can also provide complementary benefits in water quality, ecosystem restoration and levee stability, and provide operational flexibility for the state and federal water projects.

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California Bay-Delta Authority

March 16, 2004

Page 2

Therefore, we strongly encourage the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

On behalf of the California Chamber of Commerce, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



Pete Nelson, Chairman
Water Committee

CC: Patrick Wright, Director, California Bay-Delta Authority
Dan Skopec, Office of the Governor
Dennis Albani, Office of the Governor
Jeremy Arrich, Department of Water Resources
Bay Delta Public Advisory Committee
California State Senate Agriculture and Water Committee
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Honorable Richard Pombo

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February 10, 2004

California Bay-Delta Authority Members
 California Bay-Delta Authority
 650 Capitol Mall, 5th Floor
 Sacramento, CA 95814

Dear Authority Members:

On behalf of California Council for Environmental and Economic Balance, I am writing today to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision, which was supported by a broad coalition of interests, was the development and construction of new surface water storage projects, which could increase new water supplies and provide much-needed additional storage for California.

The business and labor community, which we represent, has supported the CalFed program and has specifically advocated that increased water supply reliability and new storage is required to manage the demands of a rapidly growing population and support California's vibrant economy. As you know, most, if not all, core sectors of the California economy cannot succeed without a stable and reliable source of water.

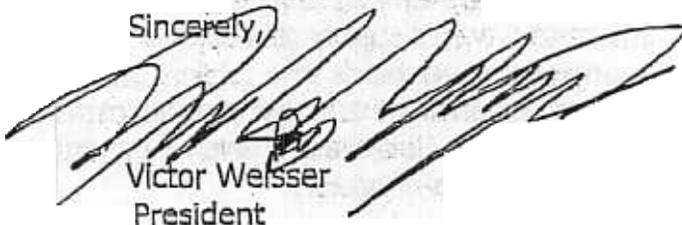
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Therefore, we strongly encourage the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

On behalf of CCEEB, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



Victor Weisser
President

CC: The Honorable John Doolittle
The Honorable Dianne Feinstein
The Honorable Robert Matsui
The Honorable Doug Ose
The Honorable Richard Pombo
The Honorable George Radanovich
Mr. Patrick Wright, Director, California Bay-Delta Authority
Mr. Jeremy Arrich, Department of Water Resources
Mr. Dan Skopec, Office of the Governor
Mr. Dennis Albiani, Office of the Governor
Senate Committee on Agriculture and Water Resources
Assembly Committee on Water, Parks & Wildlife



CALIFORNIA FARM BUREAU FEDERATION

NATURAL RESOURCES AND ENVIRONMENTAL DIVISION

2300 RIVER PLAZA DRIVE. SACRAMENTO. CA 95833-3293 · PHONE (916) 561-5665 · FAX (916) 561-5691

March 18, 2004

Jeremy Arrich
DWR, DPLA
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Scoping Comments for In-Delta Storage Feasibility Studies

Dear Mr. Arrich:

The California Farm Bureau Federation ("Farm Bureau") is a non-profit voluntary membership corporation whose purpose is to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable food and fiber supply through responsible stewardship of California's land, water and air resources. Our membership consists of 89,000 members throughout California who are farmers and ranchers or otherwise concerned about the future of agriculture and rural communities in California.

We are pleased that the Department of Water Resources ("DWR") came to the CALFED Working Landscapes Sub-Committee to discuss CALFED's In-Delta Storage feasibility studies ("Delta Wetlands project".) We were encouraged by DWR's explanation of its preliminary California Environmental Quality Act ("CEQA") analysis of agricultural resources; specifically its use of the Land Evaluation Site Assessment ("LESA") model and its ongoing discussions of mitigation options with local governments and the Department of Conservation.

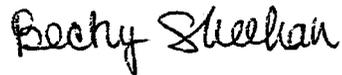
At the Working Landscapes meeting, DWR staff identified some issues surrounding the potential cost and feasibility of using agricultural easements to mitigate the impacts of the Delta Wetlands project. We do not believe easements are the only mitigation option that may effectively mitigate the impacts of the project. However, easements should be considered as a potentially feasible option. We would like to remind DWR that agriculture is a valuable resource in its own right. Its value as a buffer against urban sprawl is only a secondary benefit. As such, it is not necessary only to consider potential easement sites that are adjacent to urban development. DWR should

be looking at agricultural resources that are of comparable quality and in the same region as the resources impacted by the Delta Wetlands project.

It is our understanding that an analysis of agricultural resources has not been undertaken for two of the islands, pending a new management plan. We look forward to the inclusion of these islands in a future CEQA analysis.

Thank you for consideration of these issues. If you have any questions, feel free to me at (916) 561-5667.

Sincerely,



Becky Sheehan

BDS/sm

California Legislature

February 19, 2004

Patrick Wright, Executive Director
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, California 95814

Gary Hunt, Chairman
California Bay-Delta Advisory Committee
c/o California Strategies, L.L.C.
18800 Von Karman Avenue, Suite 190
Irvine, California 92612

RE: THE DELTA WETLANDS FEASIBILITY STUDY

Dear Mr. Wright and Mr. Hunt:

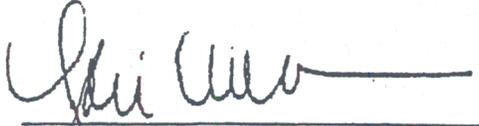
We are pleased to see that CALFED and the Department of Water Resources (DWR) have released the In-Delta Storage Program State Feasibility Study, which is the state's Feasibility Study for Delta Wetlands. CALFED was established to find solutions to California's water supply problems *before* the need reaches crisis proportions. The release of the Feasibility Study for the Delta Wetlands Project is a good beginning. We are writing to urge you to move forward expeditiously with the next steps of the study and evaluation of the Project.

The Feasibility Study finds that, "[t]he Delta Wetlands Project could provide a variety of benefits and contribute to meeting each of CALFED's four objectives for water supply reliability, water quality, ecosystem restoration, and levee system integrity." The Feasibility Study also finds that the Delta Wetlands Project would provide 217,000 acre-feet of new storage capacity for California, and finds that under all operating scenarios studied the project will provide the following benefits: Operational flexibility for the state water project, improved Delta water quality, additional wildlife habitat, storage for water transfers, reduced likelihood of flood damage in the Delta region, seismic stability, contribution to Delta requirements (D1641), state water project system wide carryover storage, and new recreational opportunities.

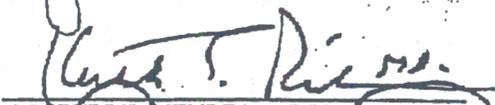


The Feasibility Study concludes that the Delta Wetlands Project requires some additional study. California needs the benefits that the Feasibility Study attributes to Delta Wetlands. We urge the California Bay-Delta Authority and the Bay-Delta Public Advisory Committee to promptly approve the next step of work on the Delta Wetlands Project so that we can continue to address California's vital water supply needs.

Sincerely,


ASSEMBLY MEMBER LOIS WOLK

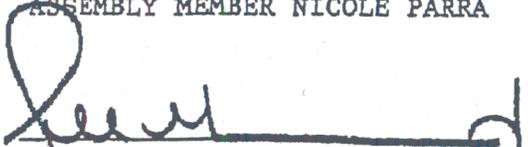

ASSEMBLY MEMBER BARBARA MATTHEWS


ASSEMBLY MEMBER KEITH RICHMAN


ASSEMBLY MEMBER JOHN CAMPBELL

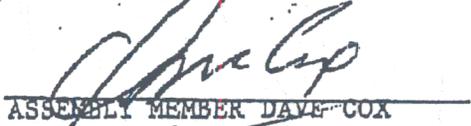

ASSEMBLY MEMBER NICOLE PARRA

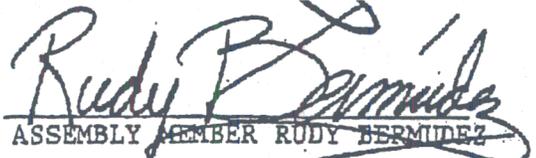

ASSEMBLY MEMBER DARRELL STEINBERG


ASSEMBLY MEMBER ABEL MALDONADO

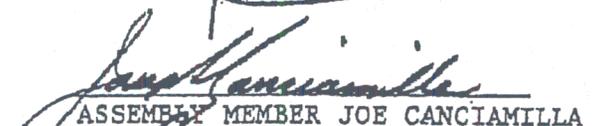

ASSEMBLY MEMBER PATRICIA BATES


SENATOR DEAN R LOPEZ


ASSEMBLY MEMBER DAVE COX

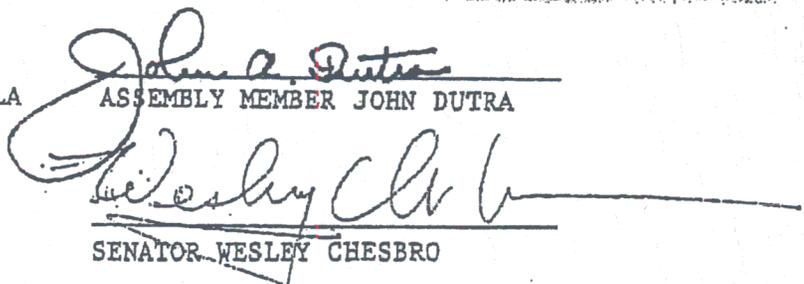

ASSEMBLY MEMBER RUDY BERMUDEZ


ASSEMBLY MEMBER CINDY MONTANEZ

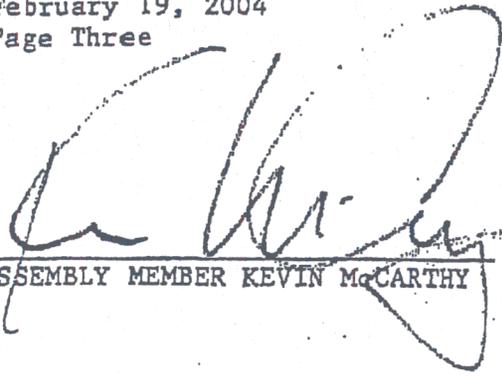

ASSEMBLY MEMBER JOE CANCIAMILLA


ASSEMBLY MEMBER JOHN DUTRA


ASSEMBLY MEMBER DAVID COGDILL


SENATOR WESLEY CHESBRO

February 19, 2004
Page Three



ASSEMBLY MEMBER KEVIN McCARTHY



SENATOR DENISE MORENO DUCHENE

cc: The Honorable Arnold Schwarzenegger
Members of the California Bay-Delta Authority
Members of the Bay-Delta Public Advisory Committee

California State Senate

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SENATOR
TOM TORLAKSON
SEVENTH SENATORIAL DISTRICT



STANDING COMMITTEES
LOCAL GOVERNMENT
CHAIR

WCT COMMITTEES
WATER INFRASTRUCTURE
CHAIR

March 8, 2004

Patrick Wright, Executive Director
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, California 95814

Gary Hunt, Chairman
California Bay-Delta Advisory Committee
650 Capitol Mall, 5th Floor
Sacramento, California 95814

RE: THE DELTA WETLANDS FEASIBILITY STUDY

Dear Mr. Wright and Mr. Hunt:

I am writing to support the continued study and evaluation of the In-Delta Storage Project. I am pleased that CALFED and the Department of Water Resources (DWR) have released the In-Delta Storage Program State Feasibility Study, a critical first step for this proposal.

I know you agree that California's growing population, economy and environmental health are dependent on a predictable and healthy water supply. Increased storage is a key part of CALFED's Record of Decision. Evaluation and implementation of the many projects and components of CALFED represent a profound challenge for your agency and its partners. Continued study of the In-Delta Storage Project will provide valuable tools for evaluation and comparison with the other storage proposals.

The In-Delta Storage Program State Feasibility Study concludes that the Delta Wetlands Project requires some additional study. California needs the benefits that the Feasibility Study attributes to Delta Wetlands. I urge the California Bay-Delta Authority and the Bay-Delta Public Advisory Committee to promptly approve the next step of work on the Delta Wetlands Project so that we can continue to address California's vital water supply needs.

Thank you for your work on this and the many other components of your mission. Please call me if you have any questions.

Sincerely,

Tom Torlakson

cc: The Honorable Arnold Schwarzenegger
Members of the California Bay-Delta Authority
Members of the Bay-Delta Public Advisory Committee

**CALIFORNIA TEAMSTERS
PUBLIC AFFAIRS COUNCIL**

1127 11TH STREET, SUITE 501
SACRAMENTO, CA 95814
PHONE 916 446.0291
FAX 916 446.9321
E-MAIL info@teamstercipac.org

March 5, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Dear Authority Members,

I am writing on behalf of Teamster union members throughout California to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). Specifically, we have long supported efforts which will result in the development and construction of new surface water storage projects which could increase new water supplies and provide much-needed additional storage for California.

From the perspective of our union, it is important the CalFed program achieve the goal of increasing water supply reliability and new storage capacity in order to meet the demands of a rapidly growing population and support our state's infrastructure needs. Clearly, California's economy cannot expand without a stable and reliable source of water.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. While an economic analysis is yet to be complete, DWR's report found the project technically feasible and determined that the project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004).

This announcement is an important step forward for the state and the water industry at large as any real progress in constructing new surface water storage facilities has yet to materialize, despite the constant calls for action. We understand all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation. To date, the In-Delt

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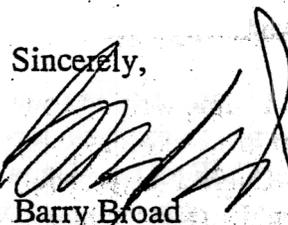


March 5, 2004

Storage Project is the only proposed water storage and supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that can also provide complimentary benefits in water quality, ecosystem restoration and levee stability, and provide operational flexibility for the state and federal water projects.

Therefore, we strongly encourage the California Bay-Delta Authority to move forward in its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

On behalf of the Teamsters, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,

Barry Broad
Legislative Director

- CC: Patrick Wright, Director, California Bay-Delta Authority
Jeremy Arrich, California Department of Water Resources
Dan Skopec, Office of the Governor
Dennis Albani, Office of the Governor
Bay Delta Public Advisory Committee
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Honorable Dianne Feinstein
Honorable Barbara Boxer
Honorable Richard Pombo
Honorable Doug Ose
Honorable Robert Matsui
Chuck Mack, Chairperson, CTPAC



March 17, 2004

Jeremy Arrich
Department of Water Resources,
Division of Planning and Local Assistance
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Arrich:

This is in reply to DWR's email notice dated February 3, 2004 regarding the release of the "State Feasibility Study of the In-Delta Storage Project."

Our principal concern is compliance with the provisions of the October 9, 2000 water rights protest dismissal agreement CUWA has with Delta Wetlands that was agreed to when the Delta Wetlands Project was before the State Water Resources Control Board. A key component of our agreement is a Water Quality Management Plan (WQMP), intended to assure that potential adverse water quality impacts would be avoided and addressed in operation of any subsequent project. The WQMP is similar to the separate protest dismissal agreement Delta Wetlands signed with Contra Costa Water District. In addition, the East Bay Municipal Utility District signed a protest dismissal agreement that focused on fishery protections and aqueduct security issues (both the CCWD and EBMUD agreements are referenced in the CUWA agreement, and the WQMP is incorporated by reference in the CCWD agreement). CUWA secured a clear commitment from the applicant/permittee Delta Wetlands to adhere to all three agreements as an assurance to protect our interests.

All three agreements also provided part of the foundation for the SWRCB water rights decision on the Delta Wetlands Project. The agreements include provisions making the terms and conditions binding on any successors in interest. We conclude that the current In-Delta Storage studies are the functional equivalent of a successor project.

We appreciate the hard work and detailed analysis done by DWR in the many components of the planning reports released over the past few months. However, the modeling to date by DWR does not show compliance with the provisions of the agreements. As stated in our February 12, 2002 letter to Bay-Delta Authority Executive Director Patrick Wright (copy attached), decision-makers and others will need an analysis which meets all of the proposed project's water quality requirements and all of its water rights operating restrictions before drawing conclusions regarding project benefits. Since neither the water quality requirements, nor the water rights operating restrictions have been met in the analysis, a true assessment of the project benefits cannot be made at this time. Further, optimistic comments on the feasibility of the project are made in the

executive summary and summary report which may be misleading to decision makers if not balanced by comments that acknowledge the severity of constraints to the project by the water quality requirements and operating restrictions, which have been identified in the State draft feasibility studies.

Attached are more detailed technical comments regarding aspects of the DWR studies and assumptions related to potential water quality impacts. Thank you for the opportunity to provide comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Macaulay". The signature is fluid and cursive, with a large initial "S" and "M".

Steve Macaulay, Executive Director
Attachments



February 12, 2002

Patrick Wright
Executive Director
CALFED
1416 9th Street, Rm. 1155
Sacramento, CA 95814

Subject: In-Delta Storage Program Water Quality Investigations

Dear Mr. Wright:

The purpose of this letter is to express our concurrence with the recommendations of CALFED and Department of Water Resources (DWR) staff as to the need for further water quality analyses before decisions are made regarding CALFED In-Delta Storage Facilities.

As you know, compliance with water quality objectives is a significant issue for this project. Water quality requirements which could affect project operations are set forth in SWRCB Decisions 1641 and 1643; in the water quality certification issued under Clean Water Act section 401; and in two water rights protest dismissal agreements between the proponents of one of the alternatives under consideration (Delta Wetlands Properties) and the California Urban Water Agencies and Contra Costa Water District. East Bay Municipal Utility District also has a settlement agreement with Delta Wetlands that does not cover water quality but is still important to CUWA. There are also certain restrictions on project operations under the new water rights for the project islands under consideration that appear to have been overlooked in the current CALFED operations modeling, e.g., restrictions on diversions to the reservoir islands.

We note that the summary of the November 27, 2001 Stakeholders meeting states:

“A preliminary evaluation of the proposed Delta Wetland operations presented in the Revised EIR/EIS (JSA 2000) was completed using the Delta daily model. The draft results indicate that the operations presented in the 2000 EIR/EIS do not meet the Water Quality Management Plan requirements using the low bookend values for dissolved organic carbon. Model runs including reoperation of the project to meet the water quality objectives will not be included in the December report.”

Further, the “Draft Summary for Stakeholders Briefing, January 16, 2002” states, among other things:

“Water quality modeling simulations of the DW Project operations do not always comply with WQMP DOC, chloride and disinfection by-product criteria at urban intakes. Additional reductions could occur due to DOC, chloride, temperature and disinfection by-product criteria. Project re-operations could likely reduce these water quality impacts.”

In the above document DWR staff recommends that CALFED:

- Undertake additional modeling studies to evaluate project operations that meet all WQMP criteria for DOC, chloride, temperature and disinfection by-products. Studies should also consider reservoir biological productivity. (Note; the key findings and conclusions on page 8 of the December 2001 “Integrated Storage Program Draft Summary Report” anticipate a yield reduction of 2 to 13 TAF to comply with the WQMP DOC criteria. We understand that estimate considers the carbon contribution from the soil, but not from vegetation. Therefore, the expected yield reduction would be greater).
- Develop laboratory methods to correlate soil characteristics with organic carbon release.
- Conduct experiments to investigate the complex ecological processes that may affect plant growth and carbon export from the reservoir islands.

Similarly, the December 2001 “Draft Report on Water Quality Investigations” now under review by the CALFED agencies (section 2.5.2) concludes:

“The frequency and severity of water quality violations in the Alternative 1 scenario demonstrate that the simulated operations are not in accordance with the terms and conditions of the permit issued by the SWRCB and other limitations imposed on the Project. As a result, the water supply benefit associated with Alternative 1 is not a reliable indication of the Project’s true benefit.”

The DWR staff then makes specific recommendations as to follow-up work needed to complete an appropriate analysis.

We are fully aware of the complexities of the ongoing analysis and recognize it as a work-in-progress. Our intent herein is to confirm the necessity of the additional work that has been identified. The CALFED decision makers, CUWA, Delta Wetlands and other stakeholders must have available an analysis which meets all of the project’s water quality requirements, and all of its water rights operating restrictions, before drawing any conclusions as to what the project can achieve.

Thank you for considering our comments. If CUWA can assist you in meeting our joint objective please contact me at (916) 552-2929.

Sincerely,



Walt Pettit
Executive Director

cc: Jim Easton
Project Manager
Delta Wetlands

Stephen Roberts, Chief
Division of Planning and Local Assistance
DWR

Gary Carlton, EO
CVRWQCB

Celeste Cantu, ED
SWRCB

**California Urban Water Agencies
March 17, 2004**

**Comments on CBDA/DWR Integrated Storage Investigations
In-Delta Storage Program State Feasibility Study
Draft Reports on Operations and Water Quality**

Observations on Operations and Water Quality Technical Analysis

The Department of Water Resources should be commended for its efforts to (1) provide a coherent technical analysis and (2) refine modeling tools and methodologies in support of the ISI In-Delta Storage Program. Noteworthy areas of advancement include:

- Development of a daily time step CALSIM II model
- Development of a simplified, yet credible, representation of interactions between Delta channels and wetlands
- Application of DSM2 fingerprinting methodologies to incorporate water quality constraints in CALSIM II
- Development of a multi-year planning methodology to evaluate dissolved oxygen concentrations in Delta channels

These advancements are expected to enhance future technical analyses of SWP-CVP operations and Delta water quality beyond their immediate application to the ISI In-Delta Storage Program.

Comments below focus generally on the ways in which unwarranted conclusions were drawn from the water quality technical analysis, rather than on any problems with the analysis itself.

Overall Conclusions

Chapter 2 of the Water Quality Report shows that the In-Delta Storage circulation alternative significantly violates the CUWA Water Quality Management Plan (WQMP) limitations placed on changes to organic carbon concentrations at urban intakes. A useful summary of these violations may be found in Table 2.5.10 on page 68. Note that under the circulation alternative Bacon Island releases water 55% of the time (Table 2.4.3). It is reasonable to assume that violations of the WQMP organic carbon standards at the export pumps caused by the project are a result of releases rather than diversions. Preliminary analyses confirm this point (M. Mierzwa, DWR, personal communication with R. Losee, MWD). From Table 2.5.10, 33% of the time the project will cause organic carbon violations at Banks; that is, 60% of the time water is released from Bacon Island, the project will be in violation. The In-Delta Storage operation was developed through CALSIM II modeling, as summarized in the Operations Report. Therefore, a feasible operations study has yet to be developed and the project yield numbers presented in the Operations Report are not supported. This review is focused on the DOC water quality

modeling, with less emphasis on the operations modeling and dissolved oxygen modeling.

In addition to significant violations of the WQMP organic carbon provisions, the Water Quality Report shows that the In-Delta Storage circulation alternative consistently violates the urban intake salinity increase provisions of the WQMP and of Contra Costa Water District's Protest Dismissal Agreement (CCWD's PDA). Some comments below address this concern.

Finally, the WQMP and CCWD's PDA contain a number of diversion and discharge limitations intended to protect water quality. Because of the limited time available for review of the Draft Feasibility Study, modeled compliance with all of these terms was not evaluated. The modeled violations of the organic carbon and salinity increase restrictions indicate that new modeling studies must be undertaken if conclusions about project operations are to be drawn. If such new studies are undertaken, diversions and releases, including diversions and releases for circulation, must show compliance with all relevant restrictions.

Operations Report

- Section 1.4 Key Findings and Recommendations (pages 3-4)
 - Bullet 5 states, "Due to strategic location of the In-Delta Storage reservoirs, immediate actions can be taken for salinity control. The reservoirs have a favorable impact to the location of the X2 line in the Delta." This finding was not validated through modeling studies and contradicts statements made in Section 5.3.6 (page 40). For example, Section 5.3.6 states "The CALSIM results indicate that the project's impact to X2 position and salinity are negligible."
 - Bullet 6 states, "DOC water quality problems can be diluted, with minor impacts to water supplies, using circulation operations." This finding was not validated through modeling studies, as discussed in the overall conclusions above.

- Section 3.4 Reiterations with DSM2 Model (page 15) – According to Section 4.4.1 on page 21, Study 4a (no circulation) reservoir diversion water quality was generated from Study 1 (no action base). While not explicitly stated, we assume that the same reservoir diversion water quality was used for Study 4b (circulation). Such an approximation may be reasonable for Study 4a, as ambient conditions would return to baseline conditions soon after the reservoir releases were made. But under Study 4b assumptions of frequent circulation, ambient conditions rarely return to baseline conditions. Therefore, such an approximation would be faulty for Study 4b.

- Section 5.4.2 Organic Carbon Evaluation (pages 41-55)
 - This lengthy section uses CALSIM results to draw conclusions about the ability of the In-Delta Storage project to meet WQMP requirements for organic carbon. DSM2 is a more appropriate tool for making assessments

about water quality. Therefore, one should rely on conclusions drawn in the Water Quality Report, rather than the Operations Report, to assess water quality impacts.

- Results are presented for a wet year (1986), a below normal year (1979), and two dry years (1985 and 1987). Selecting representative years is convenient for illustration. However, conclusions cannot be drawn from an analysis of representative years alone.
 - On page 49, the following conclusion is drawn: “The results indicate that In-Delta Storage operations, both with and without circulation, stay within the required DOC standards at the export locations from January through June of typical wet and below normal years.” As shown in Figures 5.26 and 5.30, no releases (above circulation volumes) are made from Webb during these months and year types; releases above circulation volumes are made from Bacon in June only. In spite of these minimal releases, the conclusion on page 49 is not validated by Figures 5.34 and 5.35. According to these figures, the DOC objective is violated at Banks in June of wet and below normal years.
- Section 5.5 Conclusions and Recommendations (page 58) – Bullet 2 states, “Resolution of water quality issues is possible with circulation of water through the island reservoirs.” This conclusion is not supported by the modeling results.

Water Quality Report – Chapters 1-2

- Section 1.2 (page 2). The importance of operating the In-Delta Storage project in compliance with the terms of CUWA’s WQMP is, properly, acknowledged. However, subsequent discussion of compliance is focused on the terms of the Operational Screening Criteria, Attachment 2 to the WQMP. The Drinking Water Quality Protection Principles, on Page 2 of the WQMP, also apply to project operations. In particular, the circulation operation now under consideration allows In-Delta Storage to reduce high concentrations of salt and carbon in project releases, but does so with more frequent circulation releases. Salt and carbon concentrations in the circulation releases that do not violate the numerical operational screening criteria may still violate the drinking water protection principles that require project operations to contribute toward continuous water quality improvement, to cause no water treatment cost increases, and to minimize and mitigate for any drinking water quality degradation.
- Section 1.2.2 Long-Term Requirement (page 3) – An analysis of the net long-term increase in DOC and salt loading was not provided. Given the nature of the circulation alternative, we suspect that the 5% objective is significantly violated. This requirement can only decrease project yield and operational flexibility.
- Section 1.2.3 Total Organic Carbon, bullet 1 (page 3) – While the modeled project operations minimize the number of days that the 14-day average TOC exceeds 4.0 mg/L, it does so in a manner that may be more detrimental to drinking water treatment plant operations and regulatory compliance, violating the intent of the criteria. Treatment plant compliance with the Stage 1 Disinfectants and Disinfection By-Products Rule is based on removing a certain percent of TOC based on influent

TOC and alkalinity. The limit of 4 mg/l TOC was selected for the WQMP because TOC removal requirements increase 10% when influent TOC exceeds 4 mg/l, and increases another 5% when influent TOC exceeds 8 mg/l. If compliance samples are collected during one of the TOC peaks, plants may fail to achieve the required removal rate unless they are always operating at the higher coagulant doses required by the peaks (costly), or are able to adjust operations on a daily basis (logistically difficult).

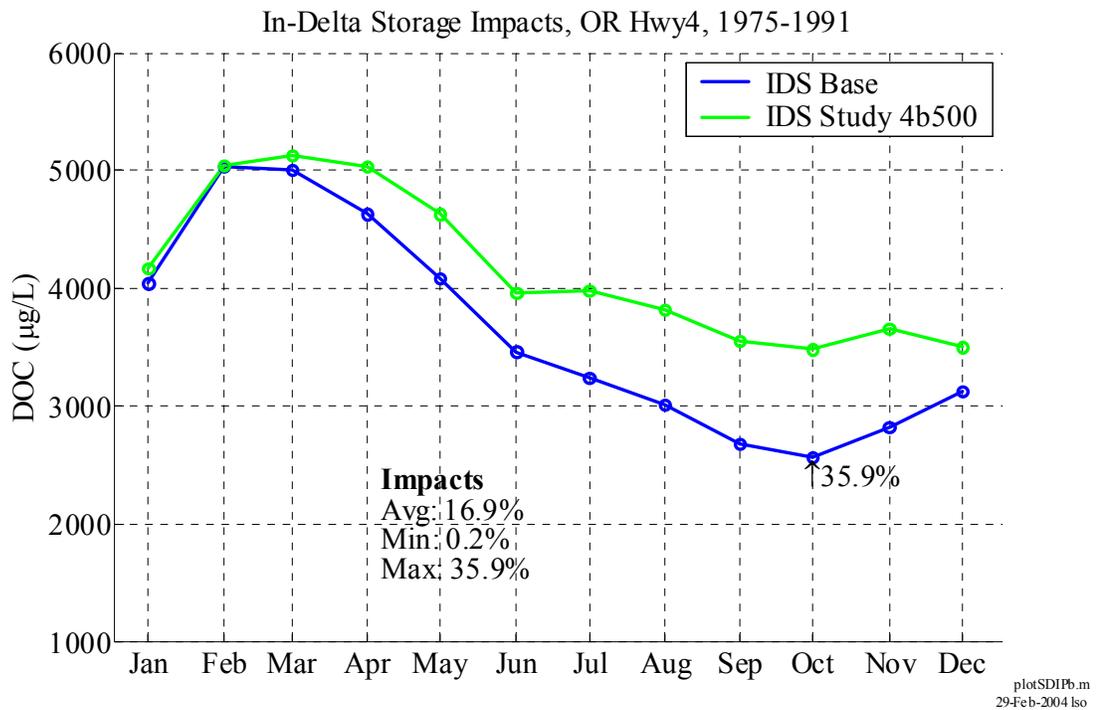
- Section 2.4.2.5 Stage / Storage (page 32) – Operating the islands at low stage as often as is modeled may create wind induced turbidity spikes similar to those experienced in Clifton Court Forebay. Re-suspension of organically rich peat soils into the water column by wind mixing was not modeled in this report, or in the chapter 3 field investigations. In addition, the mesocosm work revealed a significant contribution to shallow turbidity from release of gas bubbles from the sediments following drawdown and the loss of hydrostatic pressure (page 107). Further, gas bubble disturbance of the sediments was also associated with an increase rate of organic carbon concentration increase in the water column (Figs. 3.11, 3.12, 3.13).
- Section 2.4.2.5 Stage/Storage. – Examination of daily average project island storage for the circulation alternative (Fig. 2.4.6) shows that for about 9 to 9 ½ years out of 16 modeled Bacon and Webb island volumes will be 35 TAF or less. 35 TAF translates to a mean water depth of 2 m on both islands. These years of low volume storage on the islands will result in thousands of acres ideally suited for growth of aquatic and wetland plants. Long periods of low volume storage, such as would have occurred from 1987-1991, are likely to result in establishment of wetland vegetation unless control measures are taken. It is not clear what control measures might be taken if any are available and the cost of these measures have not been taken into account in the O&M estimates.
- Section 2.5.2 Chloride at Urban Intakes (pages 51-61) – The WQMP chloride concentration objectives are not met through the current operation. See Table 2.5.6 (page 57) for a summary of violation frequency.

The tabulated violations are based upon 14-day average concentrations, which understate actual numbers of violations; the WQMP restriction on chloride concentration increases is based upon 14-day averages, but CCWD's PDA restriction on chloride concentration increases applies to daily values.

- Section 2.5.3 DOC at Urban Intakes (pages 61-72)
 - The text on page 62 states that increases in 14-day average DOC values are “fairly small.” Table 2.5.9 (page 67) shows average DOC increases ranging between 0.4-0.6 mg/l, depending on location. Given base DOC values between 3.3-3.7 mg/l, average percent DOC increases range between 12-16%.
 - The WQMP organic carbon concentration objectives are not met through the current operations. In fact, the objectives are significantly violated. The frequency of violation is 9% at Rock Slough, 23% at LVR intake, 33% at

Banks, and 26% at Tracy. See Table 2.5.10 (page 68) for a summary of violation frequency and discussion in Overall Conclusions above.

- Section 2.5.4 TTHM at Urban Intakes (pages 72-84) - The WQMP TTHM concentration objectives are not met through the current operation. See Table 2.5.14 (page 80) for a summary of violation frequency.
- Section 2.5.5 Bromate at Urban Intakes (pages 84-95) - The WQMP bromate concentration objectives are not met through the current operation. In fact, the objectives are grossly violated. The frequency of violation is 19% at Rock Slough, 22% at LVR intake, 17% at Banks, and 20% at Tracy. See Table 2.5.18 (page 91) for a summary of violation frequency. A similar analysis as described in the Overall Conclusions for organic carbon and project operations should be undertaken for bromate.
- Section 2.6 Conclusions – The text states that median values show “... a very slight increase in all four water quality parameters covered in this study.” The implication that modeled project operations have only slight impacts on Delta water quality is not justified. For example, as discussed above, average percent DOC increases are in the 12-15% range. Median percent DOC increases are similar. The plot below of mean monthly DOC at CCWD’s Los Vaqueros intake was generated from IDS base case and Study 4b500 results; it shows increases that cannot be characterized as “very slight”.



Water Quality Report - Chapter 3

- DWR staff have done a good job dealing with a difficult problem, estimating organic carbon loading for a project not yet constructed and without an analogous system available for study. The areal organic carbon loading rates used in the DSM2 model runs are within reason (Table 3.2 Use of OC Field Data in Modeling, page 132) given the uncertainty of scaling from mesocosm work to full scale operation. However, the mesocosm experiments do not provide information for long periods of low water level such as 1987 through 1991. As discussed above in the Stage and Storage section, long periods of shallow water will result extensive growths of aquatic and wetland plants. If the islands become densely covered with vegetation and then flooded, there could be a shift away from peat soil as the dominant source of organic carbon, as is the case in under the conditions simulated in the mesocosm work, to new plant carbon as the dominant source. If these sources of carbon are additive, then this situation would result in further violations of the WQMP and PDA. Since this likely scenario would result in a decrease in project yield and in operational flexibility, it should be identified in the feasibility summary report.

Water Quality Report – Chapter 4

- General Comment –DSM2 is not an appropriate tool for addressing most of the dissolved oxygen and temperature issues related to the In-Delta Storage Project. Therefore, reliable conclusions cannot be drawn from most of the analysis presented. Specifically, DSM2 cannot address dissolved oxygen and temperature in the reservoir. DSM2 could be used to address dissolved oxygen and temperature in the adjacent channels (as was shown in Chapter 4), but a transport model is not necessary for such analysis. The only appropriate impacts that DSM2 should be used to measure are temperature and dissolved oxygen changes at Turner Cut.
- 4.3.2 Dissolved Oxygen (page 138). The second paragraph states that “because discharge of stored water is prohibited if the DO of stored water is less than 6.0 mg/L, it is assumed that DO of island water would be at 6 mg/l at all times. In reality, this may require some aeration or application of other DO improvement technology...” Section 3.2.4 (page 109) indicates that DO dropped rapidly in the mesocosm when its air line kinked. Wind mixing and circulation will have to compete with the high oxygen demand of the rich peat soils and decay of the prolific plant and algae growth. Aeration or other DO improvement technology is a significant operational cost that has not been considered.



Conserving California's waterfowl, wetlands, and waterfowling heritage.

February 19, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Dear Authority Members,

On behalf of the California Waterfowl Association (CWA), I am writing today to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). CWA is a non-profit 501(c)(3) organization of over 18,500 members committed to the conservation and wise management of California's waterfowl and wetlands. California has lost roughly 90% of its historical wetlands; more than any other state in the U.S. Among our highest priorities are wetlands and associated habitat restorations for the benefit of waterfowl, as well as other wetland-dependent wildlife and people.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface water storage projects that the CalFed program is currently studying for potential implementation. DWR's report found the project technically feasible and opined project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004)

Of critical interest to CWA are the ecosystem restoration and habitat benefits associated with the In-Delta Storage Project. Nine thousand acres on two of the four project islands will be set aside permanently as wetland and wildlife habitat, forming a mosaic of seasonal and permanent wetlands, riparian woodland zones, ponds and lakes, and open grassland areas. The habitat islands will provide extremely valuable wetland and wildlife benefits to the Delta, supporting a wide variety of species, including listed and endangered plants and animals and migratory waterfowl. The conservation area formed by the project will be among the largest in the area.



**California
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CWA is a 501 (c)(3) nonprofit organization (94-1149574).

It is rare to find a surface water storage project that provides new water supplies and storage capacity, and also generates significant habitat benefits as the In-Delta Storage Project does. We are pleased to note the important progress made by DWR in advancing this project. The CalFed Bay-Delta Program was founded on the premise that all program elements, water supply, water quality, ecosystem restoration and levee system integrity, would advance in a balanced manner. The In-Delta Storage Project provides the CalFed Bay-Delta Authority with a unique opportunity to implement a project that can provide a variety of environment and water supply benefits for California.

Given its promising progress to date, we encourage the Authority to move forward with its review of the In-Delta Storage Project. We understand all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation and also don't contain significant habitat benefits. To date, the In-Delta Storage Project is the only proposed water storage and supply project to have been determined technically feasible and, therefore, most likely to actually move to implementation.

On behalf of the California Waterfowl Association, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



M. Robert McLandress, Ph. D.
President

- cc: California Congressional Legislators
Mike Chrisman, Secretary California Resources Agency
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Dan Skopec, Office of the Governor
Dennis Albiani, Office of the Governor
Patrick Wright, Director, California Bay-Delta Authority
Bay Delta Public Advisory Committee
✓ Jeremy Arrich, Department of Water Resources

CALIFORNIA-NEVADA CONFERENCE OF OPERATING ENGINEERS

OF THE INTERNATIONAL UNION OF OPERATING ENGINEERS

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President

W.W. WAGGONER
Vice-President

DON MEAR
Secretary-Treasurer

TIM CREMINS
Director

February 17, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Dear Authority Members,

On behalf of the Ca-Nevada Conference of Operating Engineers, I am writing today to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision, which was supported by a broad coalition of interests, was the development and construction of new surface water storage projects, which could increase new water supplies and provide much-needed additional storage for California.

The business community has long supported the entire CalFed program and has specifically advocated that increased water supply reliability and new storage is required to manage the demands of a rapidly growing population and support California's vibrant economy. As you know, most, if not all, core business sectors in California cannot succeed without a stable and reliable source of water.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. While an economic analysis is yet to be complete, DWR's report found the project technically feasible and opined the project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004)

This announcement is an important step forward for the state and the water industry at large as any real progress in constructing new surface water storage facilities has yet to materialize, despite the constant calls for action. We understand all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation. To date, the In-Delta Storage Project is the only proposed water storage and supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that can also provide complimentary benefits in water quality, ecosystem restoration and levee stability, and provide operational flexibility for the state and federal water projects.

Local Union 3
Don Doser
Business Manager

Local Union 12
W.W. Waggoner
Business Manager

Local Union 39
Jerry Kalmar
Business Manager

Local Union 510
Jim McLaughlin
Business Manager

Therefore, we strongly encourage the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

On behalf of the CA/Nevada Conference of Operating Engineers, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



Tim Cremins
Director of Research and Education

CC: Patrick Wright, Director, California Bay-Delta Authority
Dan Skopec, Office of the Governor
Dennis Albiani, Office of the Governor
Bay Delta Public Advisory Committee
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Honorable Dianne Feinstein
Honorable Richard Pombo
Honorable Robert Matsui
Honorable Doug Ose
Jeremy Arrich, Department of Water Resources

TC:pw
afcioOpe 3

March 18, 2004

e-mail to arrich@water.ca.gov

Jeremy Arrich
DWR, DPLA
901 P Street, Room 213A
Sacramento, CA 95814

Re: In-Delta Storage Program State Feasibility Study

Dear Sir:

These comments are submitted on behalf of both the Central Delta Water Agency and South Delta Water Agency.

The review has a mix of the Delta Wetlands Project operations as permitted by the SWRCB and subject to the various water right protest settlement agreements and modifications introduced by the study team. It is not clear whether the alleged benefits result from the project approved by the SWRCB or some other project. The burdens should also be clearly characterized. By way of example, the pumping costs and water quality degradation associated with the recirculation of water to avoid peak dissolved organic carbon concentrations as well as the possible benefits are not part of the Delta Wetlands Project and need to be addressed as an alternative.

The interior slope stabilization with soil cement should be considered in light of future levee settlement and the hydraulic pressure created by seepage from the river when the reservoir is drained or at a level lower than the adjoining waterway. The explanation that the seepage control program could be used to avoid the back pressure does not address the problem in the areas where interceptor wells are not proposed. Even where interceptor wells are to be installed, back pressure control would likely require operation of the wells at different times. Settlement of the levee embankments can be expected to continue for an extended period even after the initial five (5) year construction period. This settlement could result in a failure of the soil cement facing. The soil conditions and fluctuations in water levels at Clifton Court Forebay are substantially different than those for the proposed projects and should not be used as a basis for justification without careful analysis.

Failure to include risks to the EBMUD pipelines and other facilities such as the SFPP, LP fuel transmission line and natural gas transmission lines should be corrected. The supporting documents for DWR's Delta Atlas should give a good starting point which of course needs to be updated. The Atlas even has a picture of the East Bay Municipal Utility District Aqueduct. The

Jeremy Arrich

DWR, DPLA 2 March 18, 2004

discussion of unquantifiable benefits should include a discussion of unquantifiable detriments.

The point raised at the meeting in Walnut Grove that strengthening the levees on the Delta Wetlands Islands in advance of strengthening the other levees in the Delta will increase the risk of flooding to other areas should be included in your analysis. In 1980 both Webb Tract and Holland Tract flooded during the peak of a flood event. There is no doubt that the flooding caused flood elevations in the vicinity to drop thereby relieving the threat to the other levees. The delta levee stability funding has lagged far behind other elements of the CalFed Program.

The stated potential risk to human life appears quite low. Highway 12 and Highway 4 both have a lot of traffic and the farming operations on surrounding islands at times employ large numbers of farm workers. There are also a large number of visitors and residents at the various marinas and so-called recreational trailer parks that have possibly been overlooked.

The claim that protecting 9,000 acres of agriculture and wetlands on the habitat islands goes beyond mitigation for the loss of 5,490 acres on Webb Tract and 5,625 acres on Bacon Island ignores the fact that Holland Tract and Bouldin Island are already used for agriculture and habitat. In reality, the pre-project condition is roughly 20,000 acres of agriculture and habitat and the project condition is 9,000 acres of agriculture and habitat and 11,000 acres of reservoir. Additionally, it would appear that you are claiming benefits on the same land for both agriculture and wetland habitat enhancement. This would appear to be double counting. Winter flooding of field corn and asparagus fields is a customary agricultural practice and when used for duck hunting, the flooding period is somewhat extended. The benefits of such customary practices should not be claimed as mitigation for the project. More intensive management for wetland and other habitat purposes will likely have a corresponding reduction in agricultural benefit and the reverse is equally likely.

We continue to object to use of taxpayer money to advocate and develop a "private for profit" project especially when it is proposed that the project or the water generated thereby be sold or leased to public entities for a profit.

Further expenditure of taxpayer funds to study and/or develop and/or advocate the Delta Wetlands Project should be immediately stopped.

Yours very truly,

DANTE JOHN NOMELLINI
Manager and Co-Counsel

DJN:ju



**CONTRA COSTA
WATER DISTRICT**

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General Manager

March 17, 2004

Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P.O. Box 942836
Sacramento, CA 94236-0001

Subject: Contra Costa Water District comments on the January 2004 Draft In-Delta Storage Program State Feasibility Study

Dear Mr. Arrich:

Contra Costa Water District (CCWD) appreciates this opportunity to comment on the January 2004 Draft In-Delta Storage Program State Feasibility Study (Study). CCWD also appreciates the open and collaborative manner in which the Department of Water Resources has shared its modeling for this project.

As a supplier of drinking water drawn from the Delta and delivered to its 450,000 customers, CCWD's primary concern is protection of Delta water quality. To ensure that operation of the In-Delta Storage (IDS) project does not degrade Delta water, CCWD entered into a Protest Dismissal Agreement (PDA) with Delta Wetlands Properties for their Delta Wetlands Project. Both this PDA and the PDA between the California Urban Water Agencies (CUWA) and Delta Wetlands Properties specify operating conditions for the project and are binding upon any successor project to Delta Wetlands. So long as IDS is operated in compliance with the PDAs, Delta water quality will be protected and CCWD's interests would be satisfied.

However, IDS operations as modeled for the Study show significant deviations from the requirements of both PDAs, including significant exceedences of the limits on salt and organic carbon concentrations at urban drinking water intakes. Thus the modeled operations and results are not representative of the agreed-upon actual project operations and performance, and conclusions about project yield and benefits are not supported by the Study. Before the Study is finalized, proposed project operations must be revised and re-modeled such that compliance with the PDAs is demonstrated. Conclusions about project yield and benefits must be based upon the results of modeled operations that meet the terms and conditions of both PDAs.

Jeremy Arrich

CCWD comments on the January 2004 Draft In-Delta Storage Program State Feasibility Study

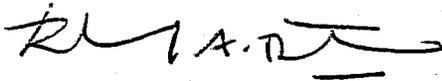
March 17, 2004

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CCWD has expressed this concern in previous letters, most recently in Greg Gartrell's October 27, 2003 letter to Michael Spear and in our June 28, 2002 comments on the May 2002 In-Delta Storage Program Draft Summary Report. Further, CCWD participated in drafting CUWA's March 2004 comment letter on the current Study, and concurs with CUWA's detailed technical comments on issues concerning compliance with the PDAs.

If you have any questions, please call me at (925) 688-8187 or call Dr. Leah Orloff at (925) 688-8083.

Sincerely,



Richard A. Denton
Water Resources Manager

RAD/LSO:wec

DELTA WETLANDS PROJECT

3697 Mt. Diablo Boulevard, Suite 100
Lafayette, California 94549
Telephone 925-283-4216

March 18, 2004

Mr. Jeremy Arrich
In-Delta Storage Program
Department of Water Resources, DPLA
P.O. Box 942836
Sacramento, CA 94236-0001

Re: In-Delta Storage Draft Summary Report Comments

Dear Mr. Arrich:

Delta Wetlands Properties (DW), as the owner of the Delta Wetlands Project (Project) currently under review by the CALFED Integrated Storage Investigation In-Delta Storage Program, offers the following comments on the *Draft Summary Report, In-Delta Storage Program, State Feasibility Study* (Report) dated January 2004, including all referenced technical reports and appendices.

The Report concludes that the Project is technically feasible and will provide significant statewide benefits. With water demand rapidly rising and regulatory/environmental constraints further straining existing water resources, California's elected officials, water industry, and business community have placed a high priority on expanding, improving, and better operating California's water infrastructure. Additional surface storage to create new water supply and efficiently store surpluses when available is critical to the state's continued economic viability. With the state's current fiscal constraints, this Project presents the California Bay-Delta Authority (CBDA) with its best opportunity to move beyond studies and actually implement a new surface storage project. As you are aware, all other projects currently under consideration are in the very early stages of investigation.

The Report lists a dozen benefits that contribute to each of CALFED's four objectives: water supply reliability, water quality, ecosystem restoration, and levee system integrity. In fact, it is the only project under consideration that can contribute to meeting all of CALFED's four primary objectives. According to the state feasibility study, the Project could provide:

- New Urban Supply
- New Agricultural Supply
- New CVPIA Level 4 Refuge Supply
- New Environmental Water Account (EWA) Supply
- New Ecosystem Restoration Program (ERP) Delta Flows
- Increased Operational Flexibility and Carryover Storage

- Water Quality (Salinity) Improvements
- Wildlife Habitat Improvements
- Interim Storage for Water Transfers
- Flood Damage Reduction
- Improved Levee (Seismic) Stability
- New Recreational Benefits

A great deal of technical work has been accomplished since the last ISI report was circulated for review and comment in May 2002. However, certain issues remain unresolved at this time, as is typical of any large project. Decision-makers need information that is complete, relevant, and sufficient to the decision being made. But, they do not need and can never obtain perfect information. We believe that the work undertaken to date on (1) the Delta Wetlands Environmental Impact Report, (2) the federal Biological Opinions and the state 2081 Incidental Take Statement, (3) the State Water Resources Control Board's proceedings and Decision 1643, (4) DW's Water Quality Management Plan (WQMP), (5) DW's agreements with California Urban Water Agencies, Contra Costa Water District and the East Bay Municipal Utility District, (6) the May 2002 ISI report and (7) this Report collectively provide more than enough support for proceeding with the Project's next steps.

GENERAL COMMENTS

We have provided below our general comments on the Report, organized by subject matter. Included in Attachment A of this letter are more specific comments, details and references in support of our general comments below.

Economic Analysis

The economic analysis presented in the Report is incomplete and should not be relied upon as a basis for future decision-making. Its assumptions are consistently conservative and serve only to establish a low-end range of benefits.

The economic analysis makes no attempt to quantify important benefits that are stated objectives of CALFED, including:

- Increased Operational Flexibility and Carryover Storage
- Water Quality (Salinity) Improvements
- Wildlife Habitat Improvements
- Interim Storage for Water Transfers

These benefit areas are precisely the benefits that are intended to distinguish CALFED surface storage projects from more traditional storage projects. If CALFED is serious about providing such non-traditional benefits, they must find a way to quantify them. Failure to do so puts all CALFED surface storage projects at risk. And, at this juncture, failure to quantify such benefits ultimately negatively and incorrectly impacts DWR's cost/benefit analysis for the Project.

The economic analysis inappropriately relies on Bulletin 160-98 for its demand and conservation assumptions. Bulletin 160-98 has been significantly criticized and is now hopelessly out of date. For example, the urban demands are based on regional population forecasts produced in 1993. Further, demand projections are for 2020 instead of 2030 as specified in CALFED's Common Assumptions. Bulletin 160-98 uses assumptions for the level of conservation that will be in place in 2020 that do not reflect decisions currently being made by responsible water agencies. The analysis assumes the implementation of all urban BMP's whether or not they are cost effective. This is not required by the Urban Best Management Practices MOU and is unlikely to occur. Cost assumptions for recycled water options are also more optimistic than more recent analyses. As such, Bulletin 160-98 provides an unrealistic set of planning assumptions that tend to understate urban water demand and Project benefits.

These deficiencies are important because the economic model is extremely sensitive to its assumptions. The defining inputs to LCPSIM are the level of urban demands, and the cost and volumes of supplies that could be used instead of new Project water supplies. None of these key inputs are known with certainty. As Appendix A to the Draft Report on Economic Analyses shows, changes in assumptions concerning the costs of alternative supplies can make significant changes in the water supply benefits of the Project. Comparison of Tables A.2 and A.5, shows that the estimated value of the project to Southern California urban users changes from \$15 million to \$27 million per year if the cost of its alternatives are increased by 50 percent. Similar analyses have not been conducted into the sensitivity of the results to water supply volumes or demand levels, but it seems clear that the modeling must be based on the best available information for these key variables. These assumptions must be carefully evaluated before the economic analysis can be finalized; therefore, the speedy development of defensible Common Assumptions for these factors is of utmost importance.

Finally, the economic analysis uses a cost of money that overstates what beneficiaries would actually pay. Using the model's assumed cost of money, the annual capital and operating cost of the project was estimated to be \$60 million. But a more realistic cost of Project financing would reduce the annual capital and operating cost to less than \$45 million. Beneficiaries would not be asked to pay the higher "societal" cost of money. This distinction is important for potential Project partners.

DWR concludes that additional work is required on the economic model. We agree. We believe that this is especially important because CALFED needs an economic analysis tool that is general and inclusive enough to provide a basis for comparing all CALFED storage projects. The economic model in its current state of development is not adequate to that task.

Water Quality

The water quality evaluations included in the Report are substantial and adequate for this level of feasibility analysis. The water quality evaluation considered dissolved organic carbon (DOC), salinity, temperature, and dissolved oxygen (DO) and concluded that the final operating criteria (FOC) of the biological opinions and the Water Quality Management Plan (WQMP) will protect the water quality of the Delta. The Report goes on to identify several operational strategies (e.g., circulation) to maximize project benefits while meeting FOC and WQMP requirements.

The DOC modeling assumptions included in the water quality modeling are unreasonably conservative and rely on unsupportable data. Assumed DOC loading rates for the reservoir islands are an order of magnitude higher than agricultural and wetland loading elsewhere in the Delta. DOC levels predicted for the reservoir islands reach levels that exceed levels found anywhere in the world (e.g., 350 mg/l). At best, this analysis shows the ability of the Project to accommodate DOC loading rates that are nearly ten times the loading rates from the existing agricultural operations. Even at the upper bound, the impact on Project operations is small which establishes the limit of financial risk associated with DOC management.

The Science Panel has reviewed the water quality analysis and has expressed no opinion regarding appropriate DOC loading rates citing a lack of understanding of underlying DOC generating mechanisms. They have recommended additional study to fill this void.

But, science in this area is not well developed and further studies to clarify DOC loading will continue to be problematic. Even after expending significant money and time for further studies, it is very likely that the results will continue to be imprecise. Given the low sensitivity of the Project to DOC loading rates, additional studies and field investigations are not necessary. A more practicable approach may be to investigate mitigation measures to address a range of DOC loading rates and to establish the financial bounds for possible DOC risk management measures. Reservoir circulation is an excellent example of one such DOC mitigation measure.

Finally, the Report ignores the potential of the Project to provide salinity benefits. The current operating scenarios focus on water supply and environmental benefits. Decision 1643 and the WQMP criteria ensure that water quality in the Delta is not negatively impacted. However, opportunities for the Project to improve or protect water quality in the Delta are abundant. An

Mr. Jeremy Arrich
March 18, 2004
Page 5

additional study should be conducted to evaluate the Project's capability to generate salinity benefits.

Conclusions

This Report is the first state feasibility report to be issued for a CALFED surface storage project. Comments on this Report are being considered at the same time that CALFED is considering the future direction of CALFED's surface storage program. As such, these comments unavoidably reflect on both the In-Delta Storage Program specifically and CALFED's surface storage projects generally. The decisions made now about how to evaluate surface storage projects are precedent setting and will establish the basis for evaluation and comparison of all CALFED surface storage projects.

It is important that CALFED recognize success and that successful completion of one milestone qualifies projects to proceed to the next. We believe that CALFED should authorize the In-Delta Storage Program to proceed with the completion of its additional environmental analyses and to develop the analytical tools necessary to evaluate the economics of all CALFED storage projects.

We appreciate the opportunity to provide these comments. We are available to meet and discuss the above issues in more detail at your earliest convenience. Please contact Andy Moran or me if you have any questions.

Sincerely,

David A. Forkel
Assistant General Manager
Delta Wetlands Project

Enclosures

cc: Patrick Wright, California Bay-Delta Authority
Lester Snow, California Department of Water Resources
Steve Roberts, California Department of Water Resources
Dan Skopec, Office of the Governor
California Bay-Delta Authority
Bay-Delta Public Advisory Committee
(All without enclosures)

ATTACHMENT A

SPECIFIC COMMENTS

Draft Executive Summary (DES)

1. **P. 4:** “Diversions to the reservoir islands would occur during high flow season, lowering flood levels in adjoining channels and reducing the risk of flooding to neighboring islands.”

Comment: Although there are theoretical flood control benefits of reservoir island diversions, they may not be very significant. The diversion impacts to flood stage have not been analyzed in the DES, but any benefits will be short-lived because there is limited storage capacity on the reservoir islands. Far more significant are the flood control benefits associated with levee improvements. Strengthening an island in the Delta will directly protect habitat and infrastructure but will also have far reaching benefits throughout the Delta. Failed levees lead to open bodies of water (e.g., Frank’s Tract, Mildred Island) that pose an enormous flood risk to neighboring islands and increase Delta salinity from seawater intrusion and mixing.

2. **P. 6-7:** “It should be noted that these estimates [of project benefits] are extremely sensitive to assumptions about the future cost and availability of regional water management options ...” and “Before total project benefits and costs can be compared, value must be assigned to these benefits.”

Comment: The DES cautions that the economic estimates are “extremely sensitive” to the future availability and cost of other water management options (e.g., conservation, recycling). In addition, many benefits of the Project have not yet been quantified. It should be emphasized in the DES that the assessment of project benefits is incomplete and that DWR intends further review of these assumptions before finalizing the economics analysis for all water storage projects.

3. **P. 11:** “Additional water quality field and modeling evaluations are necessary to refine project operations for organic carbon, dissolved oxygen and temperature.”

Comment: The DES calls for additional water quality evaluations to determine project impacts on DOC, DO, and temperature. As noted in our cover letter, the current analyses are adequate to ensure water quality objectives can be met with no significant financial impacts on the Project.

Draft Summary Report (DSR)

4. **P. 8:** “Levees that fail can also threaten the [Delta] water quality ...”

Comment: The threat to water quality in the Delta from levee failures and the resultant seawater intrusion is reduced by the Project in a number of ways. First, strengthening the levee embankments reduces the risk of levee failure. Second, having an in-Delta reservoir can assist in the management of a water quality problem after a levee failure on other Delta islands. If the reservoirs are empty, high salinity water can be pulled onto the islands and released later in the year. If the reservoirs are full, low salinity water can be released back into the Delta to improve in-Delta quality.

5. **P. 9:** “Subsequent CEQA/NEPA documents would be required because ...” and “Future CEQA/NEPA evaluations will tier from ...”

Comment: Several options for future environmental documentation are described in Chapter 8 of the DSR. The options include a “subsequent” CEQA/NEPA document and a “tiered” document, but they are just options at this time. Concluding that these types of documents will be required is inconsistent with the statements in Chapter 8 which describes several options but makes no conclusions. The text on page 9 should be revised from “would” and “will” to “may.”

6. **P. 11:** “... water diversion for Bacon Island has been changed from Old River to Santa Fe Cut.”

Comment: The Bacon Island discharge location on the south end of the island has been relocated by DWR from Middle River to Santa Fe Cut. This new location will place the Bacon Island discharges much closer to CCWD intakes in Rock Slough and on Old River and significantly increase the amount of Bacon Island water that reaches CCWD intakes. DWR should explain why the discharge was relocated and consider moving the facility back to Middle River.

7. **P. 17:** “The present study assumed 2020 level of development ...”

Comment: The operational modeling criteria assume a 2020 level of development (LOD) in this Report. CALFED is using a 2030 LOD for planning purposes which will include increased population levels and greater demands for water. Higher demands will increase the water supply benefits of the Project. The DSR should reflect that the higher demands associated with 2030

population levels will increase the water supply benefits of the Project. Presumably, all projects will be evaluated using the same LOD assumption.

- 8. P. 21:** “The In-Delta Storage Project could provide additional water for recharge to help control groundwater overdraft south of the Delta ...”

Comment: The Project can provide new water to help alleviate the groundwater overdraft problems south of the Delta and in the San Joaquin Valley. The full benefits of overdraft protection have not been considered in the economic analysis of the Project.

- 9. P. 25:** “When water is stored over peat soils, DOC growth occurs ...”

Comment: The DOC growth rate included in the water quality modeling assumes a high value that is excessively conservative and inconsistent with observed data elsewhere in the Delta. The growth rates are based solely on the Davis tank studies and are an order of magnitude higher than past work. As indicated in DW correspondence of September 5, 2003, we believe the DOC growth rate assumptions generated by the mesocosm tank studies are unrealistic and inappropriate because they do not reflect anything close to a steady-state condition that could be expected on the reservoir islands. We believe the loading rates in the DSM2 model should be corrected to reflect more reasonable loading rate assumptions. At best, the current model runs provide a tool to help understand a worst-case operating scenario (e.g., initial reservoir start-up) as an upper bound to understand the financial risks associated with the DOC loading uncertainties. However, it is not appropriate to consider these high DOC loading assumptions as representative of long-term reservoir operations. Nor is it necessary to require additional studies of this issue since the Project has been shown it can operate even at the upper bounds of the DOC loading range. Also, a comparison of Project loading rate assumptions with the existing agricultural loading rates in the DSM2 DOC model will help demonstrate the excessively conservative approach in the current DOC analysis.

- 10. P. 27:** “The weighted project yield (Table 3.2) with the FMWT impact is 20 taf less ...”

Comment: The weighted project yield impact of 20 taf when the FMWT < 239 rules are applied is too high and should be verified. The reduction is both inconsistent with past modeling and illogical, considering the constraints associated with the FMWT are primarily a reduction in diversions during February and March. This impact may be overstated.

- 11. P. 28:** “Results given in Table 3.2 indicate that impact of D1643 requirements on In-Delta storage water balance is in the order of about 100 taf.”

Comment: The cost in water supply benefits associated with D1643 requirements should be put into context relative to other water projects under consideration by CALFED. Because of the advanced stage of the DW Project, operating criteria have been established that ensure the project will not have environmental impacts or adversely affect others. Other water supply projects will face similar rules in order to avoid or mitigate environmental impacts. DWR should explain that the water cost of environmental mitigation must apply to all water supply projects.

12. P. 35-36: ‘Further studies emphasizing water quality improvements should be conducted to determine the extent to which In-Delta Storage can improve Delta water quality.’

Comment: The Report acknowledges the potential of the Project to create salinity benefits in the Delta but does not include a salinity improvement study among the 10 evaluation scenarios. The release of low salinity water from an In-Delta Storage Project can help reduce salinity levels during the dry summer and fall months. In-Delta Storage can also be used to repel seawater in emergencies. To ensure a balanced solution that includes water quality improvement, this additional study should be quantified and considered in all future analyses.

13. P. 51: “The OC growth rates shown in Table 4.1 were used in the DSM2 model runs.”

Comment: The 0.59 gC/m²/day growth rate for August, September, and October is significantly higher than the loading rates of 0.22 and 0.42 gC/m²/day from the mesocosm tank studies, as shown on Figure 4.6. Even though we believe these loading rates are unrealistic as discussed above, the assumed loading rates in the DSM2 model should be corrected to reflect the referenced study.

14. P.51: “... annual average areal loading rate of about 100 gC/m²/yr.”

Comment: The annual average loading rate of organic carbon (100 gC/m²/yr) assumed in the DSM2 model is nearly an order of magnitude above other sources in the Delta, including agricultural drainage from the intensively farmed deep peat islands of the Delta. (See DW correspondence of September 5, 2003.) This assumed loading generates DOC concentrations in the model that are excessively conservative, bordering on illogical. DOC concentrations predicted for the reservoir islands reach levels that exceed concentrations found anywhere in the world (e.g., 350 mg/l). The extreme DOC loading assumptions do show the ability of the project to accommodate high DOC loading rates. Even at the unrealistic upper bound, the impact on project operations is small. This low sensitivity to DOC loading suggests that additional studies and field investigations are not necessary.

15. P. 55: “EC and DOC were simulated as a conservative constituent while in the Delta channels.”

Comment: DOC was simulated in the DSM2 model as a conservative constituent while on the reservoirs and in the Delta channels. This is another example of the conservative nature of the DOC analysis since evidence exists to the contrary. During the January 15, 2003 CBDA Science “Brownbag,” Dr. James Hollibaugh presented data that suggests there is DOC degradation in the Delta channels and throughout the water supply system.

16. P. 73: “Considering the simulation period of 16 years, this [temperature violations] can be attributed to inherent noise within the model.”

Comment: The temperature violation identified in Table 4.17 are clearly the result of model noise since little or no reservoir discharges are occurring during the time periods of violations. For example, there were no releases from Bacon during the 2 degree violation on June 14, 1976. Therefore, the Project could not have caused the reported violation.

17. P. 89: “The schedule reflects total construction duration of 6 years ...”

Comment: The Project can be constructed in less than six years. The reservoir islands contain large quantities of material that can be moved efficiently and inexpensively to the toe of the existing levee. The DW plan has been to use the material to create wide toe berms, buttress the existing levee and improve the landside factor of safety. The large toe berms provide a higher factor of safety than a uniform slope and allow a faster construction sequence by placing mass where it can improve the safety factor without waiting for full consolidation of the peat. The DW plan has been to place the fill in stages with time between stages to allow for strength gain and monitoring. The timeframe to place the fill for this method of construction should be considerably less than the six years assumed in the Report. A timeframe of 2 years to construct the embankments should be readily achievable with the DW planned method of construction.

18. P. 99: “these gas wells and the parcels on which they are situated may not be part of the land acquisition for the project.”

Comment: There is an operating gas well on Webb Tract that will be part of the land acquisition for the Project.

19. P. 101: “... DWR acknowledges that additional input from economic experts and potential project participants is needed to refine this [economic] assessment.”

Comment: As noted in our cover letter, the economic analysis presented in the Report is incomplete and should not be relied upon as a basis for future decision making. Its assumptions are consistently conservative and serve only to establish a low end range of benefits.

20. P. 103: "... the total capital costs amortized over a 50-year period with an assumed discount rate of 6%."

Comment: As noted in our cover letter, the annualized project cost is overstated because the assumed interest rate is too high.

21. P. 106: "... the necessary capacity and policies needed to move available supplies among urban users to mitigate any localized shortage-related impacts caused by disparities in supply availability are assumed to be in place in 2020."

Comment: The assumption that the necessary capacity and policies to freely move water around the state as needed by 2020 is very questionable. This assumption will bias the economic optimization process by making phantom water available and significantly undervalue the water supply benefits of a new water storage project. For example, in the Bay Area, water quality issues make full system interconnection prohibitively expensive.

22. P. 106: "The availability and cost of the local regional options and availability of local carryover storage were assumed."

Comment: The availability assumptions for local supply options may significantly bias the economic analysis because the local regional supply options are assumed to be available at a constant level every year (P. 9, Draft Report on Economic Analysis). The LCPSIM model will not capture the large costs and losses that can arise when local shortages occur in these regional supplies. For the South Coast Region, local droughts and regional shortages often occur independent of state-wide hydrology. This modeling bias will significantly understate the water supply benefits of the Project as well as any other new water supply.

23. P. 111: "These [groundwater recharge] deliveries are valued at the average alternative cost of agricultural groundwater pumping in San Joaquin Valley, about \$55 per acre foot."

Comment: Placing a value on groundwater recharge equivalent to average pumping costs does not seem to appropriately value this benefit. This \$55 assumption overlooks the long-term effect on already overdrafted groundwater basins. The short-term use of groundwater as an alternative water supply (as analyzed for this study) may have no significant effect on the groundwater supplies; however, over the 50-year life of the Project, this effect could be significant. The only way to address the groundwater overdraft problem is to either provide new water to agricultural users or

reduce the water demand (e.g., fallowing). In either case this benefit would be more than the \$55 per acre foot assumption. So the benefit not addressed in this analysis is the long-term reduction in groundwater overdraft.

24. P. 116: “If the assumptions are unreasonably optimistic about cost and/or availability of the regional options, the value of the In-Delta Storage Project will be understated.”

Comment: The point selected on the In-Delta benefits curve (green line) from Figure 7-3 represents the minimum water supply value of the Project. An increase in the price of regional water management options that causes a reduction in local options by 100 taf (blue line) will increase the water supply benefits of the Project by about \$20 million per year. This high sensitivity to regional management options (e.g., conservation, recycling) is significant and must be considered in the final economic analysis.

March 18, 2004



Mr. Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P. O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Arrich:

Enclosed for your records are copies of the following letters commenting on the January 2004 In-Delta Storage Draft Summary Report:

1. Letter to Patrick Wright/California Bay-Delta Authority and Gary Hunt/California Bay-Delta Advisory Committee dated February 19, 2004, signed by 18 California State legislators.
2. Letter to Patrick Wright/California Bay-Delta Authority and Gary Hunt/California Bay-Delta Advisory Committee dated March 8, 2004, from Tom Torlakson, California State Senator.

Sincerely,

David A. Forkel
Assistant General Manager

These Letters are included on Pages 17 & 20

Enclosures



DEPARTMENT OF CONSERVATION
STATE OF CALIFORNIA

March 11, 2004

DIVISION OF
LAND RESOURCE
PROTECTION

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ARNOLD
SCHWARZENEGGER
GOVERNOR

Mr. Tirath Pal Sandhu, Project Manager
In-Delta Storage Program
Department of Water Resources
901 P Street
Sacramento, CA 95814

Subject: In-Delta Storage Project

Dear Mr. Sandhu:

The Department of Water Resources (DWR) in coordination with U.S. Bureau of Reclamation and the California Bay-Delta Authority has prepared documentation evaluating whether the Delta Wetlands Project meets the California Bay-Delta Authority's water supply reliability and ecosystem restoration objectives. It is our understanding that the purpose of the In-Delta storage is to help meet the ecosystem needs of the Delta, the Environmental Water Account and the Central Valley Improvement Act goals, provide water for use within the Delta and increase reliability, operational flexibility and water availability for the south of the Delta water use by the State Water Project and the Central Valley Project.

Bacon Island and the Webb Tract are proposed as reservoir islands. Holland Island and Bouldin Island are proposed as habitat islands. The California Bay-Delta Authority is considering the lease or purchase of the Delta Wetlands Properties, Inc., to develop and market a water storage facility in the Sacramento-San Joaquin Delta. The "In-Delta Storage Program Feasibility Study Draft Summary Report", and the Draft Summary Report for the Integrated Storage Investigations were distributed for agency review and comment in 2003.

The Department of Conservation (Department) is responsible for monitoring farmland conversion on a statewide basis and administering the California Land Conservation (Williamson) Act. The In-Delta Storage project involves the conversion of approximately 15,000 acres of prime agricultural land to non-agricultural uses. All of Bouldin Island, most of Bacon Island and a portion of Webb Tract are under Williamson Act contract.

As history, the State Water Resources Control Board (SWRCB) acted as lead agency in preparation of an environmental impact statement/report (EIR) for the Delta Wetlands Project, and Water Rights Decision D-1643 was approved. The SWRCB adopted a Statement of Overriding Considerations that indicates that there would be significant impacts to agricultural resources that will not be mitigated. Regardless of SWRCB's adoption of the Statement of Overriding Considerations, in accordance with CALFED's Record of Decision (ROD) mitigation measures must be considered, and must be consistent with the ROD.

We offer the following comments:

- Mitigation measures: The Department encourages the use of agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. Further, when a Williamson Act contract is terminated, or if growth-inducing or cumulative agricultural impacts are involved, the ratio should be increased. The current document (Executive Summary and Environmental Evaluations section) indicates that the purchase of agricultural easements as mitigation is being considered, however, no details are provided in the scope of the document. Where would these easements be located? Which governmental entities are involved? Do the mitigation measures include protecting farmland in the project area or elsewhere in the County through the use of 20-year Farmland Security Zone contracts (Government Code section 51296 et seq.) or the establishment of other Williamson Act contracts as per Government Code section 51200 et seq.? Although the document discloses that there would be substantial acreage converted from agriculture, it remains vague in identifying specific measures that would actually mitigate for the loss of agricultural resources. A proposed project's merits alone do not alleviate the need for mitigation. Additionally, the cost for mitigation should be included as part of the overall planning and implementation of a project.

Although the direct conversion of agricultural land and other agricultural impacts are often deemed to be unavoidable by an agency's analysis, implementation of mitigation measures must be considered, and the adoption of a Statement of Overriding Considerations does not mean that an agency may avoid implementing feasible mitigation measures that lessens a project's impacts. The California Environmental Quality Act's (CEQA) Guidelines section 15370 describes what mitigations are intended to do; "avoid, minimize, rectify, reduce or eliminate or compensate" an impact.

- Williamson Act Lands: A project is deemed to be of statewide, regional or area-wide significance if it will result in cancellation of a Williamson Act contract for a parcel of 100 or more acres [CEQA Guidelines section 15206 (b) (3)], and requires circulation of a document through the State Clearinghouse for agency

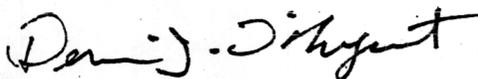
review and comment. If lands under Williamson Act contract exist on or adjacent to the project area, the Department recommends that a discussion of the contracts that would be terminated in order to accommodate the project be included in the documentation. The document mentions that the project sites are under contract, but does not provide a discussion. What are the potential impacts on nearby properties under contract resulting from termination of Williamson Act contracts? There may be significant cumulative impact on a region or area's ability to maintain the agricultural uses in the event that two islands are used as reservoir islands and two other islands are converted to habitat.

- A Williamson Act contract is an enforceable restriction pursuant to Article XIII, Section 8 of the California Constitution and Government Code section 51252. There are several ways to terminate a Williamson Act contract. According to the California Supreme Court, non-renewal is the preferred method of terminating Williamson Act contracts. Cancellation is to be used only in extreme circumstances, where the landowner lacked foreknowledge of future land uses. As an environmental impact report/statement was prepared for the Delta Wetlands Project in 1995, an extreme circumstance does not exist. Assuming that other requirements have been met, acquisition of contracted land by a public agency must also meet the requirements set forth in Government Code section 51295 in order to void the Williamson Act contract.
- The Bouldin and Holland Tracts are proposed as habitat islands. Have the lead agencies given serious consideration of the use of a publicly owned tract or island already (Sherman Island, most of Twitchell Island, for example) for habitat, so that Bouldin and Holland Tracts remain in agricultural production? Is there potential to keep a substantial portion of the lands in agriculture or manage the land as wildlife friendly farming operations? Are any alternatives to conversion to habitat being considered so that habitat and agricultural activities can coexist?

We respectfully request that any further documentation prepared for this project be sent to this Division for review. As stated previously, the Department would be pleased to offer technical assistance in the development of mitigations for agricultural impacts to either the SWRCB or DWR.

Thank you for the opportunity to review this document. Please contact Jeannie Blakeslee at (916) 323-4943 if you have any questions regarding these comments.

Sincerely,



Dennis J. O'Bryant
Acting Assistant Director

DEPARTMENT OF TRANSPORTATION

P.O. BOX 2048 (1976 E. CHARTER WAY)
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March 20, 2004

10-SJ-12 PM 0
Draft Feasibility Study
In-Delta Water Storage Project
(Delta Wetlands)

Jeremy Arrich
Department of Water Resources, DPLA
P.O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Arrich:

Thank you for the opportunity to review and comment on the *In-Delta Storage State Feasibility Study Draft Report*, an evaluation of the revised Delta Wetlands (DW) project to determine what modifications would be necessary to make the project acceptable for public ownership. The In-Delta Storage Project would develop Webb Tract and Bacon Island into reservoir islands and develop Holland Tract and Bouldin Island as habitat islands to mitigate the environmental impacts caused by the proposed project.

The Department of Transportation's (the Department) concerns rest with that portion of the project adjacent to State Route (SR) 12 on Bouldin Island which may be impacted by any changes to existing conditions. In particular, modifications that would impact the safety of the traveling public, the integrity of SR 12 structures and roadbed, and the ability to widen the corridor to meet future needs, would be significant and require mitigation.

Revision of the original DW project seems to have alleviated the Department's major concerns with the structural integrity of the highway, and we look forward to working closely with the project proponents in the evaluation and implementation phases to insure the safety of the traveling public and the protection of the State's infrastructure investment. However, the Department is concerned that the existing agricultural land use of the adjacent land may be abandoned, leaving the land to revert to wetland status. This would seriously impact any future widening by greatly increasing the cost of right of way acquisition in order to mitigate for the loss of wetland habitat. Further feasibility and cost analysis should evaluate fully the increased costs of future SR 12 projects, and the availability of funds to cover those increased costs, and the risks associated with a no project alternative for those projects, if the land will no longer be in agricultural production, against the benefit of the proposed project.

Arrich
March 20, 2004
Page 2

If you have any questions, or would like to discuss these comments in more detail, please contact me at (209) 941-1921 (email: tdumas@dot.ca.gov), or Lynn O'Connor, of my staff, at (209) 948-7575 (email: loconnor@dot.ca.gov).

Sincerely,

[as signed by]

**Tom Dumas, Chief
Office of Intermodal Planning**

CC: Ken Baxter, Deputy District Director, Planning & Local Assistance
Caltrans District 10

arrich@water.ca.gov
kbaxter@dot.ca.gov
tdumas@dot.ca.gov



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24 February 2004

Patrick Wright, Executive Director
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Gary Hunt, Chairman
California Bay-Delta Advisory Committee
c/o California Strategies, L.L.C.
18800 Von Karman Avenue, Suite 190
Irvine, CA 92612

Dear Mr. Wright and Mr. Hunt:

Re: The Delta Wetlands Feasibility Study

Ducks Unlimited supports a balanced implementation of the CalFed Bay-Delta Program. As the largest private wetland organization in the World, our highest priorities are wetlands and associated habitat restoration for the benefit of waterfowl, as well as other wetland-dependent wildlife and people.

We understand that the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project. This report found the project technically feasible. The ecosystem restoration and habitat benefits of this project are of interest to Ducks Unlimited. The proposal calls for 9000 acres on two islands to be set aside permanently as wetland and wildlife habitat, forming a mosaic of grassland, wetland, and riparian habitats. These areas could support a variety of wildlife, including migratory waterfowl.

We encourage the Authority to move forward with its review of the In-Delta Storage Project. Thank you for your leadership in advancing the CalFed Bay-Delta Program.

Sincerely,

Frederic A. Reid, Ph.D.
Director of Conservation Planning

cc: Jeremy Arrich, Dept. of Water Resources

137

March 17, 2004

Mr. Jeremy Arrich
California Department of Water Resources
Division of Planning and Local Assistance
P.O. Box 942836
Sacramento, CA 94236-0001
Subject: In-Delta Storage Program Draft Feasibility Study

Dear Mr. Arrich:

Thank you for providing this opportunity for interested parties to review and comment on the Department of Water Resources' (DWR) In-Delta Storage Program draft Feasibility Study (Feasibility Study). We also want to thank Ms. Linda Adams for responding to our October 9, 2003 letter concerning the East Bay Municipal Utility District (EBMUD)/ Delta Wetlands Protest Dismissal Agreement (PDA). Her assurances were greatly appreciated.

Despite those assurances, however, we continue to be concerned that the draft Feasibility Study fails to acknowledge or explain how the project would meet the requirements of the PDA (copy attached). The PDA places operational constraints on pumping that might interfere with Mokelumne River juvenile fish migration, and requires seepage monitoring on adjacent islands and other protections against levee failures that could put EBMUD's Mokelumne Aqueducts at risk.

EBMUD-Delta Wetlands PDA

EBMUD had serious concerns with the Delta Wetlands project, forcing it to protest the project's appropriation applications before the State Water Resources Control Board (SWRCB). EBMUD's concerns focused on fishery and levee security issues caused by that project's proposed in-Delta diversion and storage operations. Those issues were ultimately addressed in the September 2000 PDA between EBMUD and Delta Wetlands.

In addition to being a feasibility study, the Department's reports serve as a disclosure document for decision makers and a reference document for future phases of project development. As such, it is very important that the reports include all relevant restrictions and conditions under which the project would be constructed and operated. Thus, DWR's In-Delta Storage Program should address how it will meet the PDA's requirements, including its operational, monitoring, and levee design requirements.

Executive Summary

Although the EBMUD PDA is mentioned in Section 7.0 of the Draft Executive Summary, it is very much mischaracterized. The summary incorrectly states that the PDA includes “a Water Quality Management Plan” (pg 10). It does not. While other PDAs focused on water quality, specifically the California Urban Water Agencies (CUWA) and Contra Costa Water District (CCWD) PDAs, EBMUD’s PDA focused on fishery and levee/seepage issues. It does not contain a water quality management plan. Further, this same paragraph goes on to erroneously state that “The terms and conditions of these PDAs have been incorporated into D1643.” That is not entirely true. While some of the terms and conditions of the EBMUD PDA were incorporated into D1643, not all were. However, the EBMUD PDA’s terms and conditions, “whether or not” included by the SWRCB, remain binding on Delta Wetlands and its successors, as expressly set forth in Section 3 of the PDA.

The EBMUD PDA contains terms and conditions that address fishery concerns, levee design concerns, and seepage control issues. These items should be mentioned in Section 7.0 of the Draft Executive Summary. Curiously, this part of the Draft Executive Summary presents information that is not found in any of the draft reports.

The EBMUD PDA should be referenced in Sections 1.1, 1.3, and 2.4 of the Draft Report on Operations, as well as in Section 3.2.3 of the Draft Summary Report. Additionally, a more accurate characterization of the EBMUD PDA should be provided in Section 7.0 of the Draft Executive Summary.

Impact on EBMUD’s Mokelumne Aqueducts

EBMUD’s Mokelumne Aqueducts convey virtually all – about 95% – of the water supplied by EBMUD to its 1.3 million customers in its East San Francisco Bay service area. Thus, in a very real sense, the Aqueducts serve as the “lifeline” for the East Bay’s residents, institutions, and economy.

Although the Aqueducts pass just south of Bacon Island, one of the project islands, the Feasibility Study reports fail to include them in its inventory of facilities on neighboring islands that would be at risk in the event of a levee failure. That is a significant omission that should be corrected in any final Feasibility Study.

Some of DWR’s own publications contain useful background information on the Aqueducts. For example, the Mokelumne Aqueducts are clearly described in DWR Bulletin 192-82:

...the East Bay Municipal Utility District has three large pipelines crossing the Delta and connecting the District’s principal sources of water in the Sierra Nevada with its distribution area in Contra Costa and Alameda counties. During the 1981 conference on the “Future of the Delta”, District representatives indicated that its concern with Delta levee vulnerability centers on the immediate effects a levee break might have on continuous operation of these three aqueducts, which cross five tracts in the Delta:

Orwood, Woodward, Jones, Roberts, and Sargent-Barnhart. Since these aqueducts rest on piles of timber and concrete, the District is concerned about the effects of a levee break on aqueduct support systems. A levee break too close to an aqueduct river crossing would likely result in extensive scour that could put all three aqueducts out of service for a year. Flooding of adjacent islands might also result in serious damage to aqueduct support systems, but with less time needed to place the system back in service.

The concerns expressed at that time by EBMUD were real, not hypothetical. As noted in EBMUD's FYR 1981 Annual Report:

The seriousness of the Delta problem was illustrated when the aqueducts were nearly submerged last October as a result of levee failure and flooding of the Upper and Lower Jones Tracts. These three large steel pipelines are below sea level for about fifteen miles as they extend across five Delta islands and tracts protected by earthen levees which hold back the Delta waters west of Stockton.

Although not damaged, two of the three pipelines were removed from service as a precaution until inspections were completed to determine the impact of the rush of water, and they were back in operation by mid-November. Eroded areas under the aqueducts were filled with sand to stabilize pipeline supports, and by December, the flooded areas had been pumped out.

In a presentation to the California Water Commission on December 12, 1980, then DWR Central District Chief Wayne MacRostie included the following description of that year's Jones Tract floods:

The break on Lower Jones Tract occurred on September 26 under normal summer conditions. The break through the railroad embankment to Upper Jones Tract occurred on October 23. Although these breaks occurred on nonproject levees, State and Federal Government agencies were called upon to advise in the flood fight and repair activities.

Despite this clear record, the Feasibility Study's Draft Report on Risk Analysis, which addresses the costs of repairing or replacing damaged levees, buildings, and infrastructure facilities on neighboring islands, fails to even mention the presence of the 65"-, 67"-, and 87"-diameter EBMUD Mokelumne Aqueducts. This oversight needs to be rectified.

Section 3.3.1 of the Report on Risk Analysis should be expanded to include a description of the EBMUD Mokelumne Aqueducts, their importance, and their vulnerability (as detailed above). Tables 5 and 6 of the Risk Analysis report should also be revised to include the Mokelumne Aqueducts and account for their economic value.

Integrating the Requirements of EBMUD's PDA

EBMUD's concerns over the intentional flooding of the project islands are that it could increase risks to the Mokelumne Aqueducts in two ways: 1) seepage beneath the levees causing flooding of adjacent islands; and 2) an outward breach of the project island's levees which could then cause the failure of an adjacent island's levee. The Feasibility Study's Draft Engineering Investigations Summary states:

The seepage analyses conducted for three cross sections taken along the Webb Tract and Bacon Island levees shows that the proposed reservoir islands may increase the water table beneath the levee at adjacent islands 2 to 3.5 feet, and that flooding may occur in the neighboring islands in the absence of a seepage control system. (Pg. 48)

The Draft Engineering Investigations Summary goes on to note:

The interceptor well concept generally appears to be able to mitigate seepage problems induced by the proposed reservoirs. Proper design, construction, and maintenance will be key to the success of the interceptor well system. (Pg. 48)

Those observations are theoretical, based on computer modeling. The only way to know whether the interceptor wells actually perform as expected is to actually monitor groundwater levels under the project islands *and the adjacent islands*. To underscore the importance of monitoring to detect actual seepage, the last quoted sentence (from Section 5.3.8 of the Draft Engineering Investigations Summary) should be revised to say: "Proper design, construction, **monitoring**, and maintenance will be key to the success of the interceptor well system."

To ensure the seepage controls work, the EBMUD PDA contains a Seepage Control Plan (Attachment C) with very specific and detailed monitoring requirements. It also contains Geotechnical Terms and Conditions (Attachment B) with requirements for a Design and Review Board (DRB), a Monitoring and Action Board (MAB), and other safeguards. The DRB and MAB requirements of the PDA will also minimize the risk of an outward breach, as described in Section 3.3 of the Draft Risk Analysis.

Accordingly, **Section 5.3.8 of the Engineering Investigations Summary should include references to the Geotechnical Terms and Conditions (Attachment B) and Seepage Control Plan (Attachment C) of the EBMUD PDA, which will help to ensure that the seepage control measures achieve their purpose.**

The infrastructure and operation and maintenance costs required by the PDA's Seepage Control Plan (monitoring wells and automated monitoring systems) should be included in the cost analyses presented in the Draft Summary Report (Table 5.4) and the Draft Report on Economic Analyses (Table 3). It is our understanding that these costs have not yet been incorporated.

Fishery Issues

The EBMUD PDA also addresses fishery concerns. Each spring, out-migrating juvenile salmon and steelhead trout from the Mokelumne River pass by the north side of Webb Tract. To minimize entrapment or entrainment of these small fish, the EBMUD PDA contains Fisheries Terms and Conditions (Attachment A) that restrict pumping at the northeastern siphon station of Webb Tract from January 1 to June 30. Although these restrictions are significant, the Draft Report on Operations does not mention them. Section 4.4.2 of the Draft Report on Operations states “Diversions are assumed to occur on the south side of each island and discharge on the north.” **As this is a requirement of the EBMUD PDA from January 1 to June 30, the PDA should be referenced and the requirement appropriately noted in Section 4.4.2.**

Conclusion

Years of study and review are behind the EBMUD PDA terms and conditions. Those provisions were carefully developed to be workable solutions to difficult issues of public importance – maintaining the water supply to the east San Francisco Bay Area while protecting the fishery – and they are *binding*. The Feasibility Study should integrate the Mokelumne Aqueducts in its facility and risk review, and should include and fully integrate the EBMUD PDA requirements, including the fishery requirements in Attachment A, and the geotechnical and seepage control requirements in Attachments B & C.

To the extent DWR assumes that changes to existing permits or agreements, including PDAs, are needed for the project to go forward, the Feasibility Study should identify and discuss the necessary modifications to specific existing permits and agreements. This full evaluation is necessary for decision makers to gain a complete understanding of the permitting and legal challenges the project may entail.

Thank you for this opportunity to comment on the reports. We look forward to working with DWR on this project in the future. Please contact Paul Gilbert-Snyder of the District’s Bay-Delta Consensus Team at 510-287-0432 if you have further question or if we can be of assistance in clarifying EBMUD’s recommended changes to the Feasibility Report.

Very truly yours,

Lena L. Tam
Manager of Water Resources Planning

LLT:lrc

cc: Steve Macaulay, California Urban Water Agencies
Attachment

**PROTEST DISMISSAL AGREEMENT BETWEEN
DELTA WETLANDS PROPERTIES AND
EAST BAY MUNICIPAL UTILITY DISTRICT**

This Protest Dismissal Agreement is entered into and effective this 13th day of Sept., 2000, by and among Delta Wetlands Properties ("Delta Wetlands") and the East Bay Municipal Utility District ("EBMUD").

RECITALS

WHEREAS, Delta Wetlands has applied to the State Water Resources Control Board to appropriate water pursuant to Application Nos. 29062, 29066, 30268 and 30270 and petitions for change thereto ("Delta Wetlands Applications");

WHEREAS, EBMUD filed with the State Water Resources Control Board a protest of the Delta Wetlands Applications, said protest based upon (a) fishery and (b) levee and Mokelumne Aqueduct security grounds;

WHEREAS, the State Water Resources Control Board has conducted a hearing on the Delta Wetlands Applications and will resume the hearing on October 10, 2000;

WHEREAS, EBMUD has appeared as a protestant and an interested party in the hearing on the Delta Wetlands Applications;

WHEREAS, Delta Wetlands and EBMUD desire to resolve issues between them regarding the Delta Wetlands Applications;

WHEREAS, EBMUD has implemented and continues to implement a comprehensive program to protect and enhance the lower Mokelumne River anadromous fishery; to further protect that fishery, EBMUD and Delta Wetlands wish to ensure that Delta Wetlands implements measures to minimize potential Delta Wetlands Project impacts upon that fishery;

WHEREAS, Delta Wetlands wishes to ensure the security of its Bacon Island and Webb Tract reservoir island levees and seepage control systems;

WHEREAS, EBMUD owns and operates the Mokelumne Aqueducts, which convey water across the Delta to supply EBMUD's East San Francisco Bay service area with approximately 95% of its water;

WHEREAS, Bacon Island, a proposed reservoir island of the Delta Wetlands Project, is located just north of and adjacent to the Mokelumne Aqueducts as they pass through the Delta;

WHEREAS, EBMUD wishes to ensure that the Bacon Island levees are secure and do not fail and that the levees on adjacent islands around Bacon Island are not damaged by the Project, either of which EBMUD contends could damage or destroy the Mokelumne Aqueducts; and

WHEREAS, EBMUD wishes to ensure that all seepage from Delta Wetlands' reservoir operations on Bacon Island to neighboring islands is controlled to prevent damage to the Mokelumne Aqueducts;

NOW, THEREFORE, the parties agree as follows:

1. Delta Wetlands and EBMUD agree to present Attachment A, Fisheries Terms and Conditions, Attachment B, Geotechnical Terms and Conditions, and Attachment C, Delta Wetlands Seepage Control Plan, to the State Water Resources Control Board and to support inclusion of those terms and conditions in any and all permits or licenses issued by the State Water Resources Control Board for the Delta Wetlands Project, including any permits or licenses issued pursuant to Application Nos. 29062, 29066, 30268 and 30270.
2. EBMUD agrees not to oppose the issuance of water right permits or licenses to Delta Wetlands pursuant to the Delta Wetlands Applications and agrees to withdraw its protest on the condition that the terms and conditions contained herein as Attachments A, B and C are included in such permits and licenses where applicable.
3. Whether or not the State Water Resources Control Board includes the terms and conditions contained in Attachments A, B and C, Delta Wetlands and its successors shall be subject to and comply with the terms, conditions and requirements of Attachments A, B and C, including the procedures regarding the Design Review Board and the Monitoring and Action Board.
4. At the resumed water rights hearing on its applications, Delta Wetlands will offer this Agreement into evidence as part of its submission to the State Water Resources Control Board.
5. EBMUD may elect to participate in the Delta Wetlands Project Fishery Technical Advisory Committee. Delta Wetlands shall notify the Department of Fish and Game that EBMUD may participate on the Technical Advisory Committee and is to be provided notice of all Technical Advisory Committee meetings and discussions.
6. This Agreement shall be binding upon and inure to the benefit of the successors in interest and legal representatives of the respective parties.
7. All changes or modifications to this Agreement shall be in writing and signed by EBMUD and Delta Wetlands or their successors.

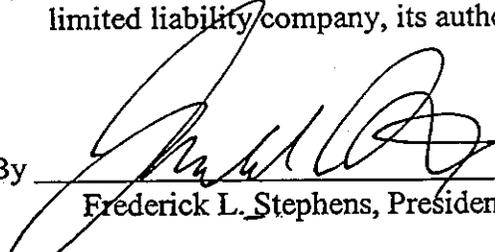
8. The signatories hereto represent that they are authorized to enter into this Agreement on behalf of the party for whom they sign. This document may be executed in duplicate originals.

DELTA WETLANDS PROPERTIES, an Illinois
general partnership

By: KLMLP, L.P., a Delaware limited partnership,
Special Partner

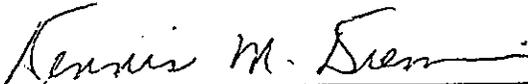
By: ZKS Real Estate Partners, LLC, a Delaware
limited liability company, its authorized agent.

Dated: Sep 7, 2000

By: 
Frederick L. Stephens, President

EAST BAY MUNICIPAL UTILITY DISTRICT

Dated: 9/14/00

By: 
Dennis M. Diemer, General Manager

**ATTACHMENT A
FISHERIES TERMS AND CONDITIONS**

Webb Tract Operations

From January 1 to June 30, Permittee's Webb Tract operations shall be in accordance with the following diversion protocol:

1. Diversions to storage shall be made through the southeastern siphon station, except that;
2. Only after the southeastern station siphon is operating at full capacity, or in excess of 90% of full capacity due to maintenance and repair, may diversions to storage be made through the northeastern siphon station;
3. Any reductions in diversions to storage shall first be accomplished by curtailing diversions at the northeastern siphon station. Only after diversions to storage at the northeastern siphon station are reduced to less than 50 cfs shall reductions in diversions begin at the southeastern station.
4. Permittee may operate the northeastern siphon station only when diversions through the southeastern siphon station are projected to be insufficient to completely fill storage on Webb Tract within 30 days. Permittee shall then operate the northeastern siphon station at or below the rates projected to fill said storage by the end of this same 30-day period. Permittee shall report Webb Tract diversion rates and storage amounts to the Technical Advisory Committee on an annual and monthly basis, in accordance with the provisions outlined in the Water Quality Management Plan or other applicable terms and conditions.
5. This diversion operations protocol is not applicable (1) if the U.S. Fish and Wildlife Service ("USFWS") determines that delta smelt eggs, larvae, juvenile or adult life stages are found at the Webb Tract southeastern siphon monitoring stations, as set forth in the USFWS Final Biological Opinion, or (2) if the 3-day running average of salinity or dissolved organic carbon ("DOC") at the northeastern siphon station is more than 10% lower than the 3-day running average of salinity or DOC at the southeastern siphon station. This 10% salinity/DOC exception to the protocol is not expected to occur more than once every five years. If, however, this 10% salinity/DOC exception occurs more frequently than once every five years, then the diversions at the northeastern siphon station resulting from this exception may not exceed 25 thousand acre feet per year nor exceed a diversion rate of 1,375 cfs, without express written authorization from EBMUD. In the event that this salinity/DOC exception is triggered, Permittee shall reimburse EBMUD up to an additional \$5,000 as provided and pursuant to paragraph 16 set forth below.
6. The diversion operations protocol is not applicable during routine repairs and maintenance of the southeastern siphon station, with such exception limited to a maximum of three days per month.

7. Any additional siphons or screening capacity constructed by Permittee will also be subject to the diversion protocol. Any such additional siphons or screening capacity will be added to the southeastern siphon station whenever possible.

Siphon Removal

8. Permittee shall limit the number of existing siphons on Bouldin Island to no more than 14. This will require Permittee to remove a number of existing siphons. This reduction shall be applied uniformly around the island. All remaining siphons shall be screened as set forth in the USFWS' Final Biological Opinion.
9. Permittee shall limit the number of existing siphons on Webb Tract to no more than 7. This will require Permittee to remove a number of existing siphons. This reduction shall be applied uniformly around the island, except that at least 50% of the existing siphons along the San Joaquin River shall be removed so that no more than 4 siphons remain on the San Joaquin River. All remaining siphons shall be screened as set forth in the USFWS' Final Biological Opinion.
10. Permittee shall complete the above-referenced siphon removal prior to beginning diversions on Webb Tract under Permittee's new water rights. Permittee shall provide EBMUD with written notice of removal within thirty days of completion of siphon removal.

Boat Docks

11. Permittee shall limit the addition of new boat docks on the exterior of Bouldin Island to no more than 150. New boat docks on the Mokelumne River shall be limited to no more than 75.
12. Permittee shall limit the addition of new boat docks on the exterior of Webb Tract to no more than 198. New boat docks on the San Joaquin River shall be limited to no more than 30.
13. The location of Permittee's new boat docks on Bouldin Island and Webb Tract shall be based on recommendations by the Technical Advisory Committee with consideration given to the proximity of the proposed new boat docks to proposed new shallow water habitat.

Webb Tract Fisheries Monitoring Program

From January 1 to June 30, Webb Tract diversions to storage from the northeastern siphon station that exceed 50 cfs shall require fishery monitoring as described below:

14. No later than January 1, February 1, and March 1 of each year, Permittee shall provide to EBMUD a monthly operations plan showing when diversions to Webb Tract and Bouldin Island are anticipated to take place for the subsequent four month period.
15. No less than three days prior to commencing diversions which exceed 50 cfs to Webb Tract or Bouldin Island, Permittee shall notify EBMUD of its proposed diversion.

16. In any year when Permittee operates its northeastern Webb Tract diversion station and EBMUD finds juvenile chinook salmon have begun outmigrating from the Mokelumne River as determined by a two-day running average of over 25 fish per day at Woodbridge Dam, Permittee will reimburse EBMUD up to \$50,000 per year in year 2000 dollars (adjusted annually for inflation by the Consumer Price Index for All Items - All Urban Consumers for the San Francisco-Oakland-San Jose Metropolitan Statistical Area) for monitoring expenses and the cost to obtain any necessary permits for monitoring in the immediate vicinity of the northeastern Webb Tract diversion station and associated boat docks.
17. Monitoring shall be performed for the first five years of actual operation (these might not be consecutive years) of Permittee's northeastern Webb Tract diversion station. If the Mokelumne River juvenile anadromous fish are not present on the screens of the northeastern diversion structure or are not in the stomachs of predators in the immediate vicinity of the northeastern diversion structure during this period, then no further monitoring shall be required.¹ If, however, Mokelumne River juvenile anadromous fish are present on the screens of the northeastern diversion structure or in the stomachs of predators in the immediate vicinity of the northeastern diversion structure, this monitoring program and its associated mitigation (described in Paragraph 18, below) will continue until such time as the monitoring program fails to detect the presence of these fish for three consecutive years of operation.
18. If this monitoring program identifies that Mokelumne River juvenile anadromous fish are present on the screens of the northeastern diversion structure or in the stomachs of predators in the immediate vicinity of the northeastern diversion structure, Delta Wetlands will immediately reduce its diversions at the northeastern Webb Tract diversion station by 50% of the then current diversion rate, or down to an instantaneous diversion rate of 50 cfs, whichever is greater.

¹For purposes of this agreement, Mokelumne River juvenile anadromous fish are any juvenile salmonids bearing an adipose fin clip. In the event tagging techniques are modified by EBMUD, or others, that eliminates the ability to distinguish Mokelumne River juvenile anadromous fish, EBMUD shall notify Permittee and modify this definition to enable proper identification of the Mokelumne River juvenile anadromous fish.

**ATTACHMENT B
GEOTECHNICAL TERMS AND CONDITIONS**

Reservoir Island Design Review Board ("DRB")

1. **Members:**
 - a. Number: Three.
 - b. **Qualifications:** Registered professional civil engineers with experience providing engineering services in the Sacramento-San Joaquin Bay-Delta. At least one member shall be a geotechnical engineer.
 - c. **Appointed by:** Delta Wetlands Properties ("DW" or "Permittee").
 - d. While not members of the Design Review Board ("DRB"), parties such as EBMUD that hold property interests adjacent to Bacon Island or Webb Tract (the Project reservoir islands) or parties that could be substantially affected by the reservoir operations and have appeared in the DW water rights hearing, shall have the ability to participate in DRB meetings, comment on design, and shall be provided a copy of all DRB minutes so that such parties can monitor the design and construction of the Project reservoir islands.
2. **Duties:** Permittee shall submit Project reservoir island plans and specifications to the DRB. The DRB shall review and comment on the plans and specifications during staged design review and during construction for the Bacon Island and Webb Tract Project improvements, confirming that Project design meets the stated objectives of the Project description as defined in the 2000 Revised Draft Environmental Impact Report/Statement and the Delta Wetlands Seepage Control Plan (Attachment C), including but not limited to: levee factors of safety, wave protection for levees, levee slopes, seepage control, and monitoring programs. Comments of the DRB shall be provided to the SWRCB, Permittee, EBMUD, and to local reclamation districts adjacent to the Project reservoir islands.
3. **Compensation:** Members of the DRB are to be compensated by Permittee for their time, in an amount up to but not to exceed \$300,000. The DRB shall cease to exist once its duties, as set forth in paragraph 2, are completed.

Reservoir Island Monitoring & Action Board ("MAB")

4. **Members:**
 - a. Number: Three, with two alternates.
 - b. **Qualifications:** The two primary members shall be registered professional civil geotechnical engineers with experience providing engineering services in the

Sacramento-San Joaquin Bay-Delta. The third member and the two alternate members shall be licensed professionals with experience in seepage in the Sacramento-San Joaquin Bay-Delta.

- c. **Appointment Process:** The State Water Resources Control Board ("SWRCB") shall appoint one member and DW shall appoint one member. In the event the SWRCB does not so appoint one MAB member, then DW shall instead appoint that member after first meeting and conferring with EBMUD on the independence and objectivity of the proposed appointment and after allowing EBMUD an opportunity to object to the appointment. No appointment of this one MAB member shall be made over the objection of EBMUD. These two members ("primary members") shall appoint the third member and the two alternate members. Any party to the Delta Wetlands SWRCB hearing may provide suggestions to the SWRCB as to who to appoint to the MAB. Each of the MAB members shall be appointed for a term of four years. At the end of the four-year term, the same selection process will be used to select the MAB.
5. **Term:** The MAB shall be established prior to the first diversions to storage on Bacon Island or Webb Tract and shall continue thereafter for the duration of Project reservoir operations on Bacon Island and/or Webb Tract.
6. **Compensation:** Members of the MAB are to be compensated by Permittee 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 MAB shall be part of the annual operation and maintenance costs of the Project.
7. **Duties:**
 - a. Permittee shall submit Project monitoring and seepage data to the MAB so that the MAB can fulfill its duties. During the first year of Project reservoir island operations, the MAB shall serve as a neutral technical engineering advisor and shall review monitoring and seepage data at each stage of initial reservoir filling. Following that initial filling, the MAB shall review monitoring and seepage data at a minimum of every three months during the remainder of the first year of Project reservoir island operation.
 - b. The MAB shall serve as a neutral technical engineering advisory panel, hearing and investigating identified problems purportedly caused by Permittee's reservoir operations, including but not limited to levee weakness, overtopping of levees, levee failure, scour at EBMUD's Mokelumne Aqueduct river crossings, and seepage. The MAB shall also issue Reports containing its recommendations on remedial actions to correct problems, as set forth in paragraph 14.
 - c. The terms of the Delta Wetlands Seepage Control Plan (Attachment C) may be adjusted over time by the SWRCB as set forth below. The SWRCB reserves jurisdiction over changes in the Delta Wetlands Seepage Control Plan to coordinate

or modify its terms for the protection of other legal users of water, fish, wildlife, instream beneficial uses, 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 MAB shall review the Delta Wetlands Seepage Control Plan to determine if changes in any of the Seepage Control Plan's terms are advisable. In its review, the MAB shall examine actual operation of the Project to date and any adverse effects of Project reservoir operations, including impacts on neighboring levees and islands. The MAB will base each of its recommended changes to Plan terms, if any, on its independent, professional judgment. At the conclusion of its review, the MAB shall issue a written list of its recommended changes, if any. The list shall be sent by the MAB to the SWRCB, Permittee, EBMUD, all Interested Parties who have notified Permittee as set forth in paragraph 9, and all parties to the Delta Wetlands SWRCB hearing ("Noticed Parties").
 - (ii) If Permittee, EBMUD, Noticed Parties and Interested Parties (as limited above) do not object to a change recommended by the MAB 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 to Permittee, EBMUD, Noticed Parties and Interested Parties (as limited above). If requested by Permittee, EBMUD, a Noticed Party or an Interested Party (as limited above), the SWRCB may hold a hearing on the proposed change.
- d. After its initial three-year review of the Delta Wetlands Seepage Control Plan as set forth above, the MAB may thereafter periodically review and change the terms of the Delta Wetlands Seepage Control Plan so long as the review and approval process set forth above is followed.

Dispute Resolution Procedure

8. Delta Wetlands and EBMUD set forth the following process to identify and remedy levee, seepage and related problems which may be caused by Project reservoir islands operations. The parties recognize, however, that in the event of an emergency, such as an imminent levee failure, there is a need for rapid action such that there may not be time for this process to take place. In the event of emergency, an Interested Party or reclamation district may notify Permittee of a problem by any available method.
9. Any entity or individual who may be injured by the reservoir operations of the Delta Wetlands Project ("Interested Party") may elect to seek a remedy through the Dispute Resolution Procedure set forth below. If such an Interested Party elects to utilize said Dispute Resolution Procedure, then the Interested Party shall notify Permittee and MAB in

writing of such election and shall be bound by all provisions set forth therein, including but not limited to paragraph 16.

10. **Method of Notification:** Except in cases of emergency, all notifications, determinations, completion notices, objections, and reports shall be in writing delivered by U.S. Mail, courier, messenger, facsimile or electronic mail. All written notifications, determinations, completion notices, objections, and reports must be signed by a registered engineer.

11. **Notification of Problem:** EBMUD, or any Interested Party that has elected to use the Dispute Resolution Procedure as set forth in paragraph 9, may notify Permittee of perceived problems caused by the Project, including but not limited to, indications of levee failure and/or seepage on Project reservoir islands or on adjacent islands. EBMUD or Interested Party shall hereafter be referred to as "Complainant."
 - a. **Contents of Notification:** The Notification shall specify the type of problem identified, its location and when it was observed.
 - b. **Notification Sent to:** The Notification shall be sent by Complainant to the SWRCB, Permittee, the MAB, and to the secretary of any reclamation district for land on which the identified problem is occurring.

12. **Determination by Permittee:** Upon receiving a written Notification pursuant to paragraph 11, Permittee shall investigate the problem. Within five working days of receiving said written Notification, Permittee shall provide a written Determination to the SWRCB, Complainant, the MAB, and to the secretary of any reclamation district to whom the Notification was sent.
 - a. **Contents of Determination:** The Determination shall outline what actions Permittee took to investigate the identified problem, Permittee's conclusions as to the nature of the problem, an explanation of what remedial actions, if any, Permittee will take to correct the problem, and when any such remedial actions will be commenced and completed.
 - b. Upon Permittee's completion of any such remedial actions, Permittee shall provide a written completion notice to the SWRCB, Complainant, the MAB, and the secretary of any reclamation district to whom the Notification was sent. The notice shall state what remedial actions were taken and when they were completed.

13. **Objection to Permittee's Determination:** In the event Complainant disagrees with all or part of Permittee's Determination, Complainant within five working days of receipt of Permittee's Determination, shall send to the SWRCB, Permittee, the MAB and to the secretary of any reclamation district to whom the Notification was sent, a written Objection to the Determination.

- a. **Contents of Objection:** The Objection shall outline to which portions of the Determination Complainant objects and why. Complainant may also state its view of the problem and remedy.
14. **MAB Report:** Upon receipt of an Objection pursuant to paragraph 13, the MAB shall commence its own independent investigation of the matter. Permittee and/or Complainant may submit additional material to the MAB to assist in its investigation, so long as the other party is copied. If, in the opinion of the MAB, additional technical studies are necessary to its investigation, it may undertake or authorize such studies. The costs of any such studies shall be paid for as set forth in paragraph 6.
 - a. Within seven working days of receiving the written Objection, the MAB shall issue a written Report. Said Report shall be sent to the SWRCB, Permittee, Complainant and to the secretary of any reclamation district to whom the Notification was sent.
 - b. **Contents of Report:** The Report shall include the MAB's independent opinion on the nature of the problem, its recommendation on what remedial actions should be taken by Permittee to correct the problem, if any, and a schedule of when any such remedial actions should be commenced and completed by Permittee. The MAB shall only recommend remedial actions which address problems determined to be caused by Project reservoir operations though, if necessary, it may identify other causes only for explanatory purposes.
 15. **Permittee's Compliance with the Report:** Permittee shall implement all recommended remedial measures listed in the MAB's Report by the deadlines included therein, and shall be solely responsible for the costs of said measures.
 16. **Frivolous Claims:** If the Permittee believes the Complainant has filed a frivolous Notification pursuant to paragraph 11, then Permittee may, within fifteen days of receiving the MAB Report, request the MAB to determine whether the Notification by Complainant is totally and completely without merit (frivolous). If the Notification is determined to be frivolous, Complainant shall pay all costs and fees of investigating the claim incurred by the MAB.
 17. **Judicial Remedy:** Nothing in these terms and conditions shall constitute a waiver of the rights of Permittee or Complainant to pursue judicial remedies in state court regarding an MAB Report.

Financial Assurances

18. The following four classes of financial assurances shall be required so long as the Project is owned by any party other than the state and/or federal government(s). In the event the Project is owned and operated by the state and/or federal government(s), then these provisions shall not apply. However, any governmental entity that purchases or leases the Project shall hold a financial reserve account for the Project that is sufficient to cover the annual costs of Project operations or shall provide equivalent assurances.

19. **Seepage and Monitoring Fund:** The parties wish to ensure that, prior to any diversions to storage on Bacon Island or Webb Tract in each and every year of Project operation, the Permittee have sufficient capital resources on hand to operate the seepage control and monitoring systems for the full year. To meet this objective, the following funding mechanism shall be utilized.

First Year of Operation. Prior to the first diversion to storage on a Project reservoir island, Permittee shall deposit, in an interest-bearing account in a financial institution licensed to do business in the State of California who will act as the escrow agent, with interest accruing to Permittee, \$500,000 to be used for the first year's annual operating expenses of the Project's reservoir island seepage control and monitoring systems. Permittee may draw upon said monies over the course of the year only to cover routine incurred expenses for seepage control and monitoring on the two Project reservoir islands.

Following Years. Prior to the first diversion to storage on a Project reservoir island in each and every water year thereafter, Permittee shall deposit into said account a sum of money the MAB estimates, as provided below, will be required for the complete annual operating costs of the Project's reservoir island seepage control and monitoring systems for that upcoming water year. Permittee may draw upon said monies over the course of the water year only to cover routine incurred expenses for seepage control and monitoring on the two Project reservoir islands.

Estimate. No later than September 1 of each year, Permittee shall file with the MAB a written estimate of the amount of money required for the complete annual operating costs of the Project's reservoir islands seepage control and monitoring systems for the upcoming water year. (The water year shall be October 1 through September 30.) The MAB shall review that estimate and, in its own discretion, set an amount of money it estimates will be needed to operate the Project reservoir islands seepage control and monitoring systems for that upcoming water year. Said sum shall not be less than the prior year's actual seepage and monitoring costs. Permittee shall then deposit that amount of money in the designated account, as provided above.

Records. Permittee shall provide proof of deposit of the estimated annual seepage and monitoring costs to the MAB prior to the first diversion to storage on a Project reservoir island in each year of operation. Permittee shall maintain all books and records on the utilization of said account monies for each year of Project operation and shall submit to the SWRCB and MAB, no later than October 15 of each year, an accounting of how said monies were expended in the prior water year.

20. **Drawdown Fund:** The parties wish to ensure that, in the event Permittee abandons the Project or otherwise does not operate the Project after water has been diverted to storage on a Project reservoir island, there are sufficient capital resources on hand to empty the Project reservoir islands.

First Year of Operation. Prior to the first year of reservoir operations, Permittee shall deposit, in an interest-bearing account in a financial institution licensed to do business in the State of California who will act as the escrow agent, with interest accruing to Permittee, \$1,000,000 to cover the expense of emptying the Project reservoir islands. Permittee may draw upon said monies over the course of the year to cover routine expenses of discharging water from the Project reservoir islands as part of normal operations.

Following Years. Prior to the first diversion to storage on a Project reservoir island in each and every water year thereafter, Permittee shall deposit into said account a sum of money the MAB estimates, as provided below, will be required for the complete annual operating costs of the Project's discharge operations for that upcoming water year. Permittee may draw upon said monies over the course of the water year only to cover routine incurred expenses for discharge of stored water on the two Project reservoir islands.

Estimate. No later than September 1 of each year, Permittee shall file with the MAB a written estimate of the amount of money required for the complete annual operating costs to discharge water from the Project reservoir islands for the upcoming water year. (The water year shall be October 1 through September 30.) The MAB shall review that estimate and, in its own discretion, set an amount of money it estimates will be needed to discharge water from the Project reservoir islands for that upcoming water year. Said sum shall not be less than the prior year's actual discharge costs. Permittee shall then deposit that amount of money in the designated account, as provided above.

Records. Permittee shall provide proof of deposit of the estimated annual discharge costs to the MAB prior to the first diversion to storage on a Project reservoir island in each year of operation. Permittee shall maintain all books and records on the utilization of said account monies for each year of Project operation and shall submit to the SWRCB and the MAB, no later than October 15 of each year, an accounting of how said monies were expended in the prior water year.

21. **Remedial Actions:** The parties wish to ensure that, in the event Permittee determines to take corrective actions in response to a Complainant's Notification or if the MAB recommends remedial actions to correct identified problems, Permittee will have sufficient capital resources on hand to implement those actions.

Prior to the first diversion to storage on a Project reservoir island, Permittee shall deposit, in an interest-bearing account in a financial institution licensed to do business in the State of California who will act as the escrow agent, with interest accruing to Permittee, \$1,000,000. This fund shall be available for use by Permittee only to implement corrective actions in response to a Complainant's Notification or to implement remedial measures recommended by the MAB.

In the event this Remedial Action Fund is so used by Permittee, Permittee shall, prior to again diverting to storage on a Project reservoir island, deposit sufficient monies into said account so that its balance returns to its minimum required level. Its minimum required level shall be \$1,000,000, as adjusted annually for inflation by the ENR Construction Cost Index

for San Francisco (ENR CCI-SF) for the life of the Project. In the event this Remedial Action Fund is not used by Permittee during ten years of reservoir operations, then such fund shall be canceled and the monies deposited shall revert back to Permittee.

Records. Permittee shall provide proof of deposit of the Remedial Action Fund to the MAB prior to the first diversion to storage on a Project reservoir island, and if the Remedial Action Fund is drawn upon, Permittee shall again provide proof of deposit of sufficient funds to maintain the balance at the minimum required level prior to again diverting to storage on a Project reservoir island. Permittee shall maintain all books and records on the utilization of said account monies for each year of Project operation and shall submit to the SWRCB and the MAB, no later than October 15 of each year, an accounting of how said monies were expended in the prior water year.

22. **Insurance:** The parties wish to ensure that in the event of damage caused by the Project, sufficient capital resources are available to reimburse damaged parties.

Permittee shall take out and maintain, during the life of the Project, General Liability Insurance that provides protection from claims that may arise from Project reservoir islands operations. Permittee shall annually submit certificates of said insurance to EBMUD. The policy shall not be cancelled or materially altered unless 30 days' written notice is given EBMUD. The amounts of insurance coverage shall not be less than \$25,000,000/ Occurrence, Bodily Injury, Property Damage - General Liability.

ATTACHMENT C
DELTA WETLANDS SEEPAGE CONTROL PLAN

I. INTRODUCTION

A. Description of Seepage

The Delta Wetlands ("DW") Project consists of four islands. Water will be stored on the two reservoir islands (Bacon Island and Webb Tract) up to elevation +6 feet. On the habitat islands (Bouldin Island and Holland Tract), water levels will be managed for a range of crops and habitats, some of which include shallow flooding. DW intends to control groundwater in the vicinity of its reservoir islands in such a way that there is no seepage beyond that which would be produced by other uses of the DW reservoir islands currently allowed (such as intensive agriculture or shallow flooded wetlands). Controlling seepage to within these limits is referred to as "no net seepage impact".

The method by which a reservoir on Bacon Island and/or Webb Tract could create a seepage impact on an adjacent island is flow through a connecting sand aquifer extending beneath both islands. Seepage flowing from one island to the next will raise the hydrostatic head in the aquifer beneath the neighboring (receiving) island. The presence or absence of a connecting aquifer is not known at many locations. If there is a connecting aquifer and if seepage is occurring from a reservoir island through the aquifer to a neighboring island, the hydrostatic head in the aquifer beneath the neighboring island will rise and fall with the filling and emptying of the reservoir. DW will monitor the hydrostatic head in the aquifers beneath neighboring island levees to check that no seepage is occurring from DW Reservoirs. Several types of "wells" are used to control and monitor seepage. Their definition and relative location are shown on Figure C-1 (attached).

B. Groundwater Monitoring Wells

Two suites of groundwater monitoring wells will be installed.

To check whether the reservoir water level on Bacon Island or Webb Tract is affecting an adjacent island, Permittee will install seepage monitoring wells along a neighboring island's perimeter directly across from the Bacon Island and Webb Tract Reservoir islands.¹ These will be the primary tool for detecting seepage from a reservoir island. If water stored on a DW reservoir island creates added seepage toward a neighboring island, the increased hydrostatic head that would be part of the seepage can be measured in monitoring wells penetrating the aquifer transmitting the water.

To check the overall groundwater behavior in the Delta, unrelated to operation of the DW Project, a series of background monitoring wells will be installed at locations sufficiently far removed from the Bacon Island and Webb Tract reservoirs as to not be influenced by water storage

¹The installation of monitoring wells is subject to the approval of the neighboring island owner(s). If approval is unreasonably withheld, alternative locations will be utilized.

within the reservoirs. The measured groundwater levels will be normalized (as described below) and averaged to develop an overall characterization of the groundwater trends in the central portion of the Delta.

C. Pre-Project Baseline

To collect baseline² data on the overall groundwater system performance as it relates to agricultural practices or wetlands management, the groundwater monitoring wells (both seepage monitoring wells and background monitoring wells) will be monitored by DW continually for at least one year prior to the start of reservoir filling. The same measurements will be taken by DW year round, once the Project is implemented.

D. Detecting Seepage

To assess whether filling Bacon Island or Webb Tract may be impacting the groundwater level beneath neighboring islands, the groundwater levels in the seepage monitoring wells beneath adjacent islands will be compared by DW to the baseline records at those same locations. Concurrently, the overall groundwater performance of the Delta will be measured by DW in the background monitoring wells. Those locations showing increases above baseline range (adjusted for extreme variations in overall Delta groundwater performance), that coincide with filling the reservoir, will be the basis for suspending water diversion onto the nearby reservoir island. Details regarding how the various data will be compared are described in Section III set forth below. The above monitoring observations will be made on a continuing basis, allowing DW to observe the start of trends that may indicate possible seepage from the reservoirs. The goal of DW is to be proactive and to make needed groundwater control adjustments far in advance of the Diversion Suspension Limits.

E. Initial Stage Filling of Reservoirs

When the Project first begins to operate, water storage will be implemented on a vertical stage-filling basis. Water within the reservoir will first be brought to a fairly low level, not more than 25% of storage capacity, and held constant for a period of time until sufficient data are collected to verify that no net seepage impacts are occurring on neighboring islands. If impacts are found that require controlling measures, filling of the reservoir will be put on hold until appropriate measures can be brought on line so as to not cause additional risk to neighboring island levees. Such actions could include increasing the pumping capacity of interceptor wells, installing additional interceptor wells, installing relief wells on a neighboring island, and/or other mitigation that may be agreed upon among DW, the adjacent landowners, and the reclamation districts.

If impacts are not detected, the reservoir will be further filled to the next vertical stage (approximately 50% of reservoir capacity) and again held constant to allow adequate time for data collection and assessing of possible seepage impacts. This cycle of staged-filling, monitoring

²“Baseline” data refer to data collected prior to the first filling of the reservoir islands. The baseline may be updated during subsequent years of no water storage on the reservoir islands.

seepage, assessing impacts, and correcting impacts will be repeated until the reservoir can be safely brought to full operational level with suitable seepage control measures in place.

F. Routine Operations

The reservoirs will commonly begin filling in late fall to early winter. Both prior to and during filling, the groundwater levels in the seepage monitoring wells will be carefully tracked by DW. The interceptor wells will begin to operate as the reservoir level is raised. Pumping rates will be increased as the pool elevation in the reservoir is raised. All this time, the seepage monitoring wells will be tracked and serve as a control for adjusting the interceptor well pumping rates. The interceptor wells will be pumped such that the water levels in the seepage monitoring wells are kept near the normal seasonal levels.

DW will continually evaluate the efficiency of the interceptor wells to verify that there is sufficient additional capacity to allow the pool elevation to continue to be raised. If the efficiency of a well drops off such that the ability of the well to pump greater volumes of water is in question, DW will redevelop the well to improve its efficiency prior to approaching the well's limits. If additional capacity is not readily available from an existing well, a new well can be drilled to increase the pumping capacity at the reservoir island's perimeter.

The reservoir pool elevation will lower as water is later exported into the adjacent slough or river. As the pool elevation decreases, the pumping rates from the interceptor wells will be gradually lowered, with the goal of keeping the water levels in the neighboring islands seepage monitoring wells near their normal seasonal levels.

During the period with little to no water storage, a thorough evaluation of the efficiency of the wells will be undertaken by DW to identify those wells that may show signs of decreasing efficiency and may be susceptible to overstressing during the following season's storage cycle. The need for additional wells will also be evaluated. To the extent practical, redevelopment of existing wells and installation of additional wells will occur during the off-season.

II. LOCATIONS OF GROUNDWATER MONITORING WELLS

A. Background Monitoring Wells

At least twenty-five (25) background monitoring wells will be sited by DW at an appropriate distance from the reservoir islands. These background monitoring wells will be at least one mile from a reservoir island and most likely will be greater than 1 1/2 miles from a reservoir island. Recommended typical locations of background monitoring wells are shown on Figure C-2. The purpose of these background monitoring wells is to monitor regional groundwater elevations beyond the reasonable influence of the DW reservoir islands.

B. Seepage Monitoring Wells

At least 100 seepage monitoring wells will be placed on or near levees directly opposite the perimeter of the reservoir islands. The five neighboring islands around the south half of Bacon

Island are Lower Jones Tract, Upper Jones Tract, Woodward Island, Orwood Tract and Palm Tract. Around the northern half of Bacon Island are Holland Tract, Little Mandeville Island (currently flooded), Mandeville Island and Mildred Island (currently flooded). Around Webb Tract are Bradford Island, Twitchell Island, Brannan/Andrus Island, Bouldin Island, Venice Tract, Mandeville Island, Franks Tracts (currently flooded), and Little Franks Tract (currently flooded).

Passing across Upper Jones Tract, Woodward Island and Orwood Tract is the Mokelumne Aqueduct, a critical structure. Flooding on any of the five neighboring islands (Lower Jones Tract, Upper Jones Tract, Woodward Island, Orwood Tract and Palm Tract) around the southern half of Bacon Island may increase the risk of service disruption for the aqueduct. The shortest distance between the levee on the southern half of Bacon Island and a neighboring island levee (centerline to centerline) is about 700 feet. A seepage monitoring well spacing of 1,500 to 2,000 feet on a neighbor island levee will provide essentially full coverage of a continuous aquifer at these distances. However, allowing for an importance or risk factor associated with the Mokelumne Aqueduct, DW will use minimum seepage monitoring well spacings of 500 to 1,000 feet for center-to-center levee distances of between 700 to 1,200 feet. For levees beyond a distance of 1,200 feet from a Bacon Island levee, seepage monitoring well spacing will be 1,500 to 2,000 feet. The approximate locations for seepage monitoring wells are shown on Figure C-3.

C. Other Water Level Monitoring

Reservoir stage recording stations will be established within Bacon Island and Webb Tract to document the water surface elevations in the reservoirs. A river stage recording station will be established on the outside perimeters of Bacon Island and Webb Tract to document the water surface elevations in the surrounding rivers and sloughs.

III. EVALUATION OF GROUNDWATER MONITORING WELL DATA

A. Collecting Data Prior to Filling Reservoir and Developing Reference Envelopes

Groundwater monitoring wells (both seepage and background monitoring wells) will be installed by DW at least one year prior to commencement of reservoir filling. Groundwater levels will be recorded using automatic data loggers, measuring and recording the groundwater elevation at least once each hour. The groundwater elevations recorded each day will be averaged to compute the mean groundwater elevation each day ("daily mean") at each groundwater monitoring well location (see Figure C-4). This "daily mean" value will be the primary data used by DW in assessing whether seepage impacts are occurring.

At least one year of groundwater elevation data will be collected from the groundwater monitoring wells prior to the filling of a DW reservoir island. These baseline data will be used as a measure of the initial conditions at these individual groundwater monitoring well locations.

Using the daily means as the data, the annual mean will be computed for each groundwater monitoring well (see Figure C-5). The daily means will be compared with the annual mean and the standard deviation of the difference between the daily means and the annual mean will be computed

for the baseline period. A reference envelope will be developed that is two standard deviations above and below the annual mean for each groundwater monitoring well.

B. Background Monitoring Wells

Data will be collected by DW from background monitoring wells over the same time period as data are collected for the seepage monitoring wells located directly across sloughs from the reservoirs. Daily means of the water level elevations will be calculated for each background monitoring well. Reference envelopes will be computed using at least one full year of pre-reservoir groundwater data to identify plus and minus two standard deviations relative to the annual mean.

After the two standard deviation reference envelopes are created for each background monitoring well for the baseline (pre-reservoir filling) period, subsequent daily mean data for each background monitoring well will be compared with its reference envelope, Figure C-6a. To normalize the data, the lower reference line value will be subtracted from the daily mean. The algebraic difference will then be divided by the height of the envelope (plus or minus two standard deviations). The daily mean for each background monitoring well will be reported as a percent of its envelope height, Figure C-6b. A normalized plot will be prepared comparing the current background groundwater data to the height of the plus or minus two standard deviation baseline envelope for the same well and presented as a percentage of its envelope, Figure C-6c.

The above computed normalized percentage results from each of the background monitoring wells will be combined with the results for all other background wells and averaged for each day. They will be plotted versus time, with the hydraulic head expressed as a percent of the background groundwater monitoring wells' reference envelopes, Figure C-6d. The intent of this last plot is to track general groundwater variations that may be occurring in the central portion of the Delta but that are unrelated to water stored by the Project.

DW anticipates that this plot will show increases in groundwater levels during sustained periods of locally heavy rainfall and low evapotranspiration and during higher water levels in the rivers and sloughs as a flood stage passes through. Many fields are flooded from mid-fall to winter for a variety of reasons. This shallow flooding will also be detected. Low background groundwater levels are expected during late spring through early autumn when evapotranspiration is high and rainfall negligible.

Individual seepage monitoring wells or groups of seepage monitoring wells showing similar responses to those indicated by the average background conditions will indicate that the individual seepage monitoring wells or groups of seepage monitoring wells are responding to the same regional conditions that are affecting the background monitoring wells.

C. Reservoir Stages

Reservoir stage will be measured by DW within the reservoir islands. The daily means of reservoir stage will be computed and recorded. The reservoir stage daily mean will be shown on a graph of pool elevation versus time, similar in format to the daily mean groundwater elevation plots for groundwater monitoring wells.

D. River and Slough Stages

River and slough stage will be measured by DW and daily means computed. The daily mean of slough and river stage will be shown on a graph of water surface elevation versus time, similar in format to the daily mean groundwater elevation plots for groundwater monitoring wells.

E. Limiting Conditions Using Groups of Groundwater Monitoring

1. General

If the groundwater in a group of three or more contiguous seepage monitoring wells located on neighboring islands surrounding a reservoir island rises more than 0.25 foot above their upper bound envelopes of baseline data and if the timing of the increase correlates with the filling of the reservoir or storage of water in the reservoir (adjusted for changes in the daily means for the background groundwater monitoring wells), the reservoir filling will be stopped. This limiting condition is referred to as the Diversion Suspension Limit. Reservoir filling will not resume until the increased hydrostatic head condition is corrected or otherwise satisfactorily remediated. The details of this evaluation are described below.

2. Correlation with Local Activities

If an individual background monitoring well exceeds its upper base data reference envelope, then the land use practices in the general vicinity of each groundwater monitoring well will be checked to see if the irrigation and/or drainage practices have recently changed. Some groundwater variations may result from changes in land management practices, including irrigation patterns, shallow flooding for leaching the soil and suspension of ditch maintenance for land in a set-aside program. Activities in the nearby river or slough will also be checked. Dredging of rivers or sloughs can have substantial impacts on groundwater levels. DW will contact and query reclamation districts on dredging activity or other substantial marine activity near their islands if a marked increase in groundwater levels is observed.

3. Regional Corrections

The background monitoring well data will track the regional variations occurring in the groundwater levels beyond the influence of the reservoir islands. This evaluation will be both qualitative and quantitative. There is considerable imprecision in attempting to correlate one or more seepage monitoring wells with another well, including the background monitoring wells. DW will use a quantitative correction to the extent that the average background condition is above 80% of the full height of the background reference envelope, shown in Figure C-7a. The additional percentage above the 80% level in the background monitoring wells will be multiplied by the plus or minus two standard deviation baseline envelope for each seepage monitoring well. The resulting product will be added to the upper envelope for each seepage monitoring well as shown in Figure C-7b.

4. Initial Evaluation

The daily mean will be computed by DW for each individual seepage monitoring well for the period of time under consideration (referred to as "current" data). The current data for each seepage monitoring well will be compared with the reference (baseline) envelope for the same groundwater monitoring well. (The reference envelope will have been prepared based on a pre-reservoir-filling period as described above in section III.A and adjusted for average changes in background groundwater levels described in the previous paragraph.)

For each seepage monitoring well in the group, the difference between the current groundwater level and the upper envelope will be computed (see Figure C-8). The differences will be averaged for three or more contiguous seepage monitoring wells. The Diversion Suspension Limit for a group of three or more wells will be defined as exceeding the average difference between the current data and upper reference envelopes by 0.25 feet or more, contingent on the conditions in the following sections.

5. Correlation with DW Activities

Finally, the variation over time for the average of the differences between the current data and the upper envelope for the group of wells under consideration will be compared by DW with the changes in reservoir stages (and interceptor pumping rates) over the same period. This comparison will be used to check whether there is a correlation between the reservoir pool elevation and the measured increased head at the groundwater monitoring wells. If the increased head in the groundwater monitoring well correlates with the fluctuations in reservoir pool elevation and the average increase is 0.25 feet above the envelope after adjustments, this will define the Diversion Suspension Limits. DW will be required to suspend diversions of water into the reservoir and to implement measures to lower the groundwater level at the neighboring island perimeters facing the reservoir island. DW will not be allowed to resume diversions until the indicated seepage is resolved.

F. Limiting Conditions Using Individual Groundwater Monitoring Wells

The following procedure will be used by DW to assess whether an individual groundwater monitoring well on a neighboring island is being impacted by water storage on a reservoir island.

1. The daily mean for an individual groundwater monitoring well will be plotted for a current year against time. The current data will be compared with the reference envelope for this groundwater monitoring well. (The reference envelope will have been prepared based on a pre-reservoir filling period as described in section III.A. and adjusted for average changes in background levels as described in section III.E.3.) If the current water level is less than or equal to one foot above the upper reference line, no action will be indicated based on the single groundwater monitoring well data. If the current groundwater level is greater than one foot above the upper reference line, a seepage impact may be indicated, and the evaluation will continue to the following steps.

2. The land use practices in the general vicinity of the individual groundwater monitoring well, including flooding fields and dredging in the river or slough, will be checked to see if practices have changed as discussed in the previous section.

3. The variation of the individual groundwater monitoring well's daily means will be compared with the changes in reservoir stages recorded over the same period of time and/or marked decreases in interceptor well pumping across from the groundwater monitoring well. If the increased head in the groundwater monitoring well correlates with the fluctuations in reservoir pool elevation (or with marked decreases in interceptor well pumping rates) and the head in the aquifer is more than one foot above the adjusted upper reference envelope, this will be a Diversion Suspension Limit, and DW will be required to suspend diversions of water into the reservoir island. DW will not be allowed to resume diversions into that reservoir island until the indicated seepage is resolved.

G. Future Modifications

The methods described herein are intended to provide a rational and responsive evaluation of changes in groundwater levels and seepage that may be attributed to water storage on Bacon Island and Webb Tract. These methods have been assessed using samples of data collected during the initial groundwater monitoring program previously conducted by DW. If, after implementation of this procedure deficiencies are discovered, EBMUD and/or DW will report such deficiencies to the Monitoring and Action Board for consideration as set forth in paragraph 7.c of Attachment B to the EBMUD and DW Protest Dismissal Agreement.

H. Data Availability

Delta Wetlands will make the following groundwater data publicly available on the internet or similarly accessible means as soon as readily available:

- Daily mean of groundwater level in each seepage and background monitoring well, reference envelope, and any Project adjustments based on background monitoring wells.
- Average normalized groundwater level for all background monitoring wells, presented as a percentage of their reference envelopes.
- Daily mean of pool elevations for both reservoirs.
- Daily mean of water level in slough/river.

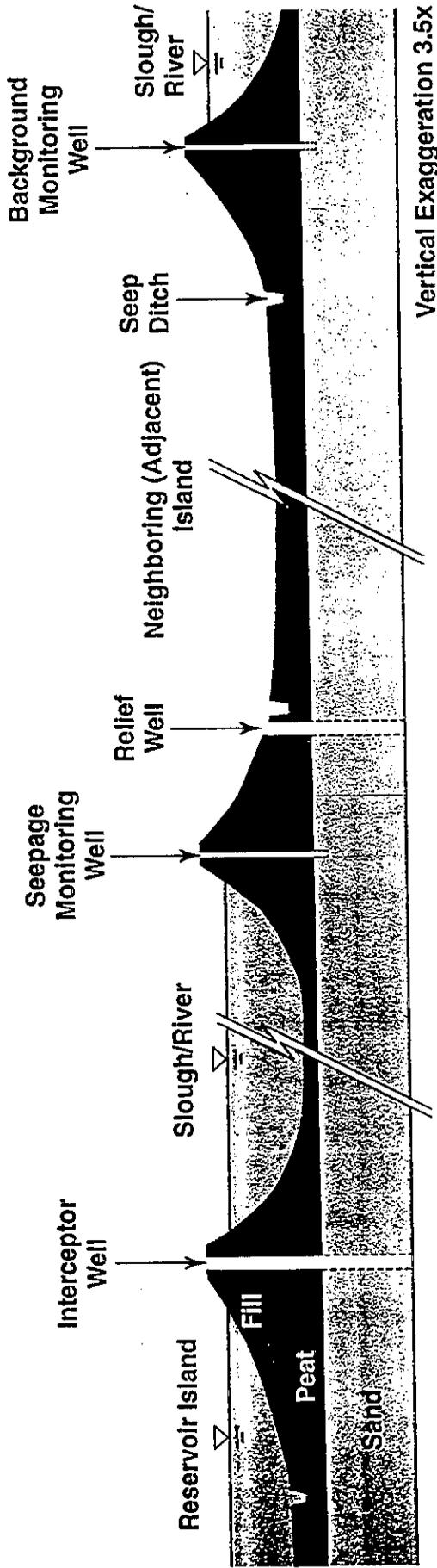
Delta Wetlands will also maintain a historical database of the above information.

IV. ACTIONS BY DELTA WETLANDS

Delta Wetlands shall take actions to control seepage. These actions may include the following, and are intended to be taken before seepage reaches the Diversion Suspension Limits.

1. Increase pumping rates in interceptor wells.
2. Lower outfall head at relief wells.
3. Redevelop interceptor wells to improve specific capacity of the wells.
4. Redevelop relief wells to improve specific capacity.
5. Install additional interceptor wells.
6. Install additional relief wells.
7. Implement other mitigation that may be mutually agreeable between Delta Wetlands, the affected adjacent landowners and the neighboring island reclamation district.
8. Stop diversion.

If the Diversion Suspension Limits are reached, DW shall immediately suspend additional water diversion into the reservoir island. Diversions may not renew until groundwater levels are brought below the Diversion Suspension Limits. If DW cannot lower the groundwater to below Diversion Suspension Limits within one week, the reservoir pool elevation shall be lowered at a rate of at least 0.5 feet per day until groundwater levels fall below Diversion Suspension Limits.



Groundwater Extraction Wells Note: All extraction wells, whether interceptor wells or relief wells, will have slotted screens extending through the full depth of the underlying aquifer.

Interceptor Wells - Pumped wells placed on the perimeter of a reservoir island. The pumping rate will be controlled to essentially capture all water tending to seep from beneath the reservoir perimeter. ⁱⁱ

Relief Wells - Placed at toe of adjacent island levee. Elevations of the tops of wells will be set such that the wells flow as artesian wells as groundwater surface rises. Where groundwater is not artesian, low head pumps may be used.

Groundwater Monitoring Wells

Seepage Monitoring Wells - Placed at the perimeter of an adjacent island, seepage monitoring wells will detect increased groundwater elevation if increased seepage occurs from slough or reservoir island.

Background Monitoring Wells - Placed far from reservoir islands, often on the far opposite perimeter of an adjacent island. Background monitoring wells will be used as a group to record Delta-wide variations in groundwater levels.

Figure C-1
Idealized Cross Section of Well Locations

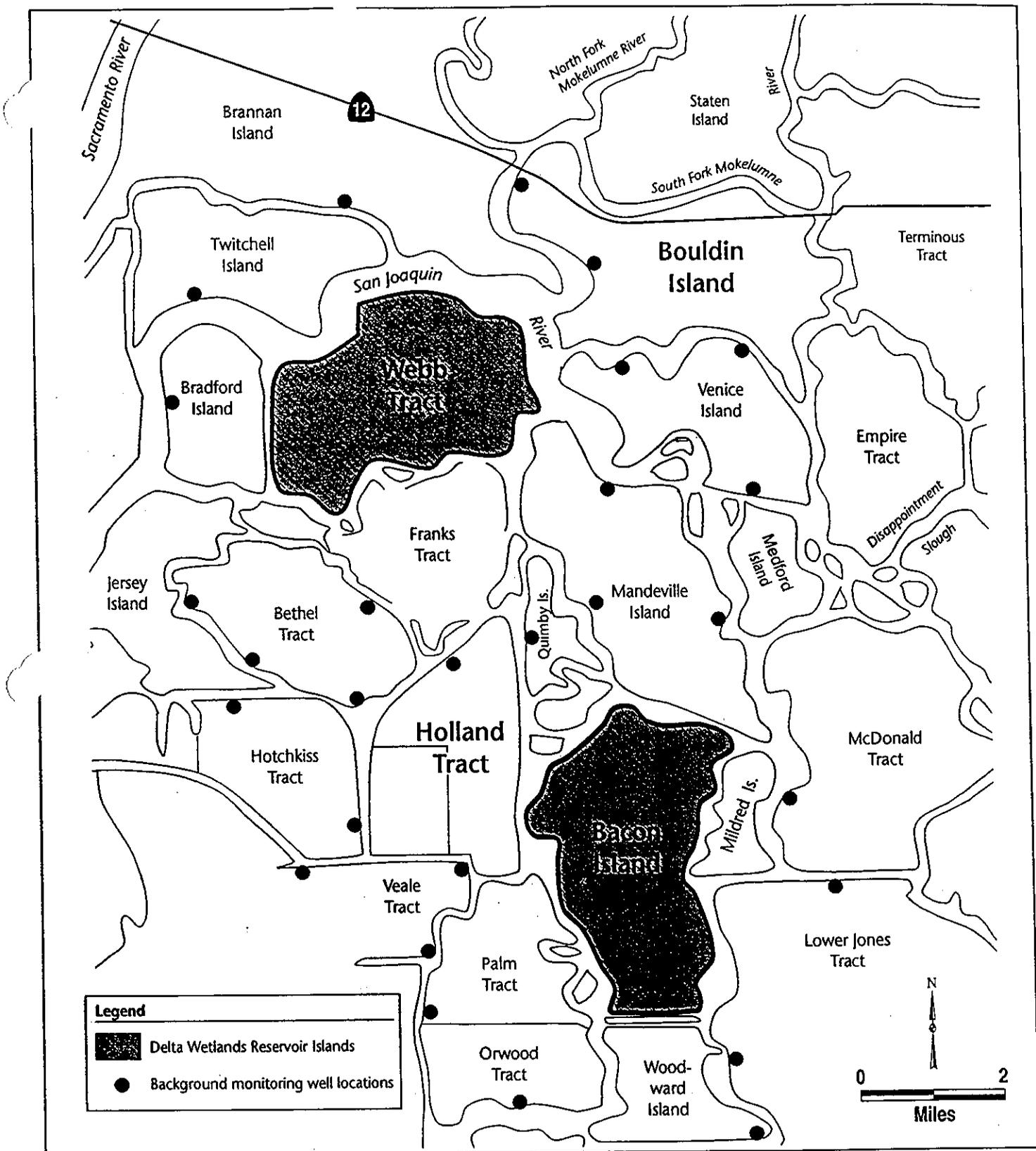


Figure C-2
Approximate Locations of Background Monitoring Wells

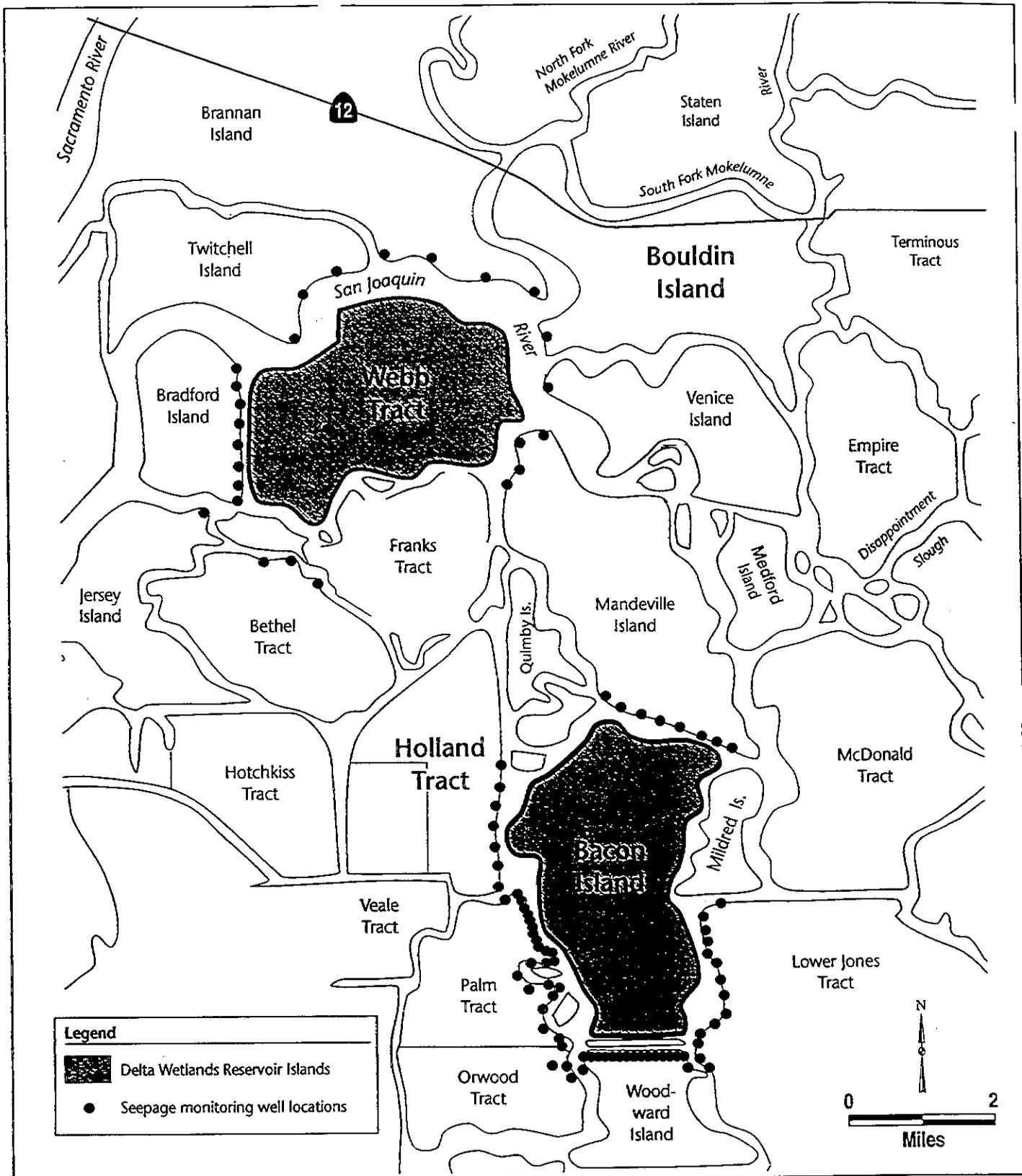


Figure C-3
Seepage Monitoring Well Locations

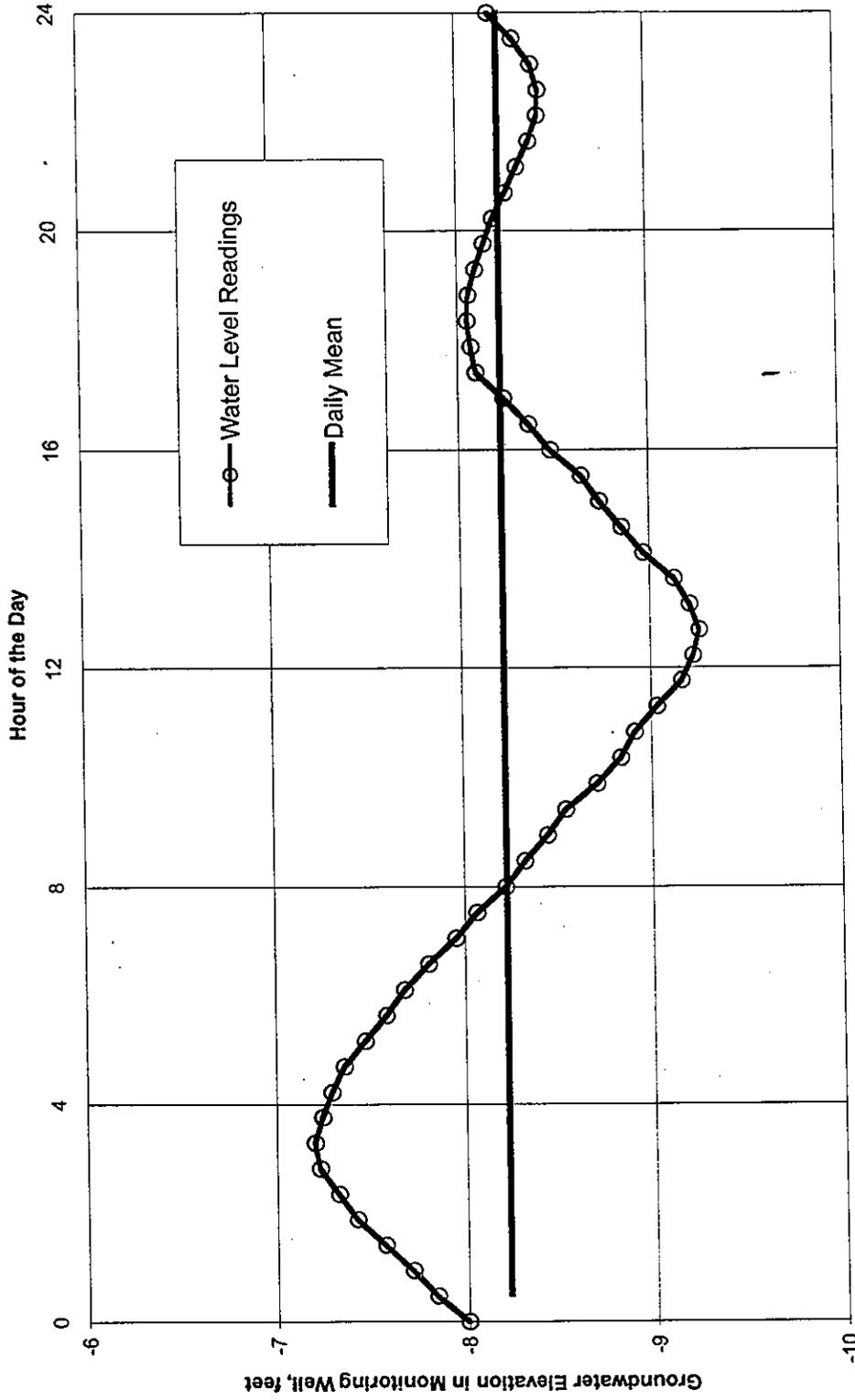
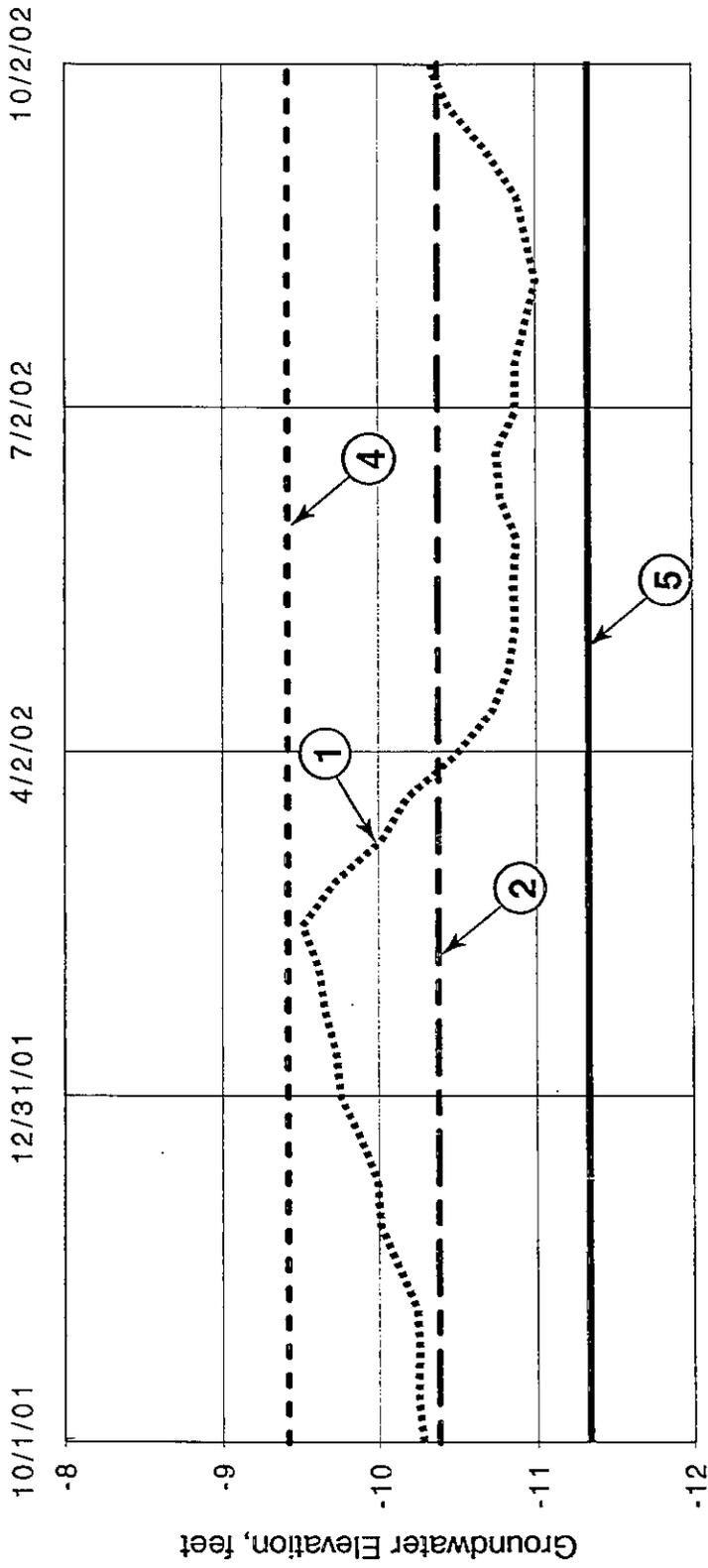


Figure C-4
Daily Mean



Developing Envelopes for Baseline Year

1. Plot daily means for the baseline year.
2. Compute average of daily means and plot as the annual mean.
3. Compute standard deviations of daily means around annual mean.
4. Compute and plot upper envelope as annual mean plus two standard deviations.
5. Compute and plot lower envelope as annual mean minus two standard deviations.

Figure C-5
Reference Envelope for Baseline Year

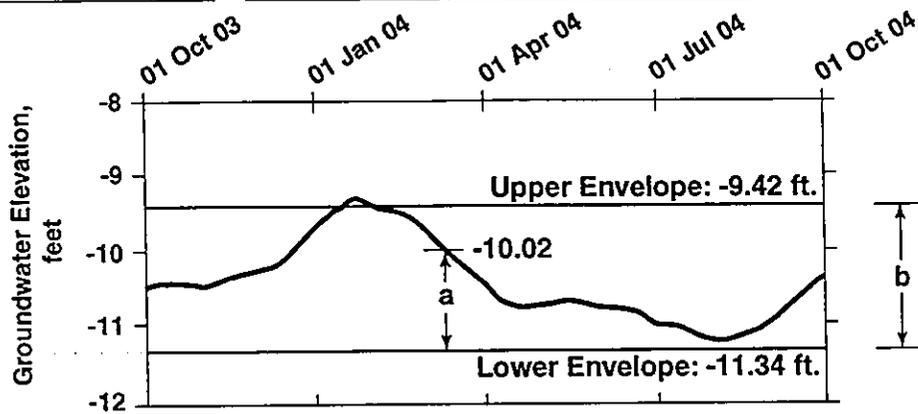


Figure C-6a. Background Monitoring Well Data for a Single Well

To normalize background monitoring well data to its unique envelope, subtract the lower envelope elevation from the daily mean and divide the remainder by the height of the envelope:

$$a/b = [(-10.02) - (-11.34)] / [(-9.42) - (-11.34)] = 65\%$$

Figure C-6b. Computation for Normalizing Background Monitoring Well Data

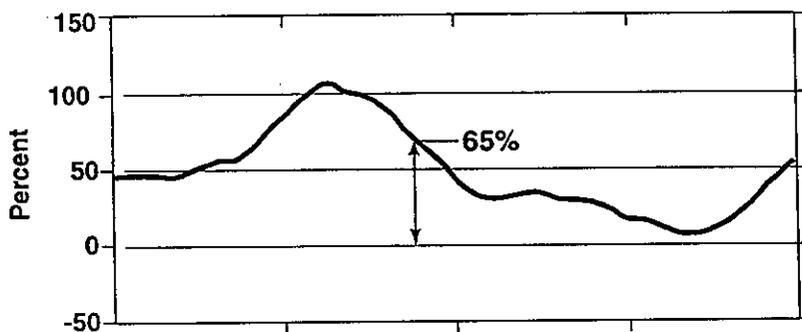


Figure C-6c. Plot of Normalized Background Monitoring Well Data for a Single Well

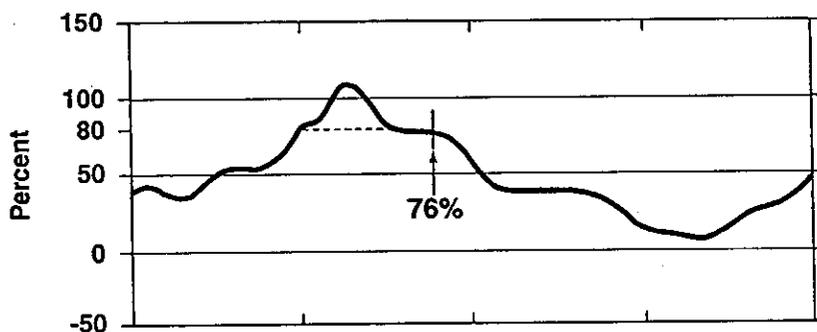


Figure C-6d. Average of Normalized Data for All Background Monitoring Wells

Figure C-6 Normalizing and Averaging Background Well Data

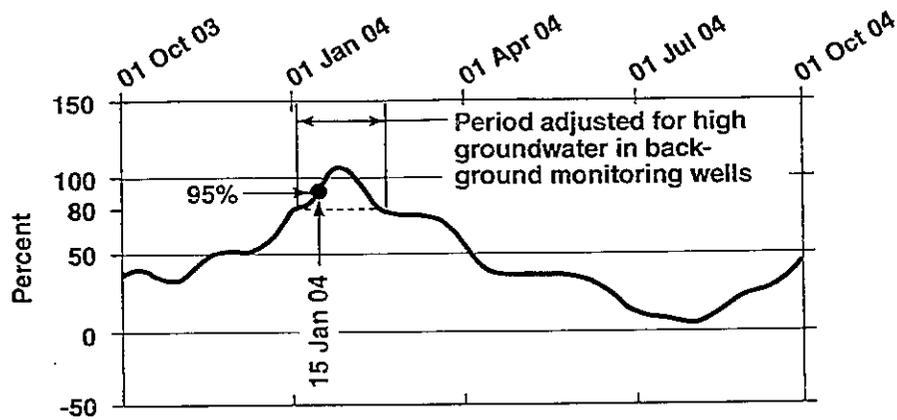


Figure C-7a. Average Normalized Data for All Background Monitoring Wells

On January 15, 2004, the average normalized data from the background monitoring well is 95%. At Seepage Monitoring Well A, the groundwater is at elevation -13.59 feet. To adjust Seepage Monitoring Well A's upper envelope for high groundwater conditions in the background monitoring wells:

- 1) Subtract 80% from the average for the background conditions:
 $95\% - 80\% = 15\%$
- 2) Multiply the height of Seepage Monitoring Well A's envelope by the above percentage remainder:
 $[(-13.84) - (-14.96)] \times 15\% = 0.17 \text{ ft.}$
- 3) Add the above product to the upper envelope:
 $-13.84 + 0.17 = 13.67 \text{ ft.}$
- 4) The above value is the adjusted upperbound envelope for this particular well on the particular day.

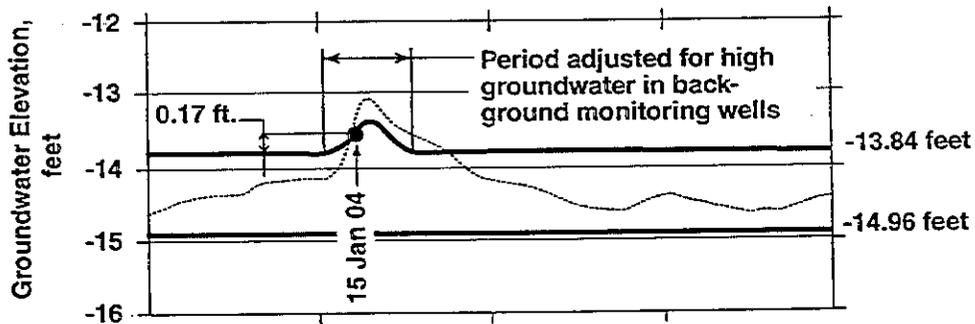
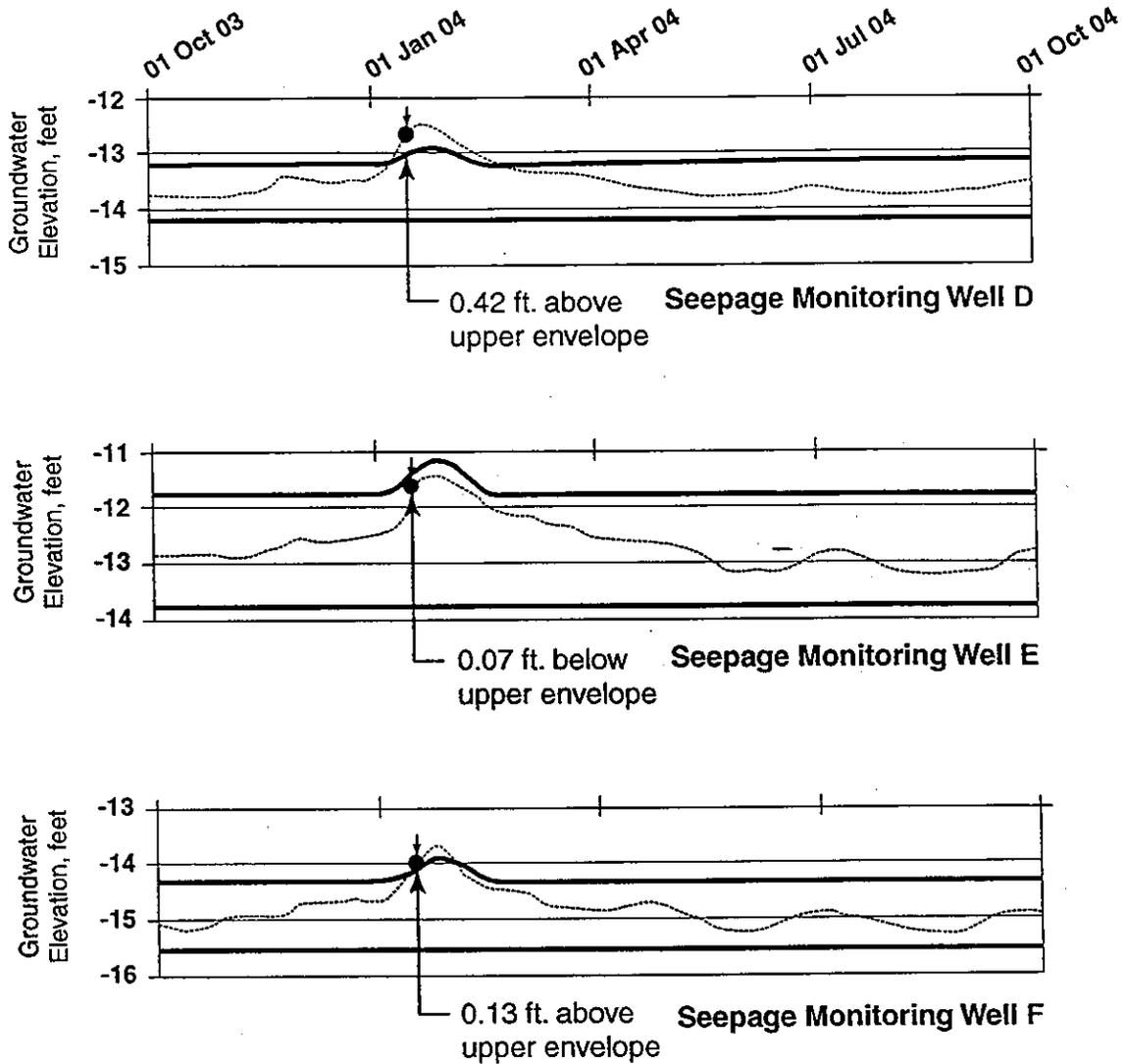


Figure C-7b. Upper Envelope of Seepage Monitoring Well A Corrected for High Groundwater in Background Monitoring Wells

Figure C-7 Correcting Upper Envelope for High Groundwater



<u>Well No.</u>	<u>Groundwater Height Above Upper Envelope</u>
-----------------	--

D	0.42
---	------

E	-0.07
---	-------

F	<u>0.13</u>
---	-------------

0.48 ft + 3 wells = 0.16 ft.

On January 15, 2004, the average groundwater height above upper envelopes for 3 wells is 0.16 ft. If the average is less than 0.25 feet above the upper envelope, the average groundwater level for these three wells is below the diversion suspension limit.

Figure C-8
Groundwater Evaluation Using Three Seepage Monitoring Wells



March 30, 2004

Mr. Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P. O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Arrich:

Re: Comments on Draft In-Delta Storage Program State Feasibility Study

We have reviewed the draft ISI feasibility report for the In-Delta Storage Program. You have asked that stakeholders submit their views with regard to going forward with this program. We have been supportive of the Delta Wetlands Project and continue to support this project because it appears to be an environmentally friendly way of developing a new source of water for California.

The report acknowledges an incomplete economic analysis. In our view it is very important that the economics of this project, other surface water storage projects and, for that matter, all projects within the CALFED program be analyzed in a manner that is as consistent as possible.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory A. Thomas".

Gregory A. Thomas, President
Natural Heritage Institute

cc: Mr. Patrick Wright, California Bay-Delta Authority
Bay-Delta Public Advisory Committee
Mr. Don Skopec, Office of the Governor
Mr. Dennis Albiani, Office of the Governor
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
The Honorable Barbara Boxer, United States Senate
The Honorable Dianne Feinstein, United States Senate
The Honorable Richard Pombo, U.S. House of Representatives



To promote the economic, social and environmental viability of Northern California by enhancing and preserving the water rights, supplies and water quality of our members.

March 22, 2004

Mr. Jeremy Arrich
Department of Water Resources, DPLA
PO Box 942836
Sacramento, CA 94236-0001

Sent Via Email

RE: In-Delta Storage Program State Feasibility Study Comments

Dear Mr. Arrich:

The Northern California Water Association (NCWA) has concerns with the level of detail and methodology used for the economic benefit and cost analysis for the Draft In-Delta Storage Program State Feasibility Study, and the broader implications it could have on other Integrated Storage Investigation (ISI) project studies.

NCWA represents 70 agricultural water districts and agencies, private water companies, and individual water rights holders with senior rights and entitlements to the surface waters of the Sacramento Valley. NCWA's members also have overlying and appropriative water rights to groundwater resources in Northern California, from the Northern reaches of Shasta County to Sacramento County, from the edge of the Sierra Nevada Mountains in El Dorado County to Glenn County which extends to the Coast range.

As you know, NCWA and its members throughout Northern California have offered a local framework to help advance the North of Delta Off-Stream Storage (Sites Reservoir) program and an enlarged Lake Shasta. We believe that an appropriately structured partnership, including various entities throughout the state, could design and operate these projects to meet the various objectives in the CALFED program. This strategic partnership, however, will only emerge if we look at these projects differently than past projects, and instead focus on the important values that these projects may offer – meeting multiple needs and providing flexibility in the Bay-Delta system for the benefit of various water demands.

More specifically, some effort has to be made to quantify the benefits storage provides towards the CALFED objectives. It will be difficult to justify the development of any storage project through the use of a benefit/cost analysis, if the project's contribution to CALFED objectives is not quantified. Importantly, this would be the case for any CALFED activity and is

not just limited to the ISI. Increased storage capacity, in Northern California for example, will provide considerable and measurable benefits to water quality, both aquatic and terrestrial ecosystem quality, and water supply reliability. If CALFED expects projects to provide these benefits, they must be quantified. Most importantly, the value of operational flexibility for all of the various needs will be significant, particularly during prolonged dry years. Value must be assigned to these benefits if a true assessment of the projects is to occur.

Not quantifying all of the project benefits leads to the confusing benefit/cost summary provided in the Conclusions section of the draft Executive Summary for the project study, where the reader gets the impression that the benefits associated with the project totaled approximately a third of the projects annual cost. All of the project benefits need to be quantified, a more accurate range of total potential benefits should be used, or a better and more thorough explanation of the potential benefits that have not been quantified needs to be presented prior to the listing of the quantified benefits and costs.

The methodology and analysis used in the Feasibility Study for the In-Delta Storage Program is critical not only to the project being studied, but also has implications on other ISI Projects. It is critical that CALFED use accurate and defensible criteria for determining the benefits and costs associated with these projects.

Sincerely,

A handwritten signature in black ink that reads "Todd N. Manley". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Todd N. Manley
Director of Government Relations

March 19, 2004

VIA E-MAIL AND U.S. MAIL

Mr. Jeremy Arrich
DWR, DPLA
P. O. Box 942836
Sacramento, CA 94236-0001

Re: Comments of Pacific Gas and Electric Company on the In-Delta Storage
Reports – State Feasibility Study

Dear Mr. Arrich:

Pacific Gas and Electric Company (PG&E) submits the following comments on the In-Delta State Feasibility Study Reports as they pertain to the proposal to convert Bacon Island from its present agricultural use, to a water storage reservoir. PG&E has been an active participant in the state study and in the earlier review of the Delta Wetlands' water right applications before the State Water Resources Control Board.

PG&E's interest in these proceedings has been to disengage its important natural gas transmission lines that cross Bacon Island from what we believe would be unacceptable operational risks of having them submerged under a major water storage reservoir. PG&E is not opposed to the concept of building a substantial water storage reservoir on the site of Bacon Island, but believes that it is in the best interests of both the operation of the storage reservoir and the security and maintenance of the gas pipelines that they be relocated from Bacon Island by the storage project to an alternate right of way.

As you are aware, the State Water Resources Control Board decision (D-1643) on the Delta Wetlands water rights applications contains several requirements related to PG&E's gas transmission lines on Bacon Island that must be satisfied prior to either the construction or operation of their proposed water storage project. These issues are acknowledged in Section 8.4.3, on page 128 of the Draft Summary Report (Jan. 2004). In the intervening years, PG&E and Delta Wetlands have engaged in an ongoing settlement discussion on these issues.

One aspect of these discussions has been our position that any agreement would apply only to the construction and operation of the storage project as described by Delta Wetlands in their water right applications and environmental documents. For example, Delta Wetlands proposed operational schedule would have a yearly dry season, when we could access the pipelines for repairs. Delta Wetlands proposed building a road parallel to the pipeline right of way to facilitate these activities.

Mr. Jeremy Arrich
March 19, 2004
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It is apparent from our review of the current proposed water storage project described in the Feasibility Study, that there would be many significant changes in both the construction and operation of the water storage project. These would include substantial redesign and enlargement of the parameter containment structure and an operating plan that may not have any yearly dry period. On page 18 of the Information Package of the CalFed Science Public Workshop, it is stated that in evaluating the environmental consequences of the storage project there was no simulation of a drying of the reservoir beds. Moreover, the operating scheme would likely include the direction that, "With management of diversion and release operation, reservoirs would not reach extreme low or dry bed stage." Additionally, the benefit of carry over storage is discussed in section 5.3.3 of the Draft Report on Operations (Dec. 2003).

As you may be aware from the record of the Delta Wetlands Water Board proceeding, the gas lines on Bacon Island are the only interconnection between the McDonald Island Gas Storage Facility and the backbone of the gas transmission system that serves PG&E's core and non-core customers. We have the capability to withdraw from storage on McDonald Island a third of the gas needed by our customers on a cold winter day. Any compromise of the interconnection could have extremely serious consequences for extended disruption of service to a large customer base, including curtailing gas-fired electric generation and gas price spikes in the available spot market.

All this leads us to the undisputable conclusion that both PG&E and the State Water Project, or other operator of a water storage reservoir on Bacon Island would be better off if the project includes the relocation of Line 57 B off of Bacon Island. While high-pressure natural gas transmission lines routinely cross small waterways we are not aware of any that are permanently located beneath a major reservoir. When a new reservoir is proposed, gas transmission lines are routinely relocated out of harm's way. Apart from PG&E's added cost and delay in repairing the pipeline, a significant reason for the reservoir operator is the elimination of unnecessary burden of having to release stored water at an inopportune time, so as to facilitate access to the pipeline. An example of this separation occurred not far from the Delta with the relocation by the project proponent of two PG&E gas transmission lines that would have been inundated under part of the Los Vaqueros Reservoir.

Additionally, from a planning standpoint, if you assumed that the gas pipelines would not be relocated, then the impact of making unplanned water releases to accommodate work on the gas transmission lines should be included in the CALSIM model runs and added to the impute to the economic models listed in section 3.6 (including revisions to the list) on page 16 of the Draft Report on Operations (Dec. 2003).

Mr. Jeremy Arrich
March 19, 2004
Page 3

Lastly we do not believe that the cost of relocating gas transmission from Bacon Island will be a significant addition to the overall long-term cost of the In-Delta storage program. We note that the draft reports prepared for the Feasibility Study apparently assume costs for the relocation of PG&E's gas pipelines on Bacon Island. For example, on Table 5.4 (Summary of In-Delta Storage Project Costs) on page 92 of the latest Draft Summary Report, an entry of \$15 million is show as the cost of "PG&E Pipeline & Electrical Relocation." If additional funds already included in the total project cost and designated for contingency and engineering design, construction management and legal are proportionally added, it is likely that this estimate it is within an order of magnitude of the likely actual cost of the gas pipeline relocation (\$40 million est.). These costs will probably may well be less then many of the stated engineering cost contingencies.

Agreement to relocate Line 57B will satisfy all of the PG&E pipeline contingencies that are included in D-1643. This will remove a major existing impediment to any plan to construct a water storage reservoir on Bacon Island in the Delta.

We are available to discuss these matters with the study team.

Sincerely,

/s/ Richard H. Moss

Richard H. Moss

RHM:vm

cc: Garry Grelli
Todd Hogenson

Mr. Jeremy Arrich
March 19, 2004
Page 4

bcc: Eric Kirkpatrick
Kwanyu Yu

Peter Margiotta

122 Castle Crest Road
Alamo, CA 94507

March 2, 2004

Mr. Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P. O. Box 942836
Sacramento, CA 94236-0001

Dear Mr. Arrich:

Re: Comments on Draft In-Delta Storage Program State Feasibility Study

I have been monitoring the progress of the Delta Wetlands Project since 1987. When I first became aware of the project, I was a member of the Contra Costa County Fish and Wildlife Advisory Committee and was initially opposed to the project. I did not support the project because I felt it did not adequately deal with the needs of wetland habitat dependent wildlife. At that time I also had concerns that there may not be a significant need for new surface water storage.

In the more than seventeen years that I have been interested in this project, two major considerations have caused me to change my thinking. The first change was that the project sponsors switched from a four-island reservoir project to a project that includes 9,000 acres of high quality habitat. I could see clearly that this was going to be a fish and wildlife benefit which is an unusual feature for a project that can add to our state's water supply.

The second consideration is that during the development of this project very little has been done to increase water supplies in California. I am more interested in the ecosystem restoration aspects of the CALFED program, but I am afraid that if CALFED fails to recognize the need for additional surface water storage that the whole program could fail.

Although this project does not produce water that will be directly used by those of us living in Contra Costa County, it will substantially strengthen the levees on four Delta islands. Stronger levees lessen the chance of failure and, therefore, reduce the risk of the adverse water quality impacts associated with levee failure. Additionally, the project's environmental enhancements will be a benefit to all Californians, especially those of us who live near or spend time in the Delta.

Also, it should be noted that the project will add jobs and sales tax revenue in Contra Costa County.

Mr. Jeremy Arrich
March 2, 2004
Page 2

In my view the Delta Wetlands project has been stalled far too long and it is appropriate to move forward with in-Delta storage at the earliest possible date. Out of necessity, this may involve the need to accelerate at least the initial evaluation of alternative water projects. Those evaluations should be done in such a manner that project costs and benefits are measured as uniformly as possible in order to avoid distortions.

I appreciate your consideration of these comments.

Sincerely,



Peter Margiotta

cc: Mr. Patrick Wright, California Bay-Delta Authority
Mr. Don Skopec, Office of the Governor
Mr. Dennis Albiani, Office of the Governor
Bay-Delta Public Advisory Committee
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
The Honorable Dianne Feinstein, United States Senate
The Honorable Richard Pombo, U.S. House of Representatives
The Honorable Ellen O. Tauscher, U.S. House of Representatives
The Honorable Tom Torlakson, CA State Senate
The Honorable Guy Houston, CA State Assembly

March 18, 2004

TO: Jeremy Arrich, Senior Engineer, In-Delta Storage Project

FROM: David Breninger, General Manager, Placer County Water Agency (PCWA) & Director,
Recreational Boaters of California (RBOC)

RE: In-Delta Storage Program/Project: Comments

I appreciate the briefing provided by state officials at the February 25, 2004, In-Delta Storage Program/Project Feasibility Study public briefing. As you mentioned to me after the meeting that I offer you comments from the perspective of a water manager and as a recreational boater "in" the Delta, I have done so as you'll find below. There are a number of colleagues and associates with whom I have talked to about this Project - from time to time over the years - and so I have included them as "cc's" to this email. You may receive some follow up comments from one or more of them.

General Observation on "Project" title:

Over the years, as I have attended meetings on this proposed Project, I've been struck by the fact that there are at least two different titles and/or names used to identify this endeavor with resultant differing information circulated or available to the public. One title used is In-Delta Storage Program or Project while the other is The Delta Wetlands Project. I've come to learn that the "Storage Project" is the title preferred by CALFED (Federal & State) government officials while the "Wetlands Project" is the titled preferred by a private firm located in Lafayette, California. As I talk with colleagues, they too notice this oddity about this particular Project.

Accordingly, to help assure clarity, staff might want to make sure that at public meetings in the future the CALFED materials ("hand outs") are the ones which are discussed and referenced and if "other" materials or maps are circulated that they are clearly identified from who they originate.

With this in mind, my comments below are related to the CALFED "In-Delta Storage Program Feasibility Study (Program)" documents received at the February 25, 2004 public briefing.

1) Water Transfers: EWA:

On page 3 of the Draft Executive Summary there is a sentence that reads:

"Environmental Water Account (EWA) – In-Delta Storage Project could provide water needed to support the EWA program, enhancing the EWA agencies ability to respond to real-time fisheries needs and would eliminate the need to purchase a substantial portion of water needed by EWA each year."

Frankly, I can not find the facts to support a phrase that this Project will truly and for all times "...eliminate the need to purchase a substantial portion of water needed by EWA each year". The use of such a phrase for this Project relevant to the EWA and water transfers with out strong supporting facts is of concern.

I recommend that in this document and all others related to this Project be reviewed and changed by staff so that this Project does not in any manner over-state that with which it can assuredly deliver in the form of real, "wet" water yield on an annual basis from the actual operations of the Project.

I recommend that this and any other references in any other Project documents be changed accordingly. An example of such a correction - such as to the above referenced sentence - could be shorten it to read: "Environmental Water Account (EWA) – In-Delta Storage Project could provide water needed to support the EWA program, enhancing the EWA agencies ability to respond to real-time fisheries needs."

2) Fish Screens:

I appreciate that at the briefing staff mentioned that it will be a challenge to develop appropriately designed and operational fish screens for this Project (relevant to the in-flow and out-flow of water within the Webb Tract and Bacon Island storage reservoirs). An opportunity

available to this Project, as it moves forward, is that it can help lead or even facilitate discussions on what is the latest “state-of-the-art” fish screen.

I recommend that consideration be given in the next or pre-design stage for the Project’s fish screens that staff host a meeting(s) that includes colleagues from local water agencies and the agricultural community so that all can mutually learn and share information on this important matter.

3) Invasive & Non-Native Aquatic Weeds:

In as much as the In-Delta Storage Project’s proposed storage of water within Webb Tract and Bacon Island will each be very shallow reservoirs, it should be anticipated that there will be a great accumulation of and serious problem in controlling the growth of invasive & non-native aquatic plants or weeds. Such plants are a very serious problem in the Delta water ways now. (Such plants are also a serious problem in irrigation canals and tributaries within and up-stream to the Delta system.) The briefing didn’t provide any information on how this serious operational problem will be addressed.

Accordingly, I recommend that this matter be more fully identified with suggested resolutions set forth during the next stage of this Project with appropriate studies reported upon at subsequent meetings as well.

I also recommend that staff consult with the staff of Department of Boating and Waterways - Ray Tsuneyoshi, Director - to learn more about that which DBW is confronted with “in” the 1,000 miles of Delta waterways on this matter. Likely wise, there are members within the Association of California Water Agencies - Steve Hall, Executive Director - who could also be consulted on the matter of canal and ditch system problems with aquatic plants.

The seriousness of addressing and resolving invasive & non-native aquatic weeds has reached a very critical level in the Delta. My observations both as a water manager and while boating in the Delta is that the Webb and Bacon reservoirs – because of their resultant shallowness and warm waters that will held within each – will likely be “plagued” by such species unless a very carefully identified and aggressively implemented eradication program is carried out at such time as the Webb and Bacon reservoirs become operational.

4) Reservoir Embankment Design: “Bench” Option:

The briefing and documents provided at the briefing identify two options to be utilized to enhance certain levee embankments. One is called the “Rock Berm Option” and the other the “Bench Option”.

The “Bench Option” needs further consideration to address, for example, how to help boats avoid going “aground” upon the “bench” on the slough side of the levees where ever this option is constructed for this Project.

I recommend staff coordinate on this matter with the Department of Boating and Waterways and the US Corps of Engineers (who have considerable experience along the Sacramento River with levee construction). Members within the organization Recreational Boaters of California (RBOC) can also assist on this matter from the perspective of the recreational boater.

5) Recreation:

I am familiar with the fact that most public water resource projects and reservoirs impounding the “waters of the state” must also provide recreational opportunities for the public as part of a water storage project.

Neither the briefing nor the Draft Feasibility Study provides sufficient information as to what the intentions of the In-Delta Storage Project will be or will provide or will finance for recreation at Bouldin Island, Webb Tract, Holland Tract and Bacon Island or the Project as a whole.

Page 4 of the Draft Feasibility Study does not clearly nor fully address this matter. Based upon what I read in the Study it seems that the matter of recreational benefits appears limited to the Bouldin Island and Holland Island component of the Project. The Webb Tract and Bacon Island components of the Project seem to be entirely omitted on this matter all together.

Although the Delta is the definitive waterway in central California, I find nothing noted any where in the Study (not even on page 4 under “Recreational Benefits”) nor was it mentioned by staff at the briefing about recreational boating or – and more importantly - how this Project will

contribute toward it. Recreational boating needs to be identified and considered as an important component in all aspects of this Project.

Illustration: Boat ramps and accessibility with near by sanitation facilities is required at other reservoirs (example: PCWA's French Meadows Reservoir and Hell Hole Reservoirs) as well as State reservoirs (example: Oroville Reservoir) and Federal reservoirs (example: Folsom Reservoir).

One example for this Project: State highway 12 traverses Bouldin Island and accordingly public access to this location of the Project currently exists. Bouldin Island can easily accommodate public accesses to the adjacent waterways, boat ramps, docks, parking lots for both boat trailers and vehicles, sanitation facilities and day and overnight use areas at various locations on Bouldin Island.

Another example: Between the north-side of Bacon Island and the south-side of Mandeville Island is Connection Slough. There is a connecting bridge (known as Connection Slough Bridge) with one abutment affixed to Bacon Island and the other to Mandeville Island. The bridge is very low across the Slough presenting a problem for boats to travel beneath it and the hours of operation for this bridge to "open" for recreational boating purposes is limited. This Project includes the bridge (and the only vehicle access to Mandeville Island other than by ferry boat) and at this location the Project can help mitigate a recreational boating need by assisting in underwriting the cost for the bridge operator to tend the bridge on a schedule that better meets the needs of boaters.

I recommend that the entire matter of recreation at each of the individual four islands/tracts as well as for the over all Project be far more fully explored, identified and mitigated for "Recreational Benefits" and recreational boating in particular be accommodated before the Project advances any further.

I further recommend that staff include the Delta Protection Commission (DPC) and its Recreation Advisory Committee as well as representatives of the Recreational Boaters of California (RBOC) plus the California Delta Chamber of Commerce in all further discussions and meetings on any aspect of the recreational and boating component benefits for this Project.

Thank you for the opportunity to offer comments to you on this Project.

David Breninger

PORT OF STOCKTON

Phone: (209) 946-0246



Fax: (209) 465-7244

February 23, 2004

Mr. Jeremy Arrich
DWR, DPLA
P.O. Box 942836
Sacramento, CA 94236-001
Email: arrich@water.ca.gov

Dear Mr. Arrich:

We are forwarding initial comments on the Draft In-Delta Storage Program State Feasibility Study, which proposes a \$774 million in capital cost projects for Webb Tract and Bacon Island as water storage islands, and Holland Tract and Bouldin Island as habitat islands. We have had only 3 weeks to review the multiple volumes of reports and really need more time to review all the documents adequately. We request an additional 60 days to review the documents, which are new to us.

We note there has been a substantial public outreach process described in the draft Summary Report. The Port of Stockton, a state chartered agency, has not been invited to or made aware of the public outreach process or stakeholders committee meetings to date.

Our Federally authorized John F. Baldwin to Stockton Ship Channel traverses the waterway around Webb Tract. We believe your project may have impacts to our federally authorized shipping lanes. We need to know what those potential impacts are with the appropriate mitigations.

The Port of Stockton also owns property on Bradford Island, west of Webb Tract and believes from past history that the flooding of Webb Tract creates seepage into Bradford Island. The Port also needs to know what the potential impacts are with appropriate mitigations because if seepage caused a levee failure to Bradford's levees it could also affect the Stockton Ship Channel, which traverses around Bradford Island.

We have scanned the volumes of reports and can find only two references to navigation. The draft Summary Report on Table 8.1, page 130 mentions Section 10 of the Rivers and Harbors Act of 1899 and Appendix B of the draft Report on Operations, page 67 mentions navigable waters for the American River. We cannot

find any discussion or mention of the Port of Stockton and the ship channel, which extends from the Golden Gate to the City of Stockton in any of your reports. It is clear to us those possible impacts to commerce navigation or the ship channel was not a consideration in your study.

Please feel free to contact us regarding our concerns about your proposed projects.

Sincerely,



Richard Aschieris

Port Director

Port of Stockton

Cc: Walter Yep
Gordon Palmer
Gary Gentry
Jeff Kaspar
Lee Hieber

PORT OF STOCKTON

Phone: (209) 946-0246



Fax: (209) 465-7244

March 19, 2004

**Mr. Jeremy Arrich
DWR, DPLA
P.O. Box 942836
Sacramento, CA 94236-001
Email: arrich@water.ca.gov**

Dear Mr. Arrich:

We are electronically mailing this letter and the attached Port of Stockton Comments on the Draft In-Delta Storage Program State Feasibility Study in order to meet your deadline of March 20, 2004 for comments. A hard copy of this letter and the attached Port of Stockton Comments will be sent to you as well.

As stated in our comments, we do not oppose the Draft In-Delta Storage Program State Feasibility Study and other CALFED activities in our area. We are concerned about the absence of communications between the Port and CALFED activities.

Please feel free to contact us regarding our concerns about your proposed projects.

Sincerely,

**Richard Aschieris
Port Director
Port of Stockton**

PORT OF STOCKTON

Phone: (209) 946-0246



Fax: (209) 465-7244

Port of Stockton Comments Draft In-Delta Storage Program State Feasibility Study March 19, 2004

1. These comments supplement our letter of February 23, 2004 sent to Mr. Jeremy Arrich, DWR, DPLA, P.O. Box 942836, Sacramento, CA 94236-001, which note the substantial public outreach process described in the draft Summary Report. However, the Port of Stockton, a state chartered agency, has not been invited to participate in the public outreach process or stakeholders committee meetings to date.
2. There appears to be other CALFED funded or supported activities in our region in addition to the Draft In-Delta Storage Program State Feasibility Study. These activities include the Vernalis Adaptive Management Plan (VAMP) and the recent California Bay Delta Authority approved grant to study water quality in the Lower San Joaquin River and the Stockton Ship Channel. The Port does not know the full extent of the CALFED activities, which may have an impact on the present and future operation of our commercial navigation program.
3. The Port of Stockton is the second busiest inland port on the West Coast – handling more than 7 million tons of cargo with trade relationships with more than 55 countries. The Port is also the third largest landholder port on the West Coast. Our Federally authorized ship channel, from the westerly boundary of Suisun Bay to Stockton, has a project depth of 35 feet below lower low water and from Suisun Bay to San Francisco Bay at a depth of 36 feet. The waterway has no width restrictions for ships. The other commercial navigation activities in the CALFED area of activities are the Ports of Sacramento, Benicia, Pittsburg, and Contra Costa County and the Concord Naval Weapons Station. It is not known whether these other navigation interests have been informed on CALFED activities.
4. The Port and the San Francisco District of the Army Corps of Engineers have been engaged in feasibility studies to further deepen the Stockton Ship Channel from 35 feet to a greater depth. Congress has authorized the lower reaches of the ship channel, known as the John F. Baldwin Ship Channel, to a depth of 45 feet. The Corps project manager for our deepening studies is Mr. Dave Patterson at the San Francisco District, telephone 415-977-8707.

5. Also, the Port is promoting economic growth and family-wage jobs for the Central Valley by developing infrastructure on Rough and Ready Island. Significant investment and progress has been on Rough and Ready Island facilities. Additional developments will take place in the near future. The Port of Stockton is also a municipal utility with approval from the Federal Energy Regulatory Commission.

6. The Port has a significant annual maintenance dredging program with the Sacramento District of the Army of Engineers. This annual program may vary from \$2 –4 million dollars in Federal funds. The Corps point of contact for this activity is Mr. Jim Sandners, Operations Manager at 916-557-5275.

7. The Port of Stockton does not oppose the Draft In-Delta Storage Program State Feasibility Study, the VAMP, or CALFED water quality grants. The Port is supportive of CALFED efforts to improve fish passage and water quality in the lower San Joaquin River. The Port is concerned about these ongoing activities and the absence of communications. In the interest of improving the communications process, the Port will have a representative at the next California Bay Delta Authority meeting scheduled for April 7 and 8 in Sacramento.

8. The Port believes an important step in communications would be a briefing on all CALFED supported activities that may impact our commercial navigation interests. The point of contact for the Port would be Mr. Jeff Kasper, Deputy Port Director for Environmental Planning and Facilities. The Port would gladly provide the meeting room and also a tour of our harbor facilities.



San Joaquin River Group

P.O. Box 4060, Modesto, CA 95352 • (209) 526-7405 • (209) 526-7315 - Fax

- Modesto Irrigation District
- Turlock Irrigation District
- Oakdale Irrigation District
- Merced Irrigation District
- Friant Water Users Authority
- City and County of San Francisco
- South San Joaquin Irrigation District
- San Joaquin River Exchange Contractors

February 23, 2004

Jeremy Arrich
DWR, DPLA
PO Box 942836
Sacramento, CA 94236-0001

RE: Draft In-Delta Storage Program State Feasibility Study

Dear Mr. Arrich:

The San Joaquin River Group Authority (SJRGA) supports continued development of the In-Delta Storage Program, originally conceived as the Delta Wetlands Project. We see it as a positive component of a balanced program for enhancing flexibility in California's water management and enhancing Delta habitat.

This project has been thoroughly considered in a variety of public processes including compliance with the National Environmental Policy Act and the California Environmental Quality Act. Its operation has been conditioned by its Biological Opinions, the terms of its State Water Resource Control Board permit, the Final Operating Criteria and agreements protecting drinking water quality with the California Urban Water Agencies, Contra Costa Water District, and East Bay Municipal Water District. It has completed most of its permitting requirements, including approval under Section 7 of the Endangered Species Act, Section 10 of the Rivers and harbors Act, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research and Sanctuaries Act. The Draft State Feasibility Report incorporates various "re-engineered" features of the project, and addresses issues raised in prior studies. It concludes that the project is technically feasible and that it "could provide a variety of benefits and contribute to meeting each of CALFED's four objectives for water supply reliability, water quality, ecosystem restoration, and levee system integrity." This important conclusion is based on a thorough understanding of the project and application of the best available science.

The SJRGA supports continued efforts to develop and implement water storage projects within California. California needs additional options for water storage and the Delta needs additional water in order to balance the competing needs exports, water quality, and the environment. Implementation of such projects is necessary to providing the operational flexibility required to satisfy these competing needs.

Jeremy Arrich
February 23, 2004
Page 2

The proponents of this project have been forthright in their effort to develop a project that minimizes environmental impacts while maintaining a viable project. We believe this is the type of project that California urgently needs to assist in meeting its rapidly growing water demands.

We urge that in its consideration of the allocation of Proposition 50 funds, the California Bay Delta Authority allocate funds to the continued development of the In-Delta Storage Program including the scoping and execution of additional environmental review.

Sincerely,



Allen Short
Coordinator

CC: Mr. Patrick Wright, Executive Director
California Bay Delta Authority
SJRG

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY

WESTLANDS WATER DISTRICT

March 26, 2004

Stephen S. Roberts, Chief
Surface Storage Investigations Branch
California Department of Water Resources
The Bonderson Building
901 P Street
Sacramento, CA

Dear Mr. Roberts,

We have reviewed the 2004 Draft In-Delta Storage State Feasibility Study and very much appreciate this opportunity to submit comments. In-Delta Storage is the first CALFED surface water storage project to achieve such an advanced level of analysis and a finding of technical feasibility. Combined with the Project's pre-existing permits and completed environmental review, it presents an important opportunity to advance balanced implementation of the CALFED Record of Decision (ROD).

Based on our review, it appears that the In-Delta Storage Project has potential to produce significant benefits under a variety of operating scenarios. Moreover, the continued viability of the CALFED Program depends on adherence to the compromise reflected in the CALFED ROD. Premature abandonment of any project identified in the CALFED ROD will threaten the Program's integrity. Accordingly, we believe DWR should recommend to the Bay-Delta Public Advisory Committee, and in turn to the California Bay-Delta Authority, the continued development of the In-Delta Storage Project, including the scoping and completion of any necessary additional economic and environmental review.

In our view, surface water storage is an important element of the CALFED ROD. CALFED implementation will not be balanced until surface water storage projects are funded and implemented along with the other CALFED program elements. While funding for such projects may not be available in the short term, it is important that we prepare to act quickly once the economy improves. For that reason, we support the timely development of CALFED surface water storage programs.

A year and a half ago, the Draft Integrated Storage Investigation of In-Delta Storage identified a series of unresolved technical issues. We are pleased to see that almost all of these issues have been resolved by the technical and engineering studies

completed by DWR over the past eighteen months. The report just released now concludes that the project is technically feasible.

The Executive Summary concludes that, "The In-Delta Storage Project could provide a variety of benefits and contribute to meeting each of CALFED's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004).

According to the State Feasibility Study, the In-Delta Storage Project could:

- Provide additional, new water supplies for urban and agricultural interests. Per operating agreements with urban water agencies, the Delta Wetlands Project will comply, and even exceed, all existing drinking water quality standards for the Delta.
- Provide 217,000 acre-feet of new storage capacity, able to capture and store excess water (typically during storms or other events that produce large flows through the Delta) and also releases from overflowing upstream reservoirs that would otherwise be lost.
- Provide water to support CALFED's Environmental Water Account, protecting fish at sensitive times and ensuring deliveries to water users are not impacted.
- Improve operational flexibility of the state and federal projects.
- Improve Delta water quality (i.e. salinity), by releasing fresh water into the Delta in a timely and flexible manner.
- Provide temporary storage for water transfers, aiding state water users who have not had enough storage opportunities.
- Improve quality and availability of habitat for fish and other wildlife living in the Bay-Delta eco-system.
- Provide additional water to support CALFED's Ecosystem Restoration Program and federal wildlife refuges.
- Reduce risk of regional flood damage, diverting water onto the reservoir islands during high flow season and lowering water in adjoining channels.
- Improve seismic stability of existing levees, reducing the risk of levee failure and associated saltwater intrusion from the San Francisco Bay.
- Benefit state and federal projects by helping meet Delta water quality standards, adding water into the system that the projects would otherwise have to provide.
- Provide regional recreational benefits.
- Be built safely. The project will meet all state and federal criteria for safety and risk factors, ensuring protection of neighboring properties.

In contrast to the progress made on engineering and scientific issues, the Report's economic analysis is incomplete; therefore, additional analysis and peer review is required.

The economic work that has been done raises questions:

- The study's assumptions are very conservative and in almost all cases tend to understate project value. The demand, supply and cost data used are from the outdated Bulletin 160. If updated Bulletin 160 information remains unavailable, it is essential to develop sensitivity analyses to investigate the effect of the more important assumptions used in this analysis.
- Soft and indirect benefits are not estimated so that, for example, the value of the project's contribution to the Environmental Water Account is estimated as the avoided cost of water purchases rather than the value of a healthy environment, a more robust fishery, or more reliable project operations.
- Some values, such as the value of lowering export salinity at key times, are not estimated at all. Finally, the economic analysis lists the following un-quantified benefits that we believe should be valued in any subsequent economic analysis:
 - Operational Flexibility
 - Water quality improvements
 - Wildlife habitat improvements
 - Storage for water transfers
 - Contribution to existing Delta requirements (D1641)
 - System-wide carryover storage

Without a detailed operations plan and a legally enforceable allocation of project benefits, it is not possible to identify specific value to this agency from the In-Delta Project. However, like virtually every agency that depends on diversions from the Delta, our water management plan identifies a need for additional water supply. In addition, we value improvements to supply reliability and water quality. We also value projects that facilitate water transfers. Further analysis of the In-Delta Project will help to clarify the Project's potential value to this and other agencies.

Thank you for your consideration of these comments.

Respectfully submitted,



Daniel G. Nelson
Executive Director
San Luis & Delta-Mendota Water Authority



Thomas W. Birmingham
General Manager/General Counsel
Westlands Water District

cc: Anson Moran

March 19, 2004

Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P.O. Box 942836
Sacramento, CA 94236-0001

Subject: Comment Letter, State Feasibility Study of the In-Delta Storage Project

Dear Mr. Arrich:

Thank you for the opportunity to comment. This letter is in reply to Department of Water Resources (DWR) email notice, dated February 3, 2004, regarding the release of the "State Feasibility Study of the In-Delta Storage Project." Our comments focus on the water quality aspects of the project. Although the analysis of the project appears to be well-thought out and comprehensive, it does not demonstrate that the proposed project would not harm our ability to supply high-quality drinking water to Santa Clara County.

The Santa Clara Valley Water District (SCVWD) is the wholesale water supplier for over 2.8 million people in Santa Clara County. Approximately 40% of the county's drinking water comes from local supplies; the other 60% of the county's drinking water is imported through the Central Valley Project and the State Water Project from the delta. The SCVWD Board of Directors has passed governance policies which guide our activities. Policy E-2.1.1 states that *The water supply meets or exceeds all applicable water quality regulatory standards in a cost effective manner.* Applying the stated policy of the Board of Directors to the water quality information available, the Santa Clara Valley Water District cannot support this project.

As a member of the California Urban Water Association (CUWA), the SCVWD District was party to the October 9, 2000 water rights protest dismissal agreement and the associated Water Quality Management Plan (WQMP) that CUWA has with Delta Wetlands. These agreements also provided part of the foundation for the State Water Resources Control Board (SWRCB) water rights decision on the Delta Wetlands Project. The agreements include provisions making the terms and conditions binding on any successors in interest. We conclude that the current In-Delta Storage studies are the functional equivalent of a successor project and consequently must meet all the criteria of the agreements.

As stated in CUWA's February 12, 2002 letter, to Bay-Delta Authority Executive Director Patrick Wright (copy attached), decision-makers and others will need an analysis which meets all of the proposed project's water quality requirements and all of its water rights operating restrictions before drawing conclusions regarding project benefits. Based on the information presented in the draft feasibility report, neither the water quality requirements, nor the water rights operating restrictions have been met. Therefore, we cannot support any conclusions regarding project benefits at this time.

Although the analysis presented in the draft In-Delta Storage Program State Feasibility Study was comprehensive and well thought out, we do not feel that the water quality summary found in the Executive Summary, correctly represents the results of the analysis. The modeling to date, by DWR, does not demonstrate that provisions of the Water Quality Management Plan will be met. The project modeling indicates that the specific water quality criteria outlined in the WQMP are violated a significant percent of the time. For example, at the State Water Project intake at Banks Pumping Plant, the organic carbon standard is violated 33% of the time (table 2.5.10), the bromate standard is violated 17% of the time (table 2.5.18), and the TTHM and chloride standard is violated 3% of the time (table 2.5.14 and table 2.5.6). In addition, according to personal communications between Mike Mierzwa at DWR and Rich Losee at Metropolitan Water District (MWD), because project releases are not occurring all the time, the organic carbon standard is violated 60% of the time that water is released from Bacon Island.

On Page 2, of the Water Quality Management Plan, five important Drinking Water Quality Protective Principles are listed. The project described in the draft In-Delta Storage Program State Feasibility Study does not demonstrate clear adherence to any of the Drinking Water Quality Protective Principles. In particular, the project described in the Feasibility Study could cause substantial increases in the cost of water treatment for the SCVWD, may contribute to non-compliance with the total organic carbon removal requirements of the Stage 1, Disinfectants and Disinfection By-Products Rule, and does not "contribute to CALFED's progress toward achieving continuous improvement of Delta drinking water source quality."

Attached are more detailed technical comments regarding aspects of the DWR studies and assumptions related to potential water quality impacts. Because our analysis of the draft report on water quality indicates that the WQMP is significantly violated, we did not conduct a thorough analysis of the economics of the project. We would hope that, if and when, the WQMP criteria are met, the project cost benefit analysis includes any expected increased cost of water treatment to the SCVWD in the cost estimate.

Again, thank you for this opportunity to comment. We appreciate the comprehensive and well-thought out analysis that DWR staff conducted on this project. We do not feel that further analysis of this project is merited. We hope that a similar level of resources can be devoted to the analysis of the other storage projects proposed in the Record of Decision. Based on the water quality information available, the SCVWD cannot support the In-Delta Storage Project.

Sincerely,



Walt Wadlow
Chief Operating Officer, Water Utility

Attachments

Santa Clara Valley Water District
March 19, 2004 Comment Letter

Attachments:

*** California Urban Water Agencies (CUWA) Comment Letters**

**Delta Wetlands water quality agreement with CUWA
Exhibit A – Water Quality Management Plan, October 9, 2000**

* This attachment is included with the CUWA comments and is not duplicated in this comments package



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President & CEO

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Working Council Chair

NANCY NOE

Alza Corporation

Founded in 1977 by

DAVID PACKARD

March 2, 2004

California Bay-Delta Authority Members
California Bay-Delta Authority
650 Capitol Mall, 5th Floor
Sacramento, CA 95814

Re: Support for Delta Wetlands Project/In-Delta Storage Project

Dear Authority Members,

On behalf of the Silicon Valley Manufacturing Group (SVMG) I am writing today to express our organization's support for balanced implementation of the CalFed Bay-Delta Program ("CalFed"). One of the key components of the CalFed Record of Decision, which was supported by a broad coalition of interests, was the development and construction of new surface water storage projects, which could increase new water supplies and provide much-needed additional storage for California.

The business community has long supported the entire CalFed program and has specifically advocated that increased water supply reliability and new storage is required to manage the demands of a rapidly growing population and support California's vibrant economy. As you know, most, if not all, core business sectors in California cannot succeed without a stable and reliable source of water.

At this time, all other proposed storage projects under consideration by CalFed are at very preliminary phases of investigation. To date, the In-Delta Storage Project is the only proposed water storage and supply project to have been determined technically feasible. Beyond its water supply benefits, we are encouraged to see a project advance that can also provide complimentary benefits in water quality, ecosystem restoration and levee stability, and provide operational flexibility for the state and federal water projects.

We understand the California Department of Water Resources (DWR) recently released a state feasibility study of the In-Delta Storage Project, one of the five surface storage projects that the CalFed program is currently studying for potential implementation. While an economic analysis is yet to be complete, DWR's report found the project technically feasible and opined the project "could provide a variety of benefits and contribute to meeting each of CalFed's four objectives for water supply reliability, water quality, ecosystem restoration and levee system integrity." (Source: DWR's

Draft Executive Summary, In-Delta Storage Program State Feasibility Study, January 2004)

Therefore, we strongly encourage the California Bay-Delta Authority to continue its investigation of the In-Delta Storage Project, including any necessary economic and environmental reviews. Given the benefits identified by DWR, the project merits a thorough investigation.

On behalf of SVMG, thank you again for your leadership role in advancing the CalFed Bay-Delta Program.

Sincerely,



Margaret Bruce
Director, Environmental Programs
Silicon Valley Manufacturing Group

CC: Patrick Wright, Director, California Bay-Delta Authority
Jeremy Arrich, California Department of Water Resources
Dan Skopec, Office of the Governor
Dennis Albiani, Office of the Governor
Bay Delta Public Advisory Committee
California State Senate Agriculture and Water Committee
California State Assembly Water, Parks & Wildlife Committee
Honorable Dianne Feinstein
Honorable Richard Pombo
Honorable Zoe Lofgren
Honorable Anna Eschoo
Honorable Mike Honda
Honorable Pete Stark
Honorable Tom Lantos

State Water Contractors

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John C. Coburn General Manager (916) 447-7357 • FAX 447-2734

Directors

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Vince Wong, Secretary-Treasurer
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Stephen N. Arakawa
Metropolitan Water District of Southern California
Thomas R. Hurlbutt
Tulare Lake Basin Water Storage District
Thomas E. Levy
Coachella Valley Water District
Dan Masnada
Castaic Lake Water Agency
David B. Okita
Solano County Water Agency
Ray Stokes
Central Coast Water Authority

March 19, 2004

Mr. Jeremy Arrich
Department of Water Resources
Division of Planning and Local Assistance
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Comments on the In-Delta Storage Program State Feasibility Study

Dear Mr. Arrich:

The State Water Contractors (SWC) appreciates the opportunity to provide comments on the California Bay-Delta Authority and Department of Water Resources (DWR) In-Delta Storage Program State Feasibility Study. SWC has been an active participant in the CALFED Bay-Delta Program, and we have an interest in the evaluation of feasibility, costs and benefits for CALFED storage project alternatives. SWC has reviewed the Feasibility Study, and we have two concerns about the In-Delta Storage Program, regarding its cost-effectiveness, and its impacts on water quality. We believe that the Feasibility Study raises serious questions as to the project's cost-effectiveness, and that its costs may have been underestimated due to exclusion of the additional water quality impact mitigation costs that would be incurred if the project went forward.

Based on our review of the economic analyses for the project, we do not envision the In-Delta Storage Project fitting into our water supply resource mix, assuming that all the project costs are applied to the delivered per acre-foot yield. We also do not believe that any reasonable level of public subsidy would be high enough to make the project acceptable. In addition to the high project costs and low benefit to cost ratio indicated in the Feasibility Study, we believe that even the stated water supply benefits are optimistic. Our review of the Feasibility Study shows that the operations studies do not fully account for water quality and other operations constraints on the project. As a result, the yield estimates for the project are likely overstated and not supported by the Feasibility Study. In addition, while many potential benefits for the project are briefly mentioned in the study reports, most of the potential benefits have not been quantified or validated through technical studies. Further, it is our assessment that many of the potential benefits will not be possible simultaneously, and would further reduce potential water supply yield from the project.

The Feasibility Study indicates that the In-Delta Storage project does not meet all the water quality requirements laid out in the Water Quality Management Plan (WQMP). We are very

Mr. Jeremy Arrich

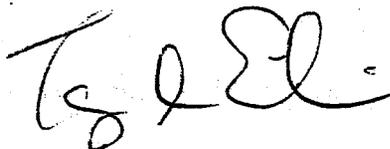
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concerned that violations of the WQMP requirements will lead to increased drinking water treatment costs for our member agencies that provide municipal drinking water. SWC also supports the comments made by the California Urban Water Agencies (see attachment), which include a more detailed evaluation of the In-Delta Storage operations and water quality studies.

SWC looks forward to working with CALFED and DWR on future feasibility studies addressing CALFED projects. If you have any questions regarding these comments, please contact Ms. Laura King Moon at (510)-482-3080.

Sincerely,



Terry L. Erlewine
General Manager

Attachment

cc: SWC Member Agencies
Lester Snow, Director, Department of Water Resources
Patrick Wright, California Bay-Delta Authority
Steve Macaulay, California Urban Water Agencies
Andy Moran, Delta Wetlands

State Water Contractors
March 19, 2004 Comment Letter

Attachment:

***California Urban Water Agencies (CUWA) Comment Letters**

* This attachment is included with the CUWA comments and is not duplicated in this comments package