Comment Letter CCWD2

CCWD2

CONTRA COSTA
WATER DISTRICT
1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

September 11, 2006

Ms. Sharon McHale
U.S. Bureau of Reclamation
2800 Cottage Way, MP-700
Sacramento, CA 95825

Mr. Paul Marshall
California Department of Water Resources
Bay Delta Office
1416 Ninth Street
Sacramento, CA 95814

Re: Draft Environmental Impact Statement/Environmental Impact Report for the South Delta Improvements Program

Dear Ms. McHale and Mr. Marshall:

Contra Costa Water District (CCWD) offers the following comments to supplement our February 7, 2006 comment letter on the Draft Environmental Impact Statement/ Environmental Impact Report (DEIS/EIR) prepared by the California Department of Water Resources and the United States Bureau of Reclamation for the proposed South Delta Improvements Program (SDIP). These supplemental comments are based upon new information that was not available when the February 7, 2006 letter was written.

Both permanent operable barriers (Stage 1 of the SDIP) and increased State Water Project export pumping from the Delta (Stage 2 of the SDIP) will alter Delta flows and salinity in ways that could harm Delta fish species. As we wrote on February 7, the DEIS/EIR analysis of the SDIP's potential significant adverse impacts on fish is not adequate. Recent results reinforce our February 7 comments that it is necessary to examine the ecosystem effects of changes in Old River and Middle River flows, and also the ecosystem effects of changes in Delta salinity.

Delta smelt and striped bass are part of the pelagic organism decline, and populations of both reached historic lows in 2005 and in 2006[1]. Concern that the SDIP may harm delta smelt and striped bass is heightened by the following recent results:

- **Changes in Old and Middle River flows may harm Delta smelt.** Recent work by the United States Geological Survey links harm to the smelt with net southward flows in Old and Middle Rivers. Both Stage 1 and Stage 2 of the SDIP will increase these flows. (The first phase of this work was presented at the Interagency Ecological Program's (IEP) annual Asilomar conference in March of 2006.) **CCWD2-1**

[1] http://www.delta.dfg.ca.gov/data/townet/

- **Increased fall salinity may harm Delta smelt**. There has been a significant decline in fall habitat quality for delta smelt in recent years. This is largely because of increased fall salinity in the western Delta, which will be further increased by Stage 2 of the SDIP. (Recent presentations by IEP staff, at the 2006 IEP Asilomar conference and elsewhere, show this result. It is consistent with CCWD's work that links the decline in delta smelt populations with the recent increase in fall salinity. See the attachment to this letter.) **CCWD2-2**

- **Increased fall salinity may harm striped bass**. Striped bass are also suffering from a decline in fall habitat quality. This too is largely because of increased fall salinity in the western Delta, which will be further increased by Stage 2 of the SDIP. (See the attachment for a depiction of this trend from recent IEP presentation.) **CCWD2-3**

In light of the above information, it is clear that the DEIS/EIR analysis of the SDIP's potential significant adverse impacts on fish is not adequate, and that the types of analysis that CCWD suggested in its February 7, 2006 letter are required.

Thank you for your consideration of these comments. If you have any questions, please call me at 925-688-8073.

Sincerely,

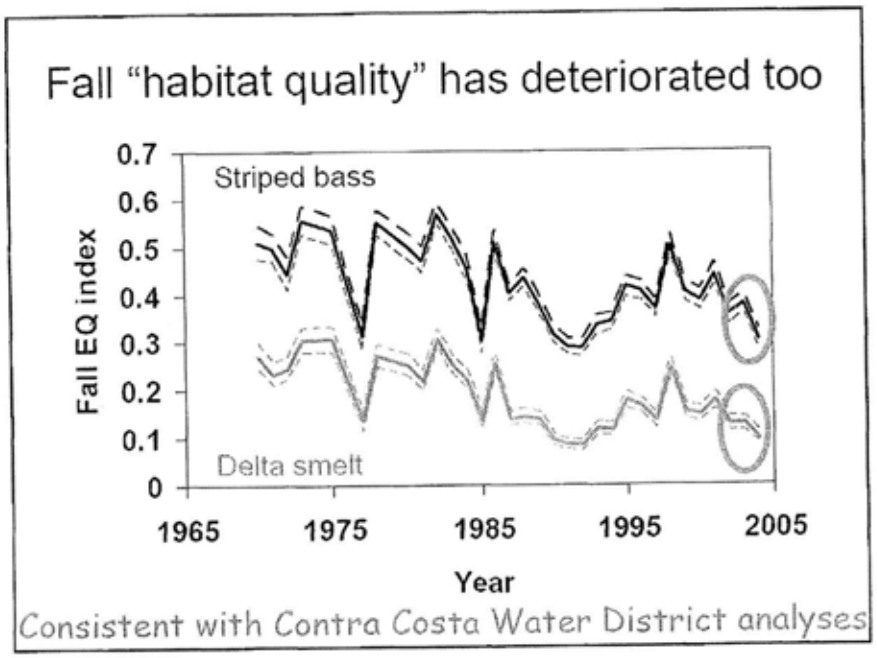
David Briggs
Water Resources Manager

DB/LSO/MG:wec

Attachment: Slide from presentation by IEP management staff to the State Water Resources Control Board in June, 2006.

Attachment. Slide from presentation by IEP management staff to the State Water Resources Control Board in June, 2006.

Available at: http://www.swrcb.ca.gov/agendas/2006/june/0607_03pres.pdf



Responses to Comments

CCWD2-1

Recent work by the USGS has evaluated the tidal flows at the Old River and Middle River stations located on opposite sides of Bacon Island. They report that the net flows toward the CVP and SWP pumps have been higher in the four recent years that are included in the POD hypothesis (2002–2005). This hydraulic effect of relatively high export pumping is being studied to determine whether it is linked to recent declines in delta smelt. No such link has been established by scientists.

Net Flows in South Delta Channels

As Section 5.2 of the Draft EIS/EIR describes, Old and Middle Rivers are the two major pathways for export water from the central Delta. The other channels are the head of Old River from the San Joaquin River near Mossdale, and Turner Cut, which connects Middle River to the San Joaquin River downstream of Stockton. DSM2 modeling results (page 5.2-13) show that about 50% of the CVP and SWP pumping (that is not supplied from the head of Old River) will flow upstream (south) in Old River from Franks Tract. About 5% of the export pumping flow will move upstream (east) in Dutch Slough from Big Break to Franks Tract. About 40% of the CVP and SWP pumping (not supplied from the head of Old River) will move upstream (south) in Middle River from the mouth or Columbia Cut. About 10% of the CVP and SWP pumping (not supplied by the head of Old River) will move upstream (southwest) in Turner Cut to Middle River.

Therefore, if the pumping is increased by 1,000 cfs, the Old River upstream flow from Franks Tract will increase by about 500 cfs (50 cfs from Big Break), the Middle River upstream flow will increase by 400 cfs, and the Turner Cut upstream flow will increase by 100 cfs. Similar flow increases in these central Delta channels would occur if the head of Old River flow were reduced by 1,000 cfs by tidal gate operations.

Operations of the Gates

The SDIP Draft EIS/EIR analysis assumes that the GORT would operate the head of Old River tidal gate, along with the other gates, to balance the various needs of the beneficial uses of the Delta channels. The GORT is made up of fish management agencies that are responsible for the protection of fish listed under the ESA, such as delta smelt, and other fish as appropriate. As described in Master Response O, the first priority for the GORT will be compliance with the BOs obtained for protection of the listed fish issued for Stage 1 of the SDIP.

The head of Old River tidal gate might be partially closed to protect San Joaquin River Chinook salmon juveniles in the months of March–June, or to increase the Stockton DWSC flows to improve DO concentrations in the months of July–September, or to improve San Joaquin River flows for adult Chinook salmon migration in the months of October–December. The possible effects of these potential tidal gate operations from March through December on delta smelt have not been specifically evaluated, because likely relationships between the central Delta channel flows and delta smelt abundance or survival in the south Delta have not been identified by IEP scientists.

In June and July, when delta smelt may be present in the vicinity of Franks Tract, gate operations have the potential to increase the net flow of water, and therefore smelt, from the central Delta to the south Delta area where they are subject to entrainment (see Appendix J and page 6.1-64 of the draft EIS/EIR). This is a result of the potential partial closure of the head of Old River gate to allow more water to flow down the San Joaquin River to improve DO conditions (see page 2-30 to 2-31 of the draft EIS/EIR). This is considered a less–than-significant impact because this potential operation of the gates in June and July is subject to the GORT, and it is assumed that the operations will be adjusted to comply with the BO and appropriate protection of delta smelt.

The GORT will consider these potential effects on delta smelt as they operate the head of Old River fish protection gates. It is likely that the magnitude of the flow changes will be considered relative to the abundance of delta smelt in the vicinity of Franks Tract and the fraction of the population that might be in the central Delta. Because delta smelt spawning may be limited by temperatures higher than 20ºC, it is likely that temperatures will also be included in the decision matrix for operating the head of Old River tidal gate.

Stage 2 of the SDIP includes changes in export operations, in addition to the tidal gate operations. The effects of the resulting incremental entrainment are described in the draft EIS/EIR, and mitigation is proposed to reduce these effects to a less-than-significant level (See pages 6.1-94 to 6.1-97 of the draft EIS/EIR). There may be additional analysis of the increased pumping patterns and more specific information on the relationship of central Delta flows and delta smelt abundance. All of the new information that may result from the intensive POD investigations, including contributions from CCWD staff, will be included in the Stage 2 evaluations.

CCWD2-2

Fall salinity in the western Delta is regulated by D-1641 Delta outflow objectives. The Jersey point EC values in the fall months have actually been relatively constant (in the range of 1,500 to 2,000 µS/cm) for the previous six years (1999–2004). EC values were only slightly lower in 2005 and are expected to be relatively low again this year, because of higher-than-normal runoff and storage releases to meet flood control storage levels at the end of September or October. These salinity data suggest that the salinity gradient has been quite

stable for the last several years, and no abrupt change appears to correspond with the POD years (2002–2005).

The work efforts that CCWD staff is contributing to the general POD investigations are commendable. But because CCWD has not released their analyses for scientific review, Reclamation and DWR scientists are unable to comment on the specific results suggested in the CCWD letter. Correlations and regression equations should not be confused with an ecological linkage. Linkages have to be established and confirmed through additional experimental evidence. The scientific products from CCWD staff will be given equal weight to other reports by IEP scientists that are produced during the POD evaluations and subsequent SDIP Stage 2 evaluations.

CCWD2-3

The decline in striped bass abundance indices has been ongoing for many years and does not seem to be obviously connected to any recent changes in water management. Appendix J describes these long-term fish abundance indices. The POD investigations are attempting to find scientific evidence that something in recent conditions is linked to the consistently low indices for delta smelt, longfin smelt, and striped bass. The relatively high recent abundance indices for threadfin shad, American shad, and Black Sea jellyfish suggest that many biological processes within the pelagic ecosystem (e.g., food supply, competition, predation) will need to be investigated and understood to resolve the POD hypothesis. All possible lines of evidence are being pursued and investigated by IEP scientists. Contributions from CCWD staff to demonstrate a linkage with salinity habitat will be fully considered during the upcoming POD evaluations and subsequent SDIP Stage 2 evaluations.

Comment Letter FC

To: Paul Marshall

FC

County of Fresno

BOARD OF SUPERVISORS
SUPERVISOR JUDITH G. CASE – DISTRICT FOUR

JAN 09 2006

041

December 13, 2005

Mr. Lester Snow, Director
Department of Water Resources
State of California
Sacramento, CA 95814

SUBJECT: South Delta Improvements Program

Dear Mr. Snow:

On behalf of Fresno County, I am writing today to express our organization's support for the Department of Water Resources' (DWR) South Delta Improvements Program (SDIP), a critical water supply, water quality and environmental project designed to meet California's diverse water needs. This November, DWR and the U.S. Bureau of Reclamation released a draft Environmental Impact Report/Statement (EIR/S) for SDIP, kicking off an important public review and comment period.

As you know, California is facing a critical challenge: We need a safe, reliable and high-quality water supply to keep up with our rapidly rising population and fast-growing trillion-dollar economy. However, we have limited water supplies in our arid state, so we must better utilize our existing water resources and infrastructure; otherwise, we put our communities, farms, environment and businesses at great risk. Two-thirds of California receives it water from the San Francisco Bay/Sacramento-San Joaquin Delta. Given its importance, we need better ways to manage the Delta's water delivery system, as well as the water itself. In essence, we need to make every drop count. FC-1

In 2000, the state and federal governments initiated the historic CalFed Bay-Delta Program to manage the Bay-Delta's water resources and ecosystem. A unique collaboration of interests supported the plan including environmental organizations, water agencies, business interests, farmers, and state and federal water and fish agencies. SDIP is the next step forward in this long-term planning effort for the Bay-Delta.

SDIP is a responsible and balanced plan to better utilize and integrate our existing water management infrastructure in the Delta. Collectively, it will improve our state's water supply reliability, water quality and the overall health of the Bay-Delta ecosystem. The program will construct season tidal gates to protect fish, and improve water circulation and quality in the Delta, dredge select Delta channels to improve water deliveries for local farmers, and allow State Water Project deliveries to increase modestly – only when needed and environmentally safe to do so.

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Mr. Lester Snow, Director
December 13, 2005
Page 2

JAN 09 2006 041

Currently, the state is constrained in its ability to use surplus water supplies. We have the infrastructure to move the water, but until SDIP is approved, the state's water managers cannot fully or responsibly use the existing system. SDIP calls for only a 3-5% increase in the average amount of water pumped from the Delta. More significantly, SDIP will provide the flexibility to shift the timing of water deliveries when surplus is available and when environmentally safe to do so. SDIP is an ideal option for California to advance – it will not require building a new project or the construction of major new infrastructure. And, funding for the program has already been secured through passage of voter-approved bonds in 2000 (Proposition 13).

Importantly, SDIP will help protect important Delta environmental resources. Specifically, it will help protect fish species in the Delta channels. At the same time, by providing the state greater flexibility in how and when SDIP operates its system of pumps, fish are granted greater protections.

FC-1

Given all these points, SDIP is supported by a statewide, broad coalition of water, agriculture, business, planning organizations, and local government officials including the Association of California Water Agencies, State Water Contractors, California Chamber of Commerce, California Business Properties Association and the Western Growers Association.

Water is the lifeblood of California – critical to our families, farms and businesses. It is our responsibility to use this precious resource wisely through all possible best management practices, including water conservation, recycling and storage, to ensure California's water future. It is imperative that we have a more flexible water delivery system so that we can continue to accommodate growth in our population and economy while relying on existing water supplies.

Again we strongly support SDIP and encourage all key stakeholders to help advance this critically needed project.

Sincerely,

Judith G. Case, Chairman
Fresno County Board of Supervisors

cc: Honorable Governor Arnold Schwarzenegger
Mr. Ryan Broderick, Director, California Department of Fish and Game
Mr. Mike Chrisman, Secretary, California Resources Agency
Mr. Joe Grindstaff, Director, California Bay-Delta Authority
Mr. Kirk Rodgers, Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation
Mr. Dan Skopec, Deputy Cabinet Secretary, Office of the Governor
Mr. Terry Tamminen, Cabinet Secretary, Office of the Governor

Responses to Comments

FC-1

The commenter's description of the project's benefits and support for the project are noted.

Comment Letter HC

HC

BOARD OF SUPERVISORS

COUNTY OF HUMBOLDT

825 5TH STREET

EUREKA, CALIFORNIA 95501-1153 PHONE (707) 476-2390 FAX (707) 445-7299

January 24, 2006

JAN 31 2006 105

Paul A. Marshall, South Delta Branch
California Department of Water Resources
1416 9th Street, 2nd Floor
Sacramento, CA 95814

RE: South Delta Improvements Program
Comments – Draft Environmental Impact Statement/Environmental Impact Report

Dear Mr. Marshall:

The County of Humboldt has reviewed the above referenced November 2005 document by the California Department of Water Resources (DWR) and the US Bureau of Reclamation (BOR) and comments provided by Trinity County. We hereby support Trinity County's comments and recommend that DWR and BOR withdraw the proposed Draft Environmental Impact Statement/Environmental Impact Report (DEIS/R) for this project because of numerous legal and technical inadequacies. Some inadequacies include, but are not limited to the following:

- The document is based on the "Biological Opinion (BO) on the Long-Term Central Valley Project (CVP) and State Water Project (SWP) Operations Criteria and Plan (OCAP)," which has been found faulty. These findings were made public January 3, 2006. A report by the Department of Commerce's Inspector General also found the BO process violated government procedures. HC-1
- The Document does not consider an alternative which **reduces** exports from the Delta, per the Third District Court of Appeals Decision (RCRC et v State of California). HC-2
- The Document fails to incorporate prior water rights or reserved, such as those held by the County of Humboldt for 50,000 af annually, nor the water associated with the fishing rights of the Hoopa Valley and Yurok Tribes. HC-3

The South Delta Improvements Program (SDIP) is based on Endangered Species Act compliance through the CVP OCAP. A revised Biological Opinion should be prepared with adequate analyses to determine jeopardy to listed species, including Klamath-Trinity coho salmon (Southern Oregon/Northern California Coho). The independent review by a team of 6 scientists concluded that the BO had deficiencies. Specifically that some models and analyses appeared to be flawed and that greater consideration should be given to genetic and spatial diversity in the ESUs. HC-4

Clearly, the SDIP is inadequate and must be revised and completed prior to release of a new DEIS/R that considers an alternative that reduces Delta exports. We encourage and support development of a "Land Retirement Alternative" which returns water to environment. HC-5

January 24, 2006
Paul A. Marshall, Department Water Resources
Page 2.

JAN 3 1 2006 105

The 2000 Trinity River Record of Decision (ROD) called for increased fishery flows into the Trinity River from Trinity and Lewiston Dams. Humboldt County is concerned that the BOR intends to continue historic deliveries of CVP water, as stated in the numerous CVP long-term contracts such as the San Luis Unit, with possible larger deliveries. HC-6

We disagree with the statement of the SDIP that impacts "salmonids with the Trinity River will be less than significant." This statement is misleading and based on assumptions which conflict with the Trinity ROD. The DEIR/R would likely have a severe impact to salmonids in the Klamath-Trinity watershed by having water temperatures instream being higher than State, federal and tribal water temperature standards and objectives. Therefore, the County believes the DWR and BOR declaration that there would be a "less than significant impact" to the Trinity River fisheries is untrue. HC-7

Additionally, we believe that the SDIP DEIS/R is premature to approve at this time because it would be pre-decisional as it relates to renewal of CVP contracts south of the Delta and drainage issues in the San Luis Unit of the CVP. Currently, the BOR is negotiating Long-Term Contracts (LTC's) for San Luis Unit and Western San Joaquin Division CVP contractors and has released NEPA documents. The San Luis Drainage Feature Re-Evaluation has not been completed, nor has the intent of the San Luis Act of 1960 (P.L. 86-488) been met. HC-8

In consideration of the above and comments submitted by Trinity County, to move forward with the SDIP before the San Luis Drainage Feature Re-Evaluation has been complete would be illegal and premature at this point in time. Humboldt County calls upon the Department of Water Resources and the Bureau of Reclamation to withdraw the South Delta Improvements Program Draft Environmental Impact Statement/Report at this time, and re-evaluate the potential impacts this action will take.

Thank you for the opportunity to comment on this document.

Should you have any questions regarding our comments, please contact Supervisor Jill Geist at 707-476-2395.

Sincerely,

John Woolley, Chair
Humboldt County Board of Supervisors

JW/kr

c: Trinity County Board of Supervisors
Clifford Lyle Marshall, Chairman, Hoopa Valley Tribal Council
Dennis Puz, Chairman, Yurok Tribal Council

Responses to Comments

HC-1 and HC-4

Please see Master Response A, *Relationship between the South Delta Improvements Program and the Operations Criteria and Plan.*

HC-2

Please see Master Response D, *Developing and Screening Alternatives Considered in the South Delta Improvements Program Draft EIS/EIR.*

HC-3

All current beneficial water uses along the Trinity River and below other CVP and SWP reservoirs are accounted for in the CALSIM modeling. These are incorporated into the minimum flow requirements or are specified as river diversions in the model. SDIP will have no effect on water rights or any upstream beneficial water uses.

HC-4

Please see Master Response A, *Relationship between the South Delta Improvements Program and the Operations Criteria and Plan.*

HC-5

Please see Master Response D, *Developing and Screening Alternatives Considered in the South Delta Improvements Program Draft EIS/EIR.*

HC-6 and HC-7

Please see Master Response N, *Trinity River Operations*.

HC-8

Please see Master Response Q, *Effects of the South Delta Improvements Program on San Joaquin River Flow and Salinity*.

Comment Letter KC

KC

DEC 2 2 2005

00012

COUNTY OF KERN
4TH DISTRICT SUPERVISOR
RAYMOND A. WATSON

December 6, 2005

Mr. Lester Snow
Director
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

RE: South Delta Improvements Program

Dear Director Snow,

I am writing today to express my support for the Department of Water Resources' (DWR) South Delta Improvements Program (SDIP), a critical water supply, water quality and environmental project designed to meet California's diverse water needs. This October, DWR and the U.S. Bureau of Reclamation released a draft Environmental Impact Report/Statement (EIR/S) for SDIP, kicking off an important public review and comment process.

SDIP is a responsible and balanced plan to better utilize and integrate our existing water management infrastructure in the Delta. Collectively, it will improve our state's water supply reliability, water quality and the overall health of the Bay-Delta ecosystem. The program will construct seasonal tidal gates to protect fish, and improve water circulation and quality in the Delta, dredge select Delta channels to improve water deliveries for local farmers, and allow State Water Project deliveries to increase modestly – only when needed and when environmentally safe to do so. KC-1

Statewide support for SDIP includes a broad coalition of water, agriculture, business, planning organizations, and local government officials including the Association of California Water Agencies, State Water Contractors, California Chamber of Commerce, California Business Properties Association and the Western Growers Association.

Water is the lifeblood of California – critical to our families, farms, and businesses. It is our responsibility to use this precious resource wisely through all possible best management practices. It is imperative that we have a more flexible water delivery system so that we can continue to accommodate growth in our population and economy while relying on existing water supplies.

Again, I strongly support the SDIP process and encourage all key stakeholders to help advance this critically needed project.

Sincerely,

Ray Watson

1115 Truxtun Avenue, Room 504 • Bakersfield, CA 93301
Tel (661) 868-3680 • Fax (661) 868-3688 E-mail: district4@co.kern.ca.us

Responses to Comments

KC-1

The commenter's description of the project's benefits and support for the project are noted.

Comment Letter EBMUD

EBMUD

EAST BAY
MUNICIPAL UTILITY DISTRICT

ROB ALCOTT
DIRECTOR OF WATER AND NATURAL RESOURCES
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February 6, 2006

Mr. Paul Marshall
SDIP EIS/EIR Comments
California Department of Water Resources
Bay Delta Office
1416 Ninth Street,
Sacramento, California, 95814

FEB 07 2006 00152

Subject: Comments on the South Delta Improvements Program Draft EIS/EIR

Dear Mr. Marshall:

The East Bay Municipal Utility District (EBMUD or District) is very interested in working with the Department of Water Resources (DWR) to address the District's concerns regarding the potential impacts of Stage 1 and Stage 2 of the South Delta Improvements Program (SDIP or Program). We appreciate the complexities of analyzing and documenting potential SDIP impacts and believe the District can be helpful to DWR as it fulfills its obligation to identify and mitigate Program related impacts. Accordingly, we are submitting these comments on the draft Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for both Stage 1 and Stage 2 of the South Delta Improvements Program.

The District has two areas of concern regarding the potential impacts of the SDIP; impacts to the Mokelumne fisheries, and impacts to the levees protecting Woodward Island. Concerns regarding both of these issues were expressed in the District's October 31, 2002 letter commenting on the SDIP Notice of Preparation. With respect to the Mokelumne fisheries, the District's October 2002 letter requested that the SDIP EIS/EIR fully analyze and disclose the potential Program effects on the survival of Mokelumne juvenile salmon and the straying of returning adult salmon. Regarding the Woodward Island protective levees, the District asked that potential Program impacts to Old River velocities be evaluated and mitigations, if appropriate, be proposed. The draft EIS/EIR fails to fully address these previously identified concerns. The comments contained in this letter are focused on these two areas of continuing District interest. **EBMUD-1**

A fundamental deficiency in the draft EIS/EIR evaluation of fisheries impacts is the grouping of Mokelumne and Sacramento fishery populations into a single combined unit for the purpose of determining Program impacts. Because these are two distinctly separate fisheries, on two distinctly different river systems, this grouping is inappropriate. Consequently, the draft EIS/EIR analysis and resulting findings are fundamentally incorrect. In effect, the analysis masks the Program's impacts on the Mokelumne fisheries. **EBMUD-2**

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Mr. Paul Marshall
DWR/Bay Delta Office
Page 2

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The District has been heavily involved in the stewardship of the Mokelumne fishery and its associated Mokelumne River habitat. Pursuant to a joint settlement agreement (JSA) between U.S. Fish & Wildlife Services, California Department of Fish & Game, and EBMUD, approved by the Federal Energy Regulatory Commission in 1998, EBMUD has invested over $15 M in the conservation and restoration of the lower Mokelumne River anadromous fishery and its associated ecosystem. The District continues to invest significant resources to preserve and protect the Mokelumne fishery. Through the work performed by the District and its resource agency partners, considerable scientific information is available about the Mokelumne salmon and steelhead populations. The attached comments and recommendations for addressing deficiencies in the fisheries evaluation of the Program draft EIS/EIR are based on that work and the information presented in the draft EIS/EIR.

EBMUD-2

Additionally, there is no analysis of the potential impacts on the Woodward Island levees as a result of increased channel flows. This is of particular concern as the Stage 2 project unfolds. This issue is also more fully discussed in the attached comments.

EBMUD-3

Thank you for your consideration of these comments. If you have any questions please call Joe Miyamoto, Manager of Fishery & Wildlife at (510) 287-2021 for more information.

Sincerely,

W. R. Alcott
Director of Water and Natural Resources

WRA:PGS:cf

FEB 07 2006

00152

EBMUD Comments on the SDIP Draft EIS/EIR

MOKELUMNE FISHERY ISSUES

The draft EIS/EIR fails to adequately address the Mokelumne fisheries by omitting the Mokelumne River system from the discussion; by its flawed analysis of Mokelumne and Sacramento River data; and by acknowledging certain impacts and then failing to address those impacts.

Omissions

The following citations are indicative of the draft EIS/EIR's failure to properly consider the Program's impacts to the Mokelumne River fishery. The Mokelumne system is a critical and distinct ecosystem which must be specifically evaluated.

EBMUD-4

- Page 6.1-1: *Introduction. This assessment covers species within aquatic environments potentially affected by the SDIP, including the Sacramento, Feather, San Joaquin, and Trinity Rivers, the Delta, and Suisun Bay.* The Mokelumne River aquatic environment may be affected by the SDIP and it should be specifically identified and assessed in the draft EIS/EIR.
- Page 6.1-35: *The hypothesis is that alternate migration pathways have different effects on juvenile Chinook salmon survival from the Sacramento and San Joaquin Rivers.* The Mokelumne River provides a migration pathway for Mokelumne origin Chinook salmon and it needs to be assessed in this section. Mokelumne fishery impacts will be distinctly different than Sacramento fishery impacts, given that Mokelumne fish use the central Delta as their primary migratory path.
- Page 6.1-77: *Impact Fish-44: Operations Related Decline in Migration Habitat Conditions for Chinook Salmon. The Sacramento, Feather and American Rivers provide a migration pathway between freshwater and estuarine habitats for Chinook salmon. In the Delta, juvenile Chinook salmon survival is lower for fish migrating through the central Delta than for fish continuing down the Sacramento River channel.* This section must also include a discussion of the Mokelumne River migratory pathway.
- Page J-37: *An effective mitigation measure for export pumping entrainment impacts at the CVP and SWP pumping plants would be to extend the closure of the DCC gates continuously from November 1 through June 30. Extending the closure period for the entire 8-month period would protect a substantial portion of all Sacramento River Chinook salmon.* The draft EIS/EIR fails to consider the impact of such a closure on the Mokelumne origin juvenile salmonids. Closure of the DCC gates combined with increased export pumping may draw more fish

FEB 07 2006 00152

from the central Delta towards the export pumps. Newman and Rice (1997)[1] showed higher survival for juvenile salmon released in the central Delta when the DCC gates were open. EBMUD-4

The EIS/EIR needs to address these omissions by analyzing Program impacts specific to the Mokelumne fishery including the Central Delta migratory pathway used by Mokelumne origin Chinook salmon.

Flawed Analysis

The draft EIS/EIR erroneously analyzes the Mokelumne and Sacramento fisheries as a combined unit for the purpose of determining impacts. Page 6.1-85 states: *If an annual entrainment loss approaching 6,000 fish occurred during a year when production of juveniles is low (i.e., 18 million fish), the loss would represent about 0.03% of the annual production. The loss contributed by additional pumping under Alternative 2A for such a year could approach just 0.006% of the juvenile population. The simulated increase of entrainment related losses would be small, and the proportion of annual fall-run production from the Sacramento River basin* ***and*** *the Mokelumne River lost to entrainment would be inconsequential, having a less than significant impact on the population.* EBMUD-5

The conclusion that the Mokelumne fish losses would be inconsequential and therefore less than significant is not supported by appropriate analysis. Mokelumne fall-run Chinook salmon have different migratory pathways than Sacramento origin salmon, especially from those fish that stay in the Sacramento River below the DCC. Because Mokelumne River fall-run Chinook salmon must migrate through the central Delta, the entrainment losses would be greater than the Sacramento Chinook losses, where only a portion of the salmon enter the central Delta. By combining the Mokelumne and Sacramento River data, the impacts on the Mokelumne fishery are greatly understated.

DWR's particle tracking models demonstrate that Mokelumne fisheries are likely to be impacted to a greater degree than Sacramento River fisheries. Particle tracking model results for particles injected in the Mokelumne North Fork and Sacramento River indicate the need to assess the effects on the Mokelumne fishery separate from the Sacramento River fishery. Page J-20 states "*Table J-21g indicates that entrainment of passive particles released in the Mokelumne River, downstream of the DCC, was about 90% for all three Delta outflows, and was similar (5% or less) to the entrainment of particles released from Prisoners Point.* Table J-21h shows a much lower percentage of particles entrained (50 to 60% total particles entrained) for particles injected in the Sacramento River at Freeport and Rio Vista at outflows of 5,000 to 12,000 cfs.

[1] Newman, K. and J. Rice. 1997. A statistical model for salmon smolt survival in the lower Sacramento-San Joaquin System. IEP Technical Report 59.

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The EIS/EIR must analyze Mokelumne River smolt production and entrainment losses independent of the Sacramento River smolt production and entrainment losses. The results of these particle tracking model simulations demonstrate why it is erroneous to combine Sacramento and Mokelumne data for the purpose of determining impacts. To correct this error the EIS/EIR needs to specifically address the entrainment impacts from the project on juvenile salmonids from the Mokelumne River migrating through the central Delta using Mokelumne-specific entrainment losses, smolt production, and other applicable entrainment data.

EBMUD-5

Impacts Identified but not Mitigated

The draft EIS/EIR identifies potential impacts to Mokelumne fisheries but does not appropriately quantify or mitigate for those impacts.

- Page 6.1-119 acknowledges that operation of the head of Old River fish control gate "*will cause more water to be drawn from the central Delta to supply the CVP and SWP pumping, which may increase entrainment of some larval or juvenile fish from the central Delta.*" This effect is quantified in Table J-22G (DSM2 Particle Tracking Results for Mokelumne River (Node 285), which shows that for the upper end of export pumping under VAMP conditions, the total entrainment of Mokelumne particles increases from 1.5% with the Head of Old River Barrier (HORB) out to 49.1% with the HORB in place. For tidal trigger simulations, the total entrainment under these conditions increases from 0.2 to 7.9% with the placement of the HORB. Accordingly, these levels of impact are significant and require additional analysis.

- The report acknowledges that compared to temporary barriers, the operation of permanent barriers would likely extend over longer periods. Permanent barrier operations at the beginning of the irrigation season in the spring could lead to more complex migration routes and increased exposure to entrainment of out-migrating juvenile salmon and steelhead from the Mokelumne River. Attachment 1 provides updated data that should be analyzed and incorporated into Tables J-23 and J-24 of the EIS/EIR. These data indicate that out-migration occurs during the January through July period, and operation of permanent flow barriers in March and April could affect this out-migration through the interior Delta. This impact should be fully addressed by the EIS/EIR.

- The draft EIS/EIR does not adequately mitigate the impacts to juvenile Mokelumne steelhead. Page 6.1-93 acknowledges *"considering that the natural production of steelhead appears to be relatively low, the potential impact of a 15 – 20% increase in entrainment loss in some years is considered significant."* The report concludes that *"Mitigation measures Fish-MM-1 and Fish-MM-2, already described for reducing Chinook entrainment, would reduce the impact to less than significant."* However, mitigation measure Fish-MM-1 only applies from May 16

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through May 31 and Fish-MM-2 only applies from March 1 through April 14 and May 16 through May 31. Attachment 1 to this letter indicates the proportion of juvenile Mokelumne Chinook salmon and steelhead entering the Delta by month from the updated EBMUD data base. The data indicates Fish-MM-1 and 2 do not provide protection during 50% of the juvenile chinook outmigration and 60% of the juvenile steelhead outmigration period. EBMUD-5

Other Issues Requiring Clarification

- Page 6.1-84 states "*Most fall-run Chinook salmon entrainment losses historically have occurred during May. More than 90% of the fall-run Chinook salmon historically entrained by SWP and CVP pumping are believed to have originated from the San Joaquin River basin; therefore only about 10% of the historical entrainment losses would include fall-run Chinook salmon from the Sacramento River basin and the Mokelumne River.*" EBMUD-6

  The draft EIS/EIR does not provide documentation to support the conclusion that 90% of the fall-run Chinook salmon historically entrained by SWP and CVP pumping originate from the San Joaquin River basin. The draft EIS/EIR cites the December 2001 DWR and USBR Biological Assessment (BA) as the source, but there is no data presented in that document. Most of the impact analysis in the BA is focused on spring-run and winter-run Chinook salmon and CV steelhead. For fall-run Chinook, the BA conclusions do not mention the Mokelumne River.

- Appendix Page J-5: *Figure J-6 shows the measured density for steelhead and splittail at the SWP and CVP fish facilities in 1999. The steelhead fish densities measured at the CVP and SWP fish facilities were very low and similar and indicate a maximum density during the months March – May. . . This review of 1999 salvage fish densities from the CVP and SWP fish facilities indicates that there are months with higher densities of fish that reflect the life stage and migration patterns for each species.* EBMUD-7

  The draft EIS/EIR evaluates fish densities based on 1999 peak densities without an explanation as to why 1999 data was used. The peak densities of 1999 do not seem representative of the period from 1998 – 2003, where the mean monthly salvage at both facilities for all steelhead was highest in February, or the period from 1980 to 2002 where the highest maximum monthly average steelhead salvage density occurred in January at the CVP.

- The draft EIS/EIR indicates that increased pumping is most likely to occur during the July through October time frame to facilitate water transfers (pg. 2-15) and increased exports (pg. J-6). The Stage 2 EIS/EIR must assess potential impacts on the upstream migration of Mokelumne origin fall-run Chinook salmon and steelhead resulting from such increases. This may be a particular concern if the EBMUD-8

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transfers occur through a Through-Delta Facility (TDF) that enters the South Mokelumne fork upstream of Beaver Slough and reverse flows occur in the south Delta at higher export levels. A greater number of Mokelumne hatchery origin fall-run Chinook salmon and non-ESU (Ecologically Significant Unit) hatchery steelhead would be expected to stray. **EBMUD-8**

- The EIS/EIR needs to clarify how Fish-MM-2 will reduce the entrainment of juvenile steelhead under the increased pumping scenario of close to 500 cfs in the middle of March, as presented in Figure 6.1-9. The December 2001 DWR and USBR Biological Assessment indicates that based on catch data from the USFWS Chipps Island Trawl, the peak CPUE for unclipped (wild) steelhead occurred in March. **EBMUD-9**

- Table 10-1 indicates a qualitative cumulative impact assessment will be completed for the Delta Cross Channel Reoperation and the Through-Delta Facility. Given the potential routing of the TDF into the South Mokelumne Fork upstream of Beaver Slough, the EIS/EIR needs to include an assessment of the risk of entrainment of Mokelumne origin juvenile salmonids under this scenario. **EBMUD-10**

Supplemental Data

Attachment 1 provides updated data that should be incorporated into Tables J-20, J-23, and J-24 of the EIS/EIR.

In response to the statement regarding a "*lack of information about movement of migrating adult and juvenile steelhead in the Delta*" (as noted on page 6.1-36 of the draft EIS/EIR), Attachment 2 contains coded wire tag recovery information for Mokelumne Hatchery steelhead released on February 3-5, 2004, and February 7-March 10, 2005. This information should be used in analyzing Program impacts related to entrainment loss rate and incorporated into the EIS/EIR. Adjustments to the data are needed to account for sample period at the export pumps and pre-screen losses due to predation at Tracy and CCFB. The data does indicate a significant number of hatchery steelhead that strayed to the Nimbus Hatchery. Higher export rates, Through Delta Facility, permanent operable barriers, and especially the combination of these actions may increase the straying of Mokelumne Hatchery salmon and steelhead.

The Mokelumne Hatchery releases yearling steelhead in the South Mokelumne Fork at Thornton, which flows directly to the interior Delta. The EIS/EIR should use the following data to compare the annual SWP and CVP hatchery steelhead salvage CPUE to the annual number of hatchery steelhead released from the Mokelumne River Hatchery for the period from 1998 to 2005.

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Annual Hatchery Releases of Mokelumne Hatchery Yearling Steelhead

Year	Number Released Susceptible to Entrainment
1998[1]	101,240
1999	124,969
2000	129,577
2001	111,680
2002	0[2]
2003	167,578
2004	239,951
2005	376,010

Footnote 1. August 1997 was the first year of the policy to mark 100% of the hatchery steelhead with an adipose fin clip so the hatchery fish can be separated in the export pump salvage.
Footnote 2. No hatchery fish were released in 2002 due to construction closure to expand the hatchery.

LEVEE INTEGRITY ISSUES

The District is concerned about potential impacts on the levees surrounding Woodward Island, which carries EBMUD's Mokelumne Aqueducts. The draft EIS/EIR does not specifically address the expected velocity changes in the south Delta channels that may result from increased export pumping. Those velocity changes must be identified, especially for Old River and Middle River, in order to determine whether or not Woodward Island levee stability/integrity will be affected, and whether or not mitigating measures will be necessary. It should also be noted that the Middle River channel profile has been altered as a result of the Jones Tract levee failure and subsequent repairs. Those alterations appear to be having an impact on Middle River flow velocities and may also have altered Old River flows. These issues should be addressed before selecting a Stage 2 preferred alternative. **EBMUD-11**

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February 6, 2006
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Attachment 1

Latest Monitoring Data on Out-migration of Juvenile Mokelumne Salmon and Steelhead

Corrected and Updated Data on Tables J-23, J-24 and J-20.

Table J-23. The Proportion of Juvenile Chinook Salmon Production Entering the Delta from the Mokelumne River by Month

MONTH	MOKELUMNE RIVER - SALMON	
	Reported in Table J-23[1]	Updated percentage[2]
January	40.91	15.08
February	30.91	24.51
March	10.91	7.88
April	2.73	7.75
May	10.00	30.75
June	0.00	13.38
July	0.00	0.61
August	0.00	0
September	0.00	0
October	2.73	0
November	0.91	0
December	0.91	0.06

[1]Rotary Screw Trap data from EBMUD from December 1997 to August 1998
[2] Rotary Screw Trap data from EBMUD from December 1997 to July 2005

Table J-24. The Proportion of Juvenile Steelhead Production Entering the Delta from the Mokelumne River by Month

MONTH	MOKELUMNE RIVER - STEELHEAD	
	Reported in Table J-24[1]	Updated percentage[2]
January	44.28	3.98
February	0.73	9.57
March	2.80	12.09
April	4.62	9.22
May	2.68	17.05
June	4.74	27.18
July	5.60	19.29
August	0.49	0.14
September	0.00	0
October	0.00	0
November	0.00	0
December	34.06	1.47

[1] Rotary Screw Trap data from EBMUD from December 1997 to August 1998
[2] Rotary Screw Trap data from EBMUD from December 1997 to August 2005

Attachment 1
EBMUD SDIP Comment Letter
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Table J-20. Natural escapement used to calculate production of juvenile Chinook entering the Delta (from Natural Escapement) for 1970-2002.

YEAR	TOTAL MOKELUMNE ADULTS	
	Reported in Table J-20	Updated Numbers
1980	400	2592[1]
1981	50	4954[1]
1982	1800	6695[1]
1983	1700	11293[1]
1983	50	8298[1]
1985	200	7459[1]
1986	300	5254[1]
1987	100	1000[1]
1988	100	400[1]
1989	50	199[2]
1990	50	429[2]
1991	50	368[2]
1992	300	935[2]
1993	1500	993[2]
1994	1200	1238[2]
1995	2400	2194[2]
1996	1800	4038[2]
1997	6300	3681[2]
1998	2500	4122[2]
1999	1600	2183[2]
2000	4600	1973[2]
2001	4300	2307[2]
2002	5800	2804[2]

[1] Data from CDFG Grand Tab
[2] Data from EBMUD FERC report

Attachment 1 (continued)
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February 6, 2006

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Attachment 2
Results from 2004 & 2005
Coded-Wire Tag (CWT) Releases

	2004	2005
Release Dates	Feb 3 – Feb 5	Feb 7 – Mar 10
Release Location	New Hope Landing (Mokelumne River)	New Hope Landing (Mokelumne River)
Number Released	163,170	282,266
Size at Release (mm FL)	171	184-201
Federal Fish Facility		
Number Recovered[1]	37	15
Recovery Dates	Feb 12 – Apr 3	Mar 16 – Apr 27
Size at Recovery	185-275	200-261
State Fish Facility		
Number Recovered[1]	56	15
Recovery Dates	Feb 16 – Mar 22	Feb 16 – Apr 14
Size at Recovery	180-275	200-255
Nimbus Fish Hatchery		
Number Recovered	27	Not Available
Recovery Dates	Dec 22 – Feb 23	
Size at Recovery	400-530	
Mokelumne River Hatchery		
Number Recovered	20	Not Available
Recovery Dates	Dec 9 – Mar 15	
Size at Recovery	400-511	
Mokelumne River		
Number Recovered		2
Recovery Dates		May 12 – May 18
Size at Recovery		202-242
Cosumnes River		
Number Recovered	3	
Recovery Dates	May 20 – Jun 2	
Size at Recovery	211-242	
Chipps Island Trawl		
Number Recovered	1	Not Available
Recovery Dates	Feb 27	
Size at Recovery	193	

[1]Raw recovery data needs to be expanded for sample period and pre-screen and with-in facility predation losses.

Attachment 2
EBMUD SDIP Comment Letter
February 6, 2006

Responses to Comments

EBMUD-1 and EBMUD-3

Concern for potential erosion along Woodward Island (where the EBMUD aqueduct crosses the Delta) is recognized. Section 5.2 and Appendix D describe the tidal flows in the south Delta, including Old and Middle Rivers near Woodward Island. No substantial changes in flow velocities, which are controlled by the tidal flows, were identified. Refer to tidal flow results in Old River at State Route 4 (Figure 5.2-55). SDIP increased pumping will not result in any substantial changes in maximum tidal flows; the tidal velocities along Woodward Island will not change significantly.

EBMUD-2

EBMUD has contributed greatly to the restoration of Chinook salmon in the Mokelumne River and its concerns regarding the impacts of the SDIP on the Mokelumne fish is understandable. However, the analysis did not focus on fish from any single river but instead analyzed the impacts at the species level. While each river is unique and the impacts on fish from individual rivers is likely to vary to some degree from the impacts at the species level, the EIS/EIR characterized the potential impacts with a general species-level analysis.

EBMUD-4

The SDIP Draft EIS/EIR identified impacts at the species level rather than the impacts on fish from individual streams such as the Mokelumne. The Mokelumne River is considered an important Central Valley River, but all provide similar habitats for Chinook salmon, steelhead, and other anadromous and resident fish species. The SDIP Stage 1 is expected to have no direct impact on the Mokelumne fish. Although the Mokelumne River is a tributary to the San Joaquin River, operational impacts (Stage 2) are assumed to be more similar to impacts on other fish from the Sacramento River because it enters the Delta in the vicinity of the DCC and Georgiana Slough. Because rearing and migration habitat conditions are assumed to be related to river flows, which are not expected to change substantially for either Stage 1 or Stage 2 of the SDIP, there are no effects from the SDIP (Stage 2) on the Mokelumne River habitat conditions.

EBMUD-5

The SDIP impacts on Mokelumne fish would be related only to changes in conditions caused by tidal gates (Stage 1) or increased pumping (Stage 2). The fish evaluation indicates that the changes in river flows and Delta channel flows

are very small. There is no identified mechanism that would potentially affect the Mokelumne fish differently from other Sacramento River fish entering the central Delta. It is recognized that the existing migratory pathway for Mokelumne fish may be more vulnerable to entrainment in the CVP and SWP pumps than Sacramento River fish. Any additional closure of the DCC for fish protection that might be considered as mitigation of Stage 2 impacts will include a separate analysis of Mokelumne fish. Although the particle tracking results are presented in Appendix J, the potential Stage 2 fish entrainment impacts were evaluated assuming that entrainment impacts are related to export pumping. The potential effects of head of Old River gate closure on fish migrating or rearing in the central Delta will be more fully considered by the GORT.

The rotary screw trap data from the Mokelumne River indicate that substantial numbers of fry enter the Delta in January and February. These fish are likely rearing within the Delta channels and are not likely entrained at the exports. Table J-11 and J-12 indicate that the entrainment of steelhead can occur in January and February, but the mitigation measures will protect the majority of the steelhead from the Central Valley Rivers. Very little historical entrainment of steelhead has been observed in June and July, when the majority of the steelhead apparently migrated from the Mokelumne River.

EBMUD-6

Documentation for the assumption that 90% of the fish entrained in the CVP and SWP is referenced in the sentence as DWR and Reclamation BA (2001). This BA represents the best available information at this time.

EBMUD-7

The splittail and steelhead data from 1999 were used only as an example. The more complete salvage density data that were used in the analysis is found in Tables J-16 and J-17.

EBMUD-8

The water transfer window is July–September and is generally supported by agencies and is intended to have the least impact on Delta fish subject to entrainment and adult Chinook salmon moving upstream. The potential impact of increased pumping on straying of hatchery fish has not been previously identified.

EBMUD-9

The mitigation benefit of Fish MM-2 relies on the expanded EWA managers to provide mitigation (reduced pumping) during March when protection is needed to avoid the high density of Chinook salmon or steelhead and other fish. March is the peak month for steelhead entrainment.

EBMUD-10

Please see response to comment EBMUD-2. DWR and Reclamation will continue working with EBMUD to identify and resolve potential concerns during the Stage 2 evaluation process.

EBMUD-11

Please see responses to comments EBMUD-1 and EBMUD-3.

Comment Letter KCWA

KCWA

February 7, 2006

FEB 07 2006 00158

Mr. Lester Snow, Director
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

RE: Comments on the South Delta Improvements Program Environmental Impact Statement/Environmental Impact Report

Dear Mr. Snow:

The Kern County Water Agency (Agency) appreciates the opportunity to comment on the South Delta Improvement Program Draft Environmental Impact Statement/Environmental Impact Report (EIS/R). The Agency commends the Department of Water Resources (DWR) for issuing the EIS/R and supports implementing the project.

The EIS/R provides a solid analytical foundation and a well-reasoned basis for determining the project's potential environmental impacts. The following comments are made to assist DWR in identifying areas where the EIS/R can be clarified or strengthened.

Staged Decision Process

KCWA-1

The EIS/R attempts to lay out a staged decision process intended to reduce the potential for environmental impacts by allowing a decision on the second stage of the project to occur after additional scientific data on the Delta's pelagic fisheries becomes available. This approach is a positive feature of the project but may be misleading to some stakeholder groups. The EIS/R provides the environmental analysis for both stages of the decision process. Comments or challenges to the second stage of the project will necessarily be based on the analysis in the EIS/R. Because much of that analysis does not distinguish between Stage 1 and Stage 2 of the project, stakeholders pursuing judicial challenges to the Stage 2 decision may seek to retroactively invalidate the Stage 1 decision by attacking the environmental analysis common to both decisions. The Department should clarify that the Stage 1 decision will not be revisited during the deliberations leading to a decision on Stage 2.

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Accelerated Installation of Operable Gates Does Not Require Separate Mitigation

KCWA-2

The CALFED Bay-Delta Record of Decision (CALFED ROD), dated August 28, 2000, was certified based on a comprehensive package of actions that included Stage 1 and Stage 2 of the EIS/R. In support of that certification, the environmental analysis performed for the CALFED ROD determined that increased pumping as described in Stage 2 of the EIS/R could precede installation of permanent operable barriers (now called operable gates and referred to as Stage 1 in the EIS/R) and precede portions of the CALFED Ecosystem Restoration Program.

The EIS/R determination that Stage 1 requires mitigation separate from Stage 2 is inconsistent with the CALFED ROD. The CALFED ROD requires the installation of the gates prior to increasing pumping to 10,300 cfs, but not prior to increasing pumping to 8,500 cfs. The EIS/R does not adequately explain why the same operable gates which the CALFED ROD required to mitigate for pumping at 10,300 cfs, but not 8,500 cfs, are now required to provide mitigation for Stage 1 implementation when pumping will remain at current levels with very limited water quality, water level and fishery impacts. The EIS/R should provide an analysis of the changed water quality, water level and fishery impacts that make the environmental analysis of the CALFED ROD invalid for the purposes of Stage 1 of this EIS/R. This same analysis is applicable to Stage 2.

Existing Mitigation Not Credited Toward Potential Project Impacts

KCWA-3

The EIS/R does not recognize the existing mitigation measures already in place to mitigate the potential environmental impacts that might result from implementation of Stage 1 or Stage 2.

Some actions have already been taken, or are proposed to be taken, that would provide mitigation in excess of that provided by the 1995 amendment to the 4 Pumps Agreement. These mitigation actions, which include the following, should be credited toward any mitigation obligation for Stage 1 and Stage 2 of the EIS/R.

- Implementation of the CALFED ERP (over 400 projects with expenditures exceeding $1 billion).[1]
- 50% of the "windfall" water available to the SWP under the CVPIA was dedicated to the EWA by the CALFED ROD. This water serves to support the ROD determination that impacts of the Conveyance Program are already mitigated by the ERP.[2]
- Providing 500 cubic feet per second (cfs) of pumping capacity July through September when pumping above 6,680 cfs is available which results in:
- Up to 60 TAF before SWP contractors may benefit; plus
- 30 TAF after 200 TAF has been provided for beneficial export uses.

[1] The CALFED MSCS states that the Multi-Species Conservation Strategy (MSCS) for the CALFED program ". . . addresses the potential adverse and beneficial effects on plant and animal species of all Program actions, including ERP actions and other Program actions such as levee system integrity, water storage, and water conveyance actions. Based in large part on the ERP, the MSCS' premise is that the Program as a whole, including all program elements, will improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta. The ERP, therefore, serves two purposes: 1) to achieve Program objectives for ecosystem restoration; and 2) to enable actions from all Program elements to be completed in compliance with FESA, CESA, and NCCPA."

[2] See Footnote 1.

Mr. Lester Snow, Director
California Department of Water Resources
February 7, 2006
Page 3 of 3

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The EIS/R fails to consider or discuss how these existing mitigation activities are credited toward the potential environmental impacts of Stage 1 and Stage 2. As a result, it is likely that Stage 1 of the project is over mitigated and possible that Stage 2 also is over mitigated. KCWA-3

Unbalanced Implementation of the CALFED Program Provides Surplus Mitigation KCWA-4

Recent review of the CALFED Program by the Department of Finance indicates that implementation of the CALFED ERP has outpaced implementation of other programs, including the conveyance program. This differential in implementation is a significant factor in the general consensus that the CALFED Program is unbalanced. The advanced degree of implementation for the ERP also results in greater environmental benefits to the South Delta ecosystem than originally anticipated when the CALFED ROD was certified. As a result, the "trajectory of recovery" exceeds what was included in the environmental analysis of the CALFED ROD because the conveyance projects were not implemented on schedule. The EIS/R does not adequately explain why greater than expected implementation of environmental programs under the CALFED ERP as compared to implementation of the CALFED Programs included in the EIS/R does not reduce the mitigation necessary for Stage 1 and Stage 2 projects.

The Agency participated in the preparation of comments on the EIS/R submitted by the State Water Contractors, Inc. by letter dated February 7, 2006. The Agency agrees with and supports those comments and hereby incorporates them by reference.

The Agency appreciates the opportunity to comment on the EIS/R. If you have any questions regarding these comments, please contact Mr. Brent Walthall of my staff.

Sincerely,

James M. Beck
General Manager

cc: State Water Contractors, Inc.

Responses to Comments

KCWA-1

Text in Chapter 2 of the SDIP Draft EIS/EIR has been modified per your comment.

KCWA-2

The gates themselves do not provide mitigation of Stage 1, in which the SWP exports are operated under existing rules and regulations. However, specific operations of the gates can result in improved conditions in the Delta for fish and diverters. DWR and Reclamation are committed to continuous improvements in the Delta, as called for in the CALFED ROD, and therefore are pursuing the implementation of Stage 1 regardless of what Stage 2 decisions are made.

KCWA-3 and KCWA-4

CALFED actions implemented specifically to improve habitats and the environment help to reduce the effects of the overall CALFED Program on these resources. However, CEQA and NEPA require lead agencies to identify and mitigate specifically for impacts on environmental resources resulting from a specific project. Therefore, specific mitigation of each specific impact resulting from the implementation of the SDIP is proposed. Although the ERP and other programs consistent with CALFED benefit the environment, DWR and Reclamation do not commit to them as specific measures they will implement to mitigate effects of the SDIP, and therefore these measures are not credited toward the SDIP.

Comment Letter RD800

RD800

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FEB 09 2006 00166

February 7, 2006

Paul Marshall
California Department of Water Resources
1416 Ninth Street
Sacramento, CA 95814

Sharon McHale
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Re: South Delta Improvements Program Draft EIS/EIR

Dear Ms. McHale and Mr. Marshall:

Introduction and Summary of Comments

Our firm represents Reclamation District No. 800 (Byron Tract) (the "District"), which is located on the west bank of Old River just north of Clifton Court Forebay. The District includes approximately 6,500 acres of land in agricultural production and is home to approximately 10,000 people in the community of Discovery Bay. The District appreciates the effort by the California Department of Water Resources (the "Department") and the United States Bureau of Reclamation ("Reclamation") to describe for the public the potential impacts of the South Delta Improvements Program ("SDIP").

The District has reviewed the Draft EIS/EIR for the SDIP (the "Draft EIS/EIR") in order to determine the potential impacts of the SDIP on the District. Specifically, the District is concerned that the full implementation of SDIP could have adverse effects on: (i) water levels in the southern and western Delta, (ii) water circulation within Discovery Bay, (iii) the quality of water used for agricultural production in the District, (iv) recreational boating in the Delta and (v) navigation in the Delta for the purpose of maintaining and repairing the District's levees. The Draft EIS/EIR indicates, based on modeling results, that SDIP will not have any of these adverse effects. Given the many uncertainties regarding the Delta, the District is willing to not to contest the impact conclusions of the Draft EIS/EIR but requests that the two Lead Agencies enter into discussions with the District aimed at including performance standards in the Final EIS/EIR that will guarantee that implementation of SDIP will not have an adverse effect on the District.

1. *Potential Impacts of Concern to the District.*

As noted above, the District is concerned about five potential physical changes in the environment that could result from the implementation of SDIP.

First, SDIP could have an adverse effect on the environment by lowering water levels in the south and western Delta. A reduction in water levels would directly interfere with navigation. Recreational boating in Discovery Bay is a primary activity of the District's residents; it is reasonably foreseeable that the District would need to dredge some or all of the channels within Discovery Bay in order to preserve the ability of the District's residents to use their boats. RD800-1

Further, with regard to the agricultural diversions within the District, a reduction in water levels – especially at Italian Slough – could result in water levels that would interfere with the siphons that deliver water via gravity to crops. The gravity-operated siphons are highly sensitive to changes in water levels and are dependent on head differential to operate properly. Landowners in the District rely on the siphons to distribute agricultural water; it would be difficult – if not impossible – for those landowners to connect to an electrical system that would serve a pumping plant. The potential interruption of water supplies would lead to a reduction in crop yields and an adverse financial impact on growers. RD800-2

Second, SDIP could have an adverse effect on the environment by interfering with the circulation of water within Discovery Bay. The District circulates approximately 42 million gallons per day of water through Discovery Bay; it is that circulation of water through the development that, save in rare cases, prevents stagnant water and algae blooms. The District's system of siphons was designed during the 1960's with then-current water levels as part of the design criteria. As previously explained, the District's siphons are sensitive to water level fluctuations. A reduction in water surface elevations, as proposed by SDIP, would lead to a reduction in the head differential between different portions of Discovery Bay and a consequent reduction in the effectiveness of the water circulation system. Such a change could well lead to more widespread areas of stagnant water, more frequent algal blooms and poorer overall water quality. RD800-3

Third, SDIP could lead to a reduction in water quality in the western Delta. The District is aware that there is a present controversy in that the California State Water Resources Control Board has issued a proposed Cease and Desist Order against the two Lead Agencies for violations of water quality standards in the Delta. Any reduction in water quality that might result from the implementation of SDIP would aggravate this existing condition. Particularly in the southern portion of the District, a reduction in water quality (or, put otherwise, an increase in salinity), could have an adverse impact on crop yields or cropping mix on agricultural lands. RD800-4

Fourth, SDIP could impede recreational boating in the Delta by preventing (or at least making more difficult) movement from the western and southern Delta to the San Joaquin River. The installation of the permanent barriers, even with locks that are designed to provide passage for recreational boats, will impede navigation in the Delta. RD800-5

Fifth, lowered water surface elevations could interfere with the District's maintenance of its levee system. The District must be able to access the levees by barge to perform necessary maintenance and repairs. Lowered water levels caused by the installation of permanent barriers RD800-6

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and/or increased pumping may well impede the District's ability to access its levees for this purpose. RD800-6

2. *Thresholds of Significance*

In each of these cases, the Draft EIS/EIR has adopted a threshold of significance. The District concurs with the general intent of these thresholds, which establish that any change from present conditions is considered to be a significant adverse effect on the environment. The following table shows the threshold of significance for each of the foregoing impacts.

Impact	Threshold of Significance
Reduction in water levels	"A project alternative is considered to have a significant effect on local channel hydraulics if it would cause local tidal flows to substantially exceed the historical range of tidal levels or to be substantially reduced below historical tidal levels." Draft EIS/EIR at 5.2-42 to 5.2-43.
Interference with water circulation	Same as reduction in water levels. Also, "[a] project alternative is considered to have significant impact on tidal circulation flows [and hence on the Discovery Bay siphon system] if it would cause monthly average tidal flows to be reduced substantially below historical tidal flows. . . There is considerable natural variability in tidal conditions. A 10% threshold is selected to distinguish an impact from this natural variability. A reduction in simulated average tidal flows of more than 10% was assumed to be substantial." Draft EIS/EIR at 5.3-31.

FEB 09 2006 00166

Impact	Threshold of Significance
Reduction in water quality	"Increases in EC values that result in exceedance of the maximum objective at specified locations in the Delta are considered to be significant water quality impacts. Monthly changes in EC values are also considered to be significant if they exceed 10% of the applicable objective." Draft EIS/EIR at 5.3-22.
Interference with recreational boating	"Impacts on both water-dependent and water-enhanced recreation opportunities may be considered significant if implementation of an alternative would cause a change in south Delta flows, or reservoir surface water elevations that would result in substantial changes to existing recreational opportunities." Draft EIS/EIR at 7.4-19.
Interference with non-recreational navigation	"[A] project may be considered to have a significant effect on the environment if it would result in. . . impedance of navigational craft as a result of cofferdams, or the staging of barges in navigational sections of the South Delta waterways; impedance or blockage of navigational craft in the Delta channels where the fish control gate and flow control gates are installed; and safety conflicts by operating large, slow-moving dredging equipment on Delta waterways." Draft EIS/EIR at 5.8-9 to 5.9-10.

3. *Adoption of Performance Standards.*

The Draft EIS/EIR concludes that SDIP will not have a significant adverse effect on the environment in any of the areas of concern to the District. Specifically, the Draft EIS/EIR described the impacts of SDIP on water levels as less than significant at pages 5.2-46; 5.2-52; 5.2-54; 5.2-55; 5.2-59; 5.2-61. The Draft EIS/EIR found that there would be no significant effect on the water available for agricultural diversions due to Phase I at pages 5.1-33 – 5.1-34. The Draft EIS/EIR acknowledged that there could be impacts from Stage 2, but failed to prescribe any mitigation measures at this time. Draft EIS/EIR at 5.1-35 – 5.1-37; 5.1-41 – 5.1-42; 5.1-44 – 5.1-45; 5.1-45 – 5.1-46; 5.1-47; 5.1-48. The Draft EIS/EIR found that impacts to water quality were less than significant at pages 5.3-31; 5.2-39; 5.3-44; 5.3-47; 5.3-49; 5.3-51 – 5.3-52; 5.3-54; 5.3-55; 5.3-58. The Draft EIS/EIR found that impacts to recreational boating were less than significant at pages 7.4-21 – 7.4-22; 7.4-23; 7.4-24; 7.4-26. Finally, the Draft EIS/EIR found that the impacts on non-recreational navigation in the Delta were less than significant at pages 5.8-14; 5.8-16 – 5.8.17; 5.8-18; 5.8-19; 5.8-21; 5.8-22 – 5.8-23.[1]

RD800-7

The Department and Reclamation are well-aware that there is presently substantial scientific uncertainty and public controversy regarding the cause(s) of declining fish populations in the Delta. It is rare to find a day without an article in the Department's clipping service discussing questions or controversies relating to the Delta. This uncertainty is aggravated by the cumulative nature of impacts in the Delta. SDIP's impacts on the environment cannot be gauged in a vacuum. Over the past fifty years – indeed, over the past 150 years – there have been a very large number of projects that have had physical impacts on the Delta and that have modified the Delta's environment. The District's modeling indicates that the cumulative impacts of the projects over the past fifty years in combination with SDIP have resulted in decreased water levels in Discovery Bay of up to 1.0 foot and up to 1.5 feet in Italian Slough. Accurately predicting the potential impacts of SDIP on such an environment is a daunting task, but significant cumulative impacts, such as these decreases in water surface elevations, must be addressed. In light of this uncertainty, the District wishes to ensure that SDIP, if implemented, in fact does not have adverse effects on the District.

RD800-8

Accordingly, the District hereby requests the opportunity to meet jointly with the Department and Reclamation to cooperatively develop performance standards that would be included in the Final EIS/EIR and that would guarantee that SDIP performs as well in practice as described in the Draft EIS/EIR. Data that the District has collected through its cooperative water level monitoring program with the Department is appropriate information for discussion and upon which to base the development of the performance standards. The District will also share any

RD800-9

[1] The District notes that the threshold for significance of non-recreational navigation does not identify a threshold for the potential effect of impeded navigation due to more shallow water. The District proposes that developing an appropriate standard for this effect be part of the discussion of performance standards among the District, the Department and Reclamation.

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additional information it has as a part of the discussions. In particular, the District proposes that we discuss performance standards for: (i) variations in water levels at several points within the District, (ii) water quality in Old River, and (iii) navigational access to the Delta from Discovery Bay. Such performance standards, of course, would be consistent with all applicable provisions of local, state and federal law. RD800-9

Please contact the District's Manager, Jeffrey Conway at (925) 634-2351 at your earliest convenience so that we may begin the process of developing appropriate performance standards.

Very truly yours,

DOWNEY BRAND LLP

David R.E. Aladjem
729126.4

cc: Board of Trustees
Jeffrey Conway
Christopher Neudeck

DOWNEY | BRAND
ATTORNEYS LLP

Responses to Comments

RD800-1, RD800-2, and RD800-3

DSM2 modeling shows that tidal water level in the vicinity of RD 800 will not change as a result of the SDIP. No effects on siphons, navigation, or water circulation are expected in Discovery Bay.

RD800-4

DSM2 modeling indicates that changes in salinity in the vicinity of RD 800 will be less than significant. Salinity in Old River at State Route 4 (CCWD Los Vaqueros Intake) is representative of salinity in Discovery Bay.

The water quality model used for impact assessment for Stage 1 of the SDIPshows an increase in salinity of 0.1 and 0.2% at Emmaton and Jersey Island, respectively. This level of impact on the western Delta was not considered a significant impact, for which mitigation is required. The water quality section also indicates a potential substantial decrease in salinity in the South Delta on Old River (17% reduction) and Middle River (25% reduction). These two sites represent water quality compliance monitoring stations in a current Cease and Desist Order issued by the State Water Board. Two other compliance stations would not be significantly affected by Stage 1 elements of the SDIP. Because of the expected benefits to south Delta water quality resulting from Stage 1, the current Cease and Desist Order nearly requires the construction of the proposed permanent operable gates or implementation of equivalent measures.

RD800-5

The permanent gates are not expected to result in substantial changes in navigational access through south Delta channels. The temporary barriers currently installed each year use boat ramps at each location. The permanent gates would each have a boat lock (except in the case of Middle River) that can accommodate up to several boats at once and would be operated at all times during gate operation. The upper sections of Middle River are shallow and do not support boating access. It is not expected that the use of the boat lock will take substantially more time than the boat ramp. Compared to the existing temporary barriers, the permanent gates would provide the same or greater passage because they would only be operated during the ebb-tide periods of each day, as necessary, rather than constructed and left in place for months at a time.

RD800-6

Please see the response to comment RD800-1.

RD800-7 and RD800-9

DWR and Reclamation will meet with RD 800 and other water districts, levee maintenance districts, and reclamation districts to describe monitoring and other assurances to demonstrate minimal impacts on local district activities.

RD800-8

Cumulative effects of CVP and SWP pumping on water level are illustrated in Figures 5.2-15, 5.2-16, and 5.2-17. Very little change in water level from SDIP Stage 2 was identified for any south Delta location.

Comment Letter SJC

SJC

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Feb 07, 2006 00136

February 7, 2006

Sent by e-mail to sdip_comments@water.ca.gov and U.S. Mail

Mr. Paul Marshall
SDIP EIS/EIR Comments
State of California Department of Resources
Bay Delta Office
1416 Ninth Street
Sacramento, CA 95814

Re: SDIP EIS/EIR COMMENTS

Dear Mr. Marshall:

On behalf of the County of San Joaquin ("County") we submit the following comments to the South Delta Improvements Program ("SDIP") Draft Environmental Impact Statement/Environmental Impact Report ("EIR").

The County has serious concerns regarding the SDIP as described in the EIR. First, the SDIP's proposed installation of permanent operable barriers must be installed and operated to provide adequate water quantity and quality at all times to the agricultural water users and for other beneficial uses located within the South Delta. The project purpose should be revised to fully mitigate the adverse impacts to the area caused by the export projects, to meet all existing water quality standards, and to satisfy the needs of all beneficial uses pursuant to the Delta Protection Act. Rather than operating at a minimal level as currently addressed in the EIR, the SDIP should be operated to maximize water quality in the channels in line with CALFED's goal of continuing improvements in water quality. SJC-1

The County supports the proposed dredging of Middle River and Old River so long as the modifications to the impacted agricultural diversions are made to the satisfaction of the local diverters and that periodic dredging occurs to maintain the optimal operation of the barriers. The County does not support increased south of the Delta exports associated with pumping at 8,500 or the Napa Proposition and objects to any linkage between increased pumping and the barrier program.

In addition, the County has other concerns regarding the impacts of the SDIP on flood control, on dissolved oxygen issues in the Deep Water Ship Channel as well as the fishery and recreational resources of the Delta.

The Project Overview provides on page 5 that the temporary barriers project began in 1991 "as an effort to improve the water levels, circulation patterns and fish protection in the South Delta" and it indicates that the three temporary rock barriers are used "to improve conditions

400282-2

Feb 07, 2006 00136

for local agriculture." The Project Overview continues on page 6 that a goal of the SDIP is "to increase water supplies south of the Delta." The EIR Executive Summary indicates on page ES-1 that since 1991, actions have been proposed to "improve water supply for south Delta agriculture, improve fish protection, and increase the amount and reliability of water supply for the State Water Project ("SWP") and the Central Valley Project ("CVP").

The County does not support any increase in water supplies south of the Delta, especially until and unless the water supplies and the water quality of the water supplies within the south Delta used for agricultural and other purposes are improved and protected. Such export and use of Delta water without the prior satisfaction of the needs of the south Delta agricultural users would be a direct violation of the Delta Protection Act (Wat. Code. §§ 12200 et seq.) and the Watershed Protection Statute (Wat. Code §§ 11460 et seq.). The SWP must not increase any pumping capacity until such time as the current impacts from the export pumps are completely mitigated and until such time as the SDIP improvements are installed and operated in such a manner to demonstrate that the improvements maintain an adequate water supply and adequate water quality for the agricultural beneficial users within the South Delta as well as provides adequate safeguards and mitigation to the Delta fishery resources. **SJC-2**

The County is particularly concerned about how the SDIP will be implemented and managed in such a manner to ensure adequate water quantity, flow and quality in all areas and at all times in order to provide continued adequate water supply to the agricultural beneficial users within the South Delta. At present, there is grave concern that barrier operation modeling results show that this will not be the case. As such, the County adopts by this reference the comments and concerns provided by the South Delta Water Agency. **SJC-3**

The installation and operation of permanent operable barriers must balance and maintain many differing factors to ensure adequate continued water quality and quantity within the south Delta channels. Some of the factors that must be considered and maintained include maintaining adequate water flow within the south Delta rivers, channels and sloughs including protecting against an accumulation of salts and probable water quality standard violations due to the limited water flows during certain periods and within all if the South Delta channels, sloughs and rivers.

In addition, in order to minimize water quality and flow impacts from SDIP on the lower San Joaquin River below Brandt Bridge, DWR and USBR must commit to providing a minimum flow on the River through recirculation, exchanges, or other means without any additional impact on New Melones Reservoir. These agencies should also commit to meeting the water quality standard at Brandt Bridge with downstream flows and not allow reverse flows on the main stem of the San Joaquin River to occur. Such downstream flows will provide help in maintaining the dissolved oxygen levels at the Stockton Deep Water Ship Channel. In addition, the barriers must be operated at all times throughout the year in order to optimize the effect of the barriers to improve water quality and quantity throughout the Delta. **SJC-4**

The County is also concerned with the actual operable barrier design and the construction of the facilities along the Delta channels. The EIR is deficient in information regarding the impact of the barriers on potential flooding in the Delta. DWR must consult with local **SJC-5**

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Reclamation Districts and their engineers to fully analyze the flood flow effects of the barriers. The barriers must be designed to be "flood neutral" as are all other in-water works in the Delta. Any flood flow restriction is unacceptable in the Delta which is already overly stressed during flood situations. The design and construction of the operable barriers may need to include substantial setbacks and levee reconstruction in order to not increase the flood flow demands within the system. **SJC-5**

The installation and operation of the SDIP is a complex proposition. The County requires that such physical facilities are designed, installed and operated in such a manner to protect the County's important beneficial agricultural, fishery and recreational uses. The design and operation of the SDIP must include adequate mitigation measures and safeguards to protect these important County resources.

At this time. the complete impacts of the SDIP is still being evaluated by the County and other interested and affected parties. It is anticipated that additional comments and concerns will be identified regarding the installation and operation of the SDIP and the County requests the opportunity to provide such further comments at a later time.

Very truly yours,

DEEANNE M. GILLICK
Attorney at Law

DMG:dmg

cc: Senator Michael Machado
Dr. Mel Lytle
Thomas J. Shephard

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400282-2

Responses to Comments

SJC-1

The water quality section indicates a potential substantial decrease in salinity in the south Delta on Old River (17% reduction) and Middle River (25% reduction) as a result of implementing Stage 1 of the SDIP. These two sites represent water quality compliance monitoring stations in a current Cease and Desist Order issued by the State Water Board. Two other compliance stations would not be significantly affected by Stage 1 elements of the SDIP.

Please also see Master Response O, *Gate Operations Review Team*.

SJC-2

Implementation of Stage 1 includes the adaptive management of gate operations. Modeling, however, does indicate significant improvements in water quality in several south Delta locations resulting from Stage 1, and slightly less improvement occurring if and when Stage 2 is implemented. For both Stage 1 and Stage 2, DWR and Reclamation would be responsible for the continuous compliance with existing water quality regulations and requirements.

SJC-3

Please see Master Response O, *Gate Operations Review Team*.

SJC-4

Reclamation is currently in the process of developing a Plan of Study for a feasibility study of Delta-Mendota Canal Recirculation as a means to augment flow and improve water quality on the San Joaquin River. Additionally, both DWR and Reclamation are already committed to meeting the water quality standard at Brandt Bridge. Water Rights Decision 1641 stipulates that water quality objectives for agricultural beneficial uses in the southern Delta shall be met at specific monitoring locations, including Brandt Bridge. Furthermore, the project description includes operating the head of Old River gate at times throughout the year that will optimize flow on the San Joaquin River in an effort to help improve DO levels.

The impacts of the SDIP on Brandt Bridge water quality are described on page 5.3-26 and in Figure 5.3-11. Water quality degradation downstream of Brandt Bridge is a function of discharges to the San Joaquin River from various sources. Proposed gate operations at the head of Old River will maintain the historical 50/50 flow split with the San Joaquin River; this will improve flow conditions in

the Deep Water Ship Channel and the low DO conditions. Because the proposed flow conditions will not allow reverse flows in the San Joaquin River past Stockton, the water quality there will be entirely dependent on San Joaquin River water quality and will be slightly lower quality than at other times in the past. Gate operations have little effect on water quality outside of the interior south Delta channels.

SJC-5

Please see Master Response R, *Effects of the South Delta Improvements Program Stage 1 Tidal Gates and Dredging on Flood Elevations in the South Delta Channels*.

Comment Letter SJWD

SJWD

San Juan Water District

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February 8, 2006

Mr. Paul Marshall
1416 Ninth Street
Sacramento, Ca 95814

FEB 14 2006 00200

Subject: SDIP EIS/EIR Comments

Dear Mr. Marshall:

Thank you for the opportunity to comment on the South Delta Improvement Program (SDIP). I have provided my comments below as briefly as possible.

First, I would like to commend both the State of California (SWP) and the United States Bureau of Reclamation (CVP) in working in a collaborative approach to identify the most efficient way to manage water in the State of California. This cooperative approach is refreshing to witness.

The District supports full contractual deliveries to all CVP contractors. While encouraging the SWP and CVP to continue to work in a collaborative manner toward this goal, San Juan Water District believes that the projects must evaluate SDIP's potential impacts to water supply reliability at Folsom Reservoir. In the event that SDIP's implementation reduces carry over storage in Folsom Reservoir, the resulting impacts must be mitigated. SJWD-1

SDIP has significant potential to impact the reliability of water supplies provided by Folsom Reservoir for both consumptive and environmental uses. The CVP uses Folsom Reservoir as an "annual reservoir," based on the assumption is that the Reservoir is highly likely to refill each year, which it generally does. **The District, however, is seriously concerned about the years when Folsom Reservoir does not refill and about whether SDIP will make such shortages years more frequent and/or more severe. SDIP's impacts to fish flows and municipal water supply reliability could be significant if SDIP results in more frequent and/or more severe storage shortages at Folsom Reservoir.**

Folsom Reservoir supplies over 98% of the water supply for San Juan Water District (wholesale provider to Citrus Heights Water District, Fair Oaks Water District, Orange Vale Water Company, and San Juan Water District retail service

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area), as well as the cities of Folsom and Roseville. These purveyors are the water suppliers for the eastern portion of the greater Sacramento Metropolitan Area. The water supply at Folsom Reservoir is critical to the health and safety of over 250,000 people. **Folsom Reservoir is the only portion of the CVP capable of supplying this region**. SJWD-1

The SDIP EIS/EIR states that SDIP would reduce average carryover storage at Folsom Reservoir by an average of 22 taf because of the increased deliveries from the Reservoir to satisfy the increased export demands. It is not the average that primarily concerns the District, but rather the intermittent years in which Folsom storage could be reduced significantly. In those years when reduced Folsom carry over storage spikes significantly lower, water contractors south of the Delta should receive water provided from other reservoirs within the system. As the SWP and CVP continue to evaluate the operational criteria to utilize the additional capacity made available by the SDIP, it is imperative that any potential impact to the reliability of surface water deliveries to Sacramento-area CVP contractors be analyzed and mitigated in a suitable manner.

In addition, the SDIP EIS/EIR also must analyze, and propose mitigation for, the impacts that reduced Folsom storage may have on the lower American River's environmental resources. Sacramento-area municipal water purveyors like the District and environmental groups, among others, have signed the Sacramento Water Forum agreement, under which the signatories work together to satisfy the twin goals of enhancing the region's water supplies and improving the lower American River's environmental resources. Folsom Reservoir of course provides flows to the lower American River. If SDIP would result more frequent and/or more significant reductions in lower American River flows during dry years, then that impact must be analyzed and mitigated in a suitable manner. SJWD-2

I appreciate your acceptance of my comments. If you have any additional questions or comments, please do not hesitate to contact me on my direct line at 916-791-6936.

Sincerely,

Shauna Lorance

Shauna Lorance
General Manager

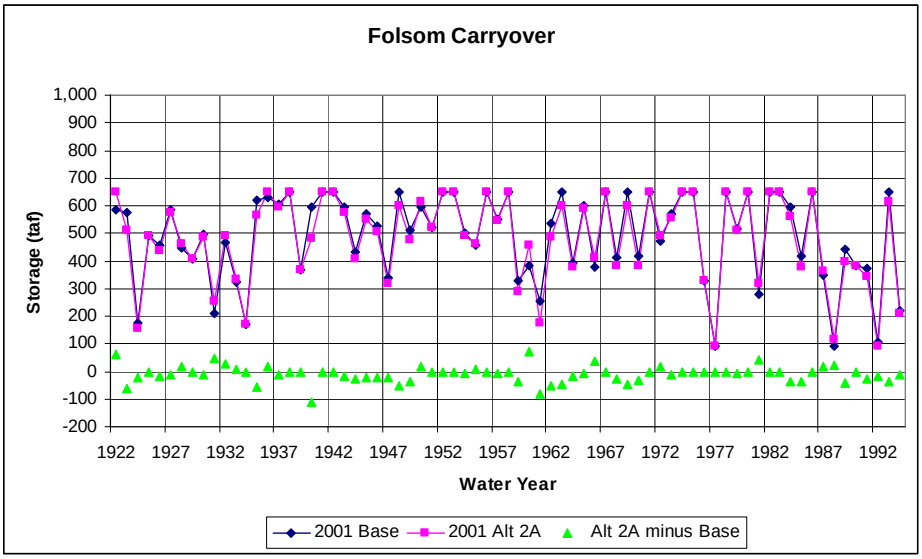
Responses to Comments

SJWD-1

Folsom Reservoir operations will not be changed by the SDIP Stage 2 alternatives. Reclamation operates Folsom to meet all local water contracts and supply all water rights. The Water Forum agreements are included in the CALSIM modeling. The description in Section 5.1 of a reduction in Folsom Reservoir carryover of 22 taf refers to the expected changes under 2020 baseline conditions, largely because of the higher water supply deliveries from Folsom. The SDIP has no additional effects on Folsom Reservoir levels.

The monthly CALSIM results for the SDIP 2001 and 2020 baselines and each alternative can be reviewed in a single Excel spreadsheet (MacroSets_RussOutputs_10-18-05.xls) from the SDIP website (<ftp://ftp.modeling.water.ca.gov/pub/SDIP/DSM2_SDIP_results>).

For example, Alternative 2A will reduce the average carryover storage by less than 10 taf. The pattern of carryover storage will not be substantially reduced. The figure below illustrates these small simulated changes.



SJWD-2

SDIP Stage 2 alternatives will have no effect on the dry year river flows below Folsom Dam. These flows are regulated by the existing water right decisions, as well as by other Reclamation agreements and provisions. If the proposed Water Forum minimum flows are approved, this new water right decision will control flows in dry years.

Comment Letter SDWA

SDWA

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February 7, 2006

Via e-mail

Mr. Paul Marshall
Department of Water Resources

Re: Comments to DEIS/R for the South Delta Improvements Program

Dear Mr. Marshall:

In making these comments, the South Delta Water Agency ("SDWA") notes that it is involved in ongoing discussions and negotiations with DWR regarding the project. It is the intent of the parties through those discussions to resolve all of the issues which are of concern to SDWA. At this time, it is anticipated that the resolution would be some sort of outside agreement similar in form to that which was originally proposed as a settlement to the lawsuit referenced below. In light of this, SDWA looks forward to reaching agreement with DWR and USBR so that it may fully support the barrier portion of SDIP.

One portion of the SDIP deals with the tidal barriers. The genesis of the barrier project was a 1982 lawsuit filed by SDWA against both DWR and the USBR. That suit alleged adverse impacts arising out of the operation of the SWP and CVP to the detriment of southern Delta water users. The suit was eventually stayed so the parties could follow through on settlement negotiations. Those negotiations were at first productive and resulted in the idea that exports could continue if tidal barriers were installed and operated in the south Delta to address water level and quality impacts. Another portion of the negotiations dealt with addressing the effects of the CVP on San Joaquin River flows and anticipated the commitment of additional flows down the River. This latter portion of the negotiations was terminated by the USBR, which in turn prevented any final settlement from being formalized.

From the beginning, SDWA has tried to have a comprehensive resolution of the issues in order that the alleged effects of the projects are cured or mitigated. At this time, the SDIP preferred alternative addresses many but not all of the issues. Hence, SDWA believes a resolution will require not only necessary changes to the SDIP, but also, outside additional commitments by DWR and the USBR.

The other portion of SDIP deals with increasing SWP export rates up to 8500 cfs. Per the DEIS/R, DWR and USBR are waiving any statute of limitations for a CEQA or other challenges to the portions of this document which relate to 8500 until sometime after the decision on selecting a preferred alternative for the 8500 is accomplished through additional or supplemental

environmental review. Based on that assurance, SDWA will make no comments at this time on 8500 or transfers done thereunder, and the possible effects of those actions.

The following comments are divided into two areas. The first, which includes Nos. 1 through 11 are general comments on the efficiency and performance of the proposed barrier program. Although general, these comments do deal with the specifics of water quality, quantity, and depths associated with proposed barrier operations. The second group of comments are more
narrowly focused on statements, facts, or assumptions in the DEIS/R which SDWA seeks to correct or comment on.

General Comments

1. Project Purpose. The SDIP project purpose is to "maintain adequate water levels, and through improved circulation, water quality available for agricultural diversions in the South Delta." The water level, flow and quality problems experienced in the South Delta are the result of the operation of the SWP and CVP. Although the exact extent of those impacts may be the subject to discussions, the effects themselves and the magnitude thereof is not. Attached hereto is a 1980 Report on the effects of the projects on South Delta water levels, inflow, circulation, quality and quantity. The SDIP project purpose should be to fully mitigate the adverse impacts to the area caused by the projects. In addition, as this project is a key portion of CALFED's attempts to "fix the Delta," to improve water quality for all users, and to not redirect adverse impact to other parties, the project purpose should also be to meet all existing water quality standards and to satisfy the needs of all beneficial uses in the area pursuant to the Delta Protection Act and watershed protection statutes. As written, the project purpose allows for water levels and quality to be maintained at what DWR and USBR deem adequate, rather than what the local diverters believe is adequate or what is required by statute or permit conditions. **SDWA-1**

2. Salinity Goals. Actual operations of the barriers, Clifton Court Forebay, the CVP Tracy Pumping Plant, and numerous upstream actions taken by or at the behest of the projects, will affect the water quality in the southern Delta channels. The system should be operated to maximize water quality in the channels in line with CALFED's goal of continual improvements in water quality. Such efforts will not only be beneficial to local diversions, but will improve export quality also to the benefit of municipal and agriculture export users. Hence, regardless of the existing water quality standards, the system should be operated to better those standards when
reasonable. **SDWA-2**

3. Barriers Used as Needed. Current language in the DEIR/S suggests that use of the barriers in summer will be allowed most of the time and that use during other times will be contingent on other factors, and may not be allowed. There must be assurance that the barriers and other facilities will be operated when and as needed to protect the in-channel water supply and quality. This protection must not be subject to being overridden to satisfy other interests. Fishery concerns may create a tension with barrier operations, but both are mitigation for project operations and one should not trump the other. If the projects cannot protect fisheries and local diversions, then exports must decrease to the point where such complete protection is provided. **SDWA-3**

4. Water Levels. The draft SDIP plans to do specified dredging and then operate barriers so that the water level at any point in the channels downstream of the HOR will not fall below 0.0 ft msl, and will have adequate depth at that level for continuous operation of local diversion facilities. This level is lower than that maintained with temporary barriers. The barriers are proposed to be operated so that there is a net unidirectional reverse flow from the Middle River barrier up to Old River; a net unidirectional reverse flow from the Old River barrier near Tracy up and through the connecting channels to Grant Line Canal; and a net unidirectional flow in Grant Line Canal over the Grant Line barrier/weir. Alternatively the flows in Old River and **SDWA-4**

Grant Line can be switched so that the upstream flow is in Grant Line and the downstream flow is in Old River.

DWR modeling indicates that this lower level is satisfactory. However, there is no margin of error. If the modeling is off for any reason, operations may not be flexible enough to correct the problem while still maintaining water quality. [This is due to the tension between the two goals; raising the barriers to help levels will decrease net flows and adversely affect quality.] The program should insure that water levels are kept at heights that actually do allow for local diversions to continue as needed and without impairment. **SDWA-4**

DWR and USBR should commit to keeping water levels at heights "which will allow for local diversions to continue as needed and without impairment." If proposed operations do not provide such protection, DWR and USBR must commit to supplementing the tidal inflow so that adequate depth can be maintained while still providing circulation for quality concerns. This supplemental flow will most likely involve the use of low-lift pumps at one or more of the tidal barriers. This contingency option should be included in the final EIR/S. The only other option is to increase San Joaquin River flow such that the net flow is downstream in all South Delta channels. This option appears to be more difficult to implement.

5. Net Flows/Maintaining Water Quality. DWR modeling (attached) done at the behest of SDWA indicates that under certain conditions, during the two neap tide cycles of each month and with average local diversions, net flow upstream in Middle River and Old River will slow sometimes to 50 cfs or less. Both DWR and SDWA believe such a low flow will be insufficient to adequately flush the salts and other constituents. During these times, it is likely that water quality on Old River, and perhaps also on Middle River will exceed the standard. This is of special concern in Old River which receives both a higher amount of poor San Joaquin River water and the effluent discharges of the City of Tracy. During times of peak local diversions, the modeling indicates that the flows in the upstream areas of Old River and Middle River will rarely be in the upstream direction (which is necessary for the maintenance of water quality). At those peak times, the flows will be back downstream creating a null zone in each channel where salts and other constituents will accumulate and concentrate. At those times, water quality in the channel cannot be expected to be in compliance with water quality standards. Even when the flow under these conditions is back upstream, it is far less than what is necessary to have any meaningful flushing of the channel.

This lack of salinity control can occur twice each month over a four to seven day period at a minimum, and at most (under peak depletion times) during the entire month. Although DWR modeling of these conditions uses July of 1995 as the worst case scenario, this does not mean these conditions can be assumed to be rare. It is likely that they will occur in many summer or fall months. Even if these conditions were not frequent, they should still constitute a significant impact that must be avoided or mitigated. Local diversion needs and the requirement for good water quality (at or below the standard) are necessary for the production of crops. Evidence on the impacts to crops production are also included herewith. Local agricultural diverters should not subject to protection at some times and not at others. **SDWA-5**

DWR modelers have proposed that to address this situation when net flows are insufficient or lacking, the Old River barrier be used as a weir instead of the Grant Line Canal barrier. DWR partical tracking indicates that with such a change (under monthly average diversions, not with peak diversions) the constituents of Old River water will be flushed out downstream over a three to five day period. This does provide a flushing, but it is unknown if that will be enough. That channel is expected to get even more municipal discharges in the near future, and already experiences low DO levels and elevated salinities.

Given the lack of margin of error in water level portion of the program, it is not certain that switching the flow patterns will solve the quality problem when it occurs. Therefore, just as the water level concerns require supplementing the incoming tidal flows, so too must this option

be considered for the water quality aspect of the project. It appears that a commitment to the low-lift pumps is necessary to make the program provide the necessary protections.

The program must also insure that there is a net export or flushing of incoming salts out of the area. Even if flows at some times are sufficient to meet water quality standards, there can still be an accumulation of salts on the lands and in the groundwater of the area, to the detriment of local beneficial uses. Flows must transport all of the incoming salts out of the area.

The water quality analysis and modeling supporting the program should be updated. Currently the model used incorporates an assumed salinity concentration for local discharges. However, this assumption derives from a survey that lumps portions of the Central Delta with the South Delta to arrive at an average discharge salinity. Central Delta discharges from the area included in the survey have salinities well below those in the South Delta and consequently, the assumption causes results which understate the salinity of the return flows. This in turn results in an understatement of the water quality in the channels and the effects of the SDIP barriers. Hence, it is unknown at this time if the impacts to water quality resulting from the project are adequately represented and thus an analysis of significant impacts undeterminable.

SDWA-5

6. Tom Paine Slough A question exists as to whether or not Tom Paine Slough will fill under the manipulated tidal conditions of the SDIP. In recent years (at least 2002, 2003, 2004), the Slough has experienced significant problems of insufficient water levels. A number of causes have been proposed, but the effects of export pumping on the ability of the channel to get water into the Slough is at least a part of the underlying causes. Prior investigations by SDWA and USBR in their 1980 Report indicate that channel resistance in the area greatly increases and therefore the normal degradation of the channel bottoms may have exacerbated the "normal" problem of filling the slough such that it cannot now fill during the time available. The SDIP and related exports decrease the duration and peak of the incoming tides. At this time, DWR modeling indicates that SDIP will not make it any easier to fill the Slough and may likely make it more difficult. The program should include measures to insure that the Slough will fill as needed.

SDWA-6

7. San Joaquin River. The SDIP proposes to address the channels west of the HOR and not the mainstem. As stated above SDWA believes it should not separate out two portions of the same problem; the adverse effects of the SWP and CVP on water levels, quality and flows in the South Delta.

The SDIP assumes that under monthly average depletion conditions, minimum flows of 700 - 800+ cfs will be present at Vernalis to supply the necessary 500 cfs into HOR while still providing depletion needs and downstream flow towards Stockton. [SDIP assumes operation of the HOR such that 500 cfs flows into Old River when mainstem flows are 700 - 2,200. Above 2,200, the barrier is proposed to be fully open. Below 700 the barrier is also fully opened.] The 700 - 800+ cfs amount is based upon 150 - 200 cfs of diversions from Vernalis to HOR plus the 500 cfs regulated into Old River with the remaining flow, if any, providing net downstream flow towards Brandt Bridge. When peak diversions are modeled, the 500 flow into HOR must be raised to 700 cfs during the neap tide periods in order to maintain water levels west of the HOR barrier (this additional inflow has no effect on the lack of net flow/water quality problem identified above, it is necessary to keep water levels behind the tidal barriers above the 0.0 msl). In such an event, the minimum Vernalis flow to provide these needs is somewhere near 1,000 cfs in order to maintain some sort of net downstream flow to Brandt Bridge.

SDWA-7

Current modeling of the San Joaquin River predicts that these summer flows may decrease to approx 600 cfs.

When the flows drop below approx 1,000 cfs at Vernalis, many local diversions on the mainstem are unable to draw water out of the river due to low levels. If the flows drop below 700 - 800+ cfs, the SDIP still requires 500 - 700 flow through the HOR. Given the depletions upstream on the mainstem, that required flow will result in reverse flows in the Brandt Bridge

area towards HOR. This circumstance is not expressly analyzed in the DEIS/R, but was done by DWR in its communications with SDWA. The modeling shows that if flows on the mainstem decrease to 600 cfs at Vernalis, the San Joaquin will reverse its net flow from north to south. This reverse flow is not expected to be abrupt and substantial, and will therefore result in the creation of a large null zone where quality will worsen. In that circumstance, the SDIP will also be lowering the levels in the mainstem and exacerbating the diversion problem. SDWA asserts that pre-project, the tidal waters reached all the way to Vernalis, and that the tidal effect helped provide the necessary water height notwithstanding low River flows. Hence, under those conditions the diverters would have had sufficient depth for their pumps, and therefore the SDIP should insure they can continue such diversions. **SDWA-7**

DWR and USBR must commit to providing a minimum flow on the River through recirculation, exchanges, or other means. They should also commit to meeting the water quality standard at Brandt Bridge with downstream flows and not allow reverse flows on the mainstem to occur. Such downstream flows will provide help in maintaining the DO levels at the Stockton Deep Water Ship Channel. In addition, DWR may want to explore dredging and intake alterations along the mainstem to minimize the extra flows needed.

8. Barrier Effects of Flood Flows. It appears that SDIP modeling for flood flow effects in the DEIR/S is insufficient. The analysis appears to have compared the HOR channel cross-section as it is now with the cross-section after dredging for the barrier but without the barrier in place. Thus the modeling gives no meaningful data on flood flow effects. Other barriers were not examined, but were assumed to have no effect on flood flows. This deficiency in modeling must be corrected in the final EIR/S. DWR and USBR must consult with local Reclamation Districts and their engineers to fully analyze the flood flow effects of the barriers. The barriers need to be flood neutral as are all other in-water works in the Delta. **SDWA-8**

9. Maintenance Dredging. In order to maintain the efficiency of the barriers, maintenance dredging is required to insure barrier operations continue as planned. Since the barriers are mitigation for the adverse effects of the SWP and CVP on local beneficial uses, it should be the obligation of the projects to make sure the barriers continue to work. That obligation should include maintenance dredging. **SDWA-9**

10. Downstream Diversions. The barrier program will adversely affect water levels downstream of the structures. The SDIP includes necessary changes to diversion intakes and dredging as necessary. It appears that Victoria Island is also experiencing this problem and will need to be added to the project, especially if 8500 is approved. **SDWA-10**

11. Other. Both the 1995 Water Quality Control Plan for the Bay-Delta and D-1641 recognized that the previous salinity monitoring locations will no longer be representative of conditions throughout the channels once barrier operation create altered flow patterns. New monitoring points must therefore be representative of salinity throughout the channels during each mode of operation. **SDWA-11**

Specific Comments

-- It is unclear as to what the net flows will be in channels such as Old River during VAMP flow periods. At those times, the project proposes closure of head of Old River. Even with the expected low exports during that time, there does not appear to be a mechanism for creating a net flow in the various channels. Although these are normally times of good quality, during low flow years the existing problems in Old River may be exacerbated rather than improved. **SDWA-12**

-- On page 1-5, the document lists numerous effects on water quality and levels in the South Delta. Although there are certainly numerous things which affect such quality and levels, the document should not suggest that export levels are merely one of many. The

conditions other than exports did not historically appreciably affect local diversions. However, when exports began and CVP service area discharges entered the river, numerous adverse effects to the South Delta arose. **SDWA-12**

-- On page 1-19, the document references a CALFED goal to balance beneficial uses as well as the needs of the environment. To the extent such a balancing is contrary to existing water right priorities including the priorities of the Delta Protection Act and area of origin statutes, such a balance would be illegal. **SDWA-13**

-- Page 1-30 references a potential agreement to allow for the easy installation of low lift pumps to supplement tidal inflows. The project at a minimum should anticipate and allow for such installation. The operational scenarios examined by the document refer to an increase in State exports up to 8,500 cfs. Until the perceived problems with the SDIP are either resolved or otherwise corrected, there should be no increase in exports allowed. **SDWA-14**

-- With regards to the various alternatives examined, it should be made clear that options which include only the HOR barrier or only the HOR barrier and the Old River and Tracy Old River barrier would not mitigate the effects of the export projects on the South Delta. Closing off the head of Old River for the protection of fish without some other agreed-to program could be deemed illegal as it would deprive various riparian, appropriative, and pre-1914 water right holders of water to which they are entitled. **SDWA-15**

-- SDWA believes there should be no interim 8,500 operations until resolution of the herein-described issues is accomplished. **SDWA-16**

-- The document states in one place that the barriers will be installed without any levee relocation. At another place, it states that the barriers will have no adverse effects on the passage of flood waters. Given the drawings and schematics of the barriers, it appears that each will have an abutment and other in-channel structures which will necessarily impact the passage of flood flows. The final document should include an examination and most likely adoption of levee relocations to address this issue. **SDWA-17**

-- At page 2-26, the document describes how operation of the tidal barriers would vary over the course of the peak agricultural diversion season. This statement should be corrected to indicate that the barriers will always be operated as needed. **SDWA-18**

-- Page 2-29 describes a gate operations review team which does not include SDWA. In addition to resolving the issues described herein through an agreement, any oversight team dealing with barrier operations must include a representative of SDWA. **SDWA-19**

-- On page 2-33, the amount of dredging proposed is set forth. It would appear that substantially more dredging will be necessary in the Doughty Cut/Old River/Salmon Slough area. SDWA suggests the document be changed to include such additional dredging. **SDWA-20**

-- It should be noted that the document and especially figure 4-1 therein show that the project results in lower peak tide levels under all alternatives and lower low tides during a substantial portion of the year during the preferred alternative. The benefits from such higher tides should not be understated.

-- The document's treatment of water rights in Chapter 5 is incomplete. It suggests that South Delta diverters may not always be entitled to divert from the channels. To the contrary, given the area's elevation, there is always water in the channels, even during the worst droughts of record. During those times, all inflow into the Delta provided a supply for diverters which was maintained or supplemented by Bay waters. Only on one occasion did sea water intrude into the South Delta and that was in a September, allowing local diverters to adjust **SDWA-21**

accordingly. The issue of maintaining water quality has been settled by being placed in the permits of the DWR and USBR, besides other statutory and regulatory requirements. Hence, there are no times when South Delta diverters would be legally unable to divert from the channels.

-- The document makes the error of analyzing averages, whether it be flows, tides, depletion rates, or salinity. Averages mask maximum and minimum conditions and give the impression that there are no problems. This is inappropriate. For example, average water levels may be sufficient for local diversions, but those averages may include substantial times when levels are below the target level. During those times, diversions will be impaired and crops may be affected. When the higher levels occur it does not "undo" the harm that occurred when the levels were low. The document notes some of these extremes, but concludes that on average the
extremes don't result in significant impacts. **SDWA-22**

– The document lists the priority of uses for the increased export rates, but these uses do not include recirculation of export water for release into the San Joaquin River. By excluding such a priorty, DWR and USBR are ignoring D-1641's directive to examine recirculation as a means of addressing salinity loads/concentrations on the River, and HR 2828's directive to do the same. **SDWA-23**

– Page 5.2-17 states that Tom Paine Slough is isolated from tidal influences. This is only partially true. The siphons which fill the slough are influenced by the tides on the Old River side. Anecdotal observations indicated that the problems experienced on the slough in recent years was directly related to the tide levels in Old River. **SDWA-24**

– The analysis of impacts on tide levels in Chapter 5.2 requires clarification. The impacts stated are substantially different than those contained in the 1980 Report and an explanation would seem appropriate. In addition, some of the analysis includes SWP export rates at 10,300 cfs. Such an analysis should not be done unless one of the purposes of the document is to allow later tiering for 10,300. If that is the case, it should not be. Any decision on such a radical changes must stand alone and not be hidden in this document. At this time, DWR modelers and SDWA acknowledge that protection of water levels and quality in the South Delta cannot be maintained when SWP exports are at 10,300. **SDWA-25**

– The operation of the tidal barriers on page 5.2-30 gives a false impression that the barriers can be manipulated to achieve higher water levels. As currently modeled, raising the level above the 0.0 msl goal will adversely affect circulation and quality. **SDWA-26**

– The data in Figures 5.2-28 et. seq. raises numerous questions. For example, how can water levels at Grant Line be lower than -1.0 with barrier operations which prevent such an occurrence? Similarly, under the circulation scenario, water levels sometimes drop below -1.0. Discussions with DWR modelers indicated that with the GLC barrier at 0.0, the water levels in the channels upstream would remain at or above 0.0. If water levels drop below this target, even for short periods of time, substantial impacts do occur to local diversions. [Loss of siphon or pump results in an interruption of irrigation needs. Re-establishing the supply results in over watering of a portion of the crop, and the delay can result in lack of water for the remainder of the crop. The later application of irrigation water does not "cure" the previous stress to the plant when water was unavailable.] **SDWA-27**

– The analysis of salinity effects should take into account that standards apply to all portions of the channels, not just at specific compliance locations. **SDWA-28**

– It is not clear how the changes in water quality which are greater than 10% (Table 5.3-3) are treated in the significance analysis. A ten percent changes was described as significant

in the text, but the results are not deemed significant. The project should result in full compliance with the 0.7/1.0 EC standards.

– The water quality and level impacts resulting from a substantial amount of transfers (see for example page 5.3-62) are generally unexamined and deferred. SDWA assumes that comments to this may be made at the time the preferred alternative for 8500 is determined. **SDWA-28**

– The modeling results for EC contained in Figures 5.3-46 et. seq. show exceedances above the standards. If those exceedances constitute a violation of the standards (are over thirty days) they are necessarily significant under CEQA. Even if they do not occur over the thirty day average time frame of the standard, they should be considered significant to the degree they impact crop production.

The SDWA looks forward to resolving its concerns with DWR and USBR.

Very truly yours,

JOHN HERRICK

Attachments

Various DWR flow and salinity model runs
1980 Report (send in two parts)
Cease and Desist Hearing Transcript November 21, 2005
Alex Hildebrand Testimony and Exhibits
Terry Prichard Testimony
Dr. Sean Snaith Testimony and Exhibits

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Responses to Comments

SDWA-1

The project purpose statement is intended to meet the minimum needs of local diverters such as SDWA, and also to allow for the best possible CVP and SWP operations. Existing water quality standards and other applicable requirements will continue to be met. Therefore, DWR and Reclamation intend to meet the "No redirected impacts" principle of CALFED.

SDWA-2

Existing salinity objectives in the Delta and San Joaquin River have been established by the State Water Board to protect municipal, agricultural, and fish and wildlife uses of water. SWP and CVP reservoir and Delta operations are managed to protect all beneficial water users and provide good quality water for water supply contractors south of the Delta. Whenever reasonable to do so, project operations will provide the best available water quality in south Delta channels.

SDWA-3

Please see Master Response O, *Gate Operations Review Team*.

SDWA-4

DWR and Reclamation are committed to provide a minimum water level of 0.0 feet msl to allow diversions from all south Delta pumps and siphons upstream of the agricultural gates. Low-head pumps are not currently included in the gate design. Reclamation and DWR have completed modeling that shows low lift pumps would not be necessary under the range of operations considered in the 16–year period analyzed. However, engineers are designing elements of the proposed gates to allow for the placement of low lift pumps in the future, if they are needed, without modification to the new gate structures.

SDWA-5

The SDIP proposed tidal gate operations will produce substantial net circulation flows in the south Delta channels, which are expected to maintain very good water quality. The existing EC monitoring locations throughout the south Delta channels will provide sufficient information for the GORT to consider possible modifications in the tidal gate operations to reduce salinity, when EC conditions suggest that this is needed. Section 5.2 describes in detail the channel volumes,

tidal fluctuations, and corresponding flushing of water in the channels upstream of the tidal gates. Tidal flow and salinity conditions will be much better with the SDIP than they have been with the temporary barriers.

The general operation of the head of Old River tidal gate for fish protection can be modified to also provide for a flow split that allows sufficient water into Old River for salinity management and dilution of the Tracy treated wastewater effluent, while still maintaining a net downstream flow at Brandt Bridge and at Stockton.

The DSM2 model does use constant monthly estimates of agricultural drainage salinity. This is considered to be a reasonable representation of central and the south Delta agricultural drainage effects; very few measurements of these agricultural drainage EC values are available.

SDWA-6

Tom Paine Slough water levels will be protected by the continued operation of CCF gates under the priority 3 schedule, which allows the higher-high tide to fill south Delta channels without diversions into CCF. DWR will continue to work with SDWA to resolve local water supply issues along Tom Paine Slough.

SDWA-7

SDIP does not change the San Joaquin River flows at Vernalis or Mossdale. Diversions along the river may have problems during periods of summer low flow. SDIP operations at the head of Old River will be evaluated and determined through the GORT. There are no guaranteed flows; the SDIP allows tidal and net flows in the south Delta channels to be more adaptively managed than with the temporary barriers, which generally restrict tidal flows.

The modeling results you cite in your example are based on maximum exports from both CVP and SWP facilities coupled with maximum diversions for agricultural uses throughout the south Delta. In the modeling you cite, the original low flow condition was on the order of 1,300 cfs on the San Joaquin River. It was set lower to study the hypothesis that SDWA presented. It is believed that the proposed gate operations will meet or exceed the needs of the SDWA in the interior south Delta during low flow periods. No minimum flow on the San Joaquin River is being proposed at this time.

SDWA-8

DWR has conducted additional flood-flow modeling in consultation with SDWA staff. Each of the four tidal gates are flood-neutral, causing no significant increase in water surface elevation at a peak Vernalis inflow of 52,000 cfs

(existing levee capacity). Dredging in Middle River may increase flows in Middle River, but will not substantially raise water levels (more than 0.1 feet) during flood events. Additional modeling is being conducted in cooperation with CDWA and SDWA engineers to extend the dredging to Tracy Boulevard Bridge to obtain a dredging plan that is flood-neutral. Please also see Master Response R, *Effects of the South Delta Improvements Program Stage 1 Tidal Gates and Dredging on Flood Elevations in the South Delta Channels.*

SDWA-9

As described in Chapter 2 of the Draft EIS/EIR, DWR would conduct maintenance dredging around the gates, as needed, to continue operating the tidal gates.

SDWA-10

Water levels along Victoria Canal will not be changed by the SDIP. However to ensure uninterrupted function of diversions, the SDIP includes spot dredging for intakes along Victoria Canal that are currently higher than –2 feet msl.

SDWA-11

Salinity monitoring stations are already located throughout the south Delta channels. No new stations are proposed under SDIP to measure salinity within the channels influenced by SDIP tidal gate operations. Information provided by the current monitoring stations will be regularly reviewed by GORT to maintain adequate water quality for agricultural uses.

SDWA-12

Please see Master Response O, *Gate Operations Review Team*.

SDWA-13

SDIP will not affect any Delta water right priority. As described in Chapters 1 and 2 of the SDIP Draft EIS/EIR, several regulations are in place to protect water quality, fish, water levels, and other important resources. The proposed project would continue to operate in compliance with these regulations.

SDWA-14

Any increase in CCF diversions will be based on SDIP Stage 2 evaluations, which will begin after a Stage 1 decision is made.

Reclamation and the Department have completed modeling that shows low lift pumps would not be necessary under the range of operations considered in the 16–year period of analysis. However, engineers are designing elements of the proposed gates to allow for the placement of low lift pumps in the future without modification to the new gate structures. This is not to say low lift pumps have been designed for installation, but only that future installation could be accommodated with relative ease.

SDWA-15

Neither the one-gate or three-gate configuration provides water level and water quality protections that sufficiently meet the project objectives. Therefore, DWR and Reclamation are proposing the four-gate configuration.

SDWA-16

Please see Master Response M, *Interim Operations*.

SDWA-17

Please see the response to comment SDWA-9. The proposed gate designs were modeled to determine if the gate designs caused any localized water stage effects during floods. Those results showed very small water level effects. Therefore, levee relocation is not necessary.

SDWA-18

The agricultural tidal gates will be operated to provide minimum water levels and tidal flushing throughout the irrigation season.

SDWA-19

The text has been modified. Please see Master Response O, *Gate Operations Review Team*.

SDWA-20

The SDIP Draft EIS/EIR provides an overall estimate of the likely total dredging volumes. More detailed assessment of dredging needs will be prepared by DWR in the first phase of Stage 1 implementation. Dredging volumes in the Doughty Cut area will be refined as the design is furthered. SDWA will be consulted on the areas that need dredging in that vicinity.

SDWA-21

The discussion of water rights in Section 5.1 provides only a general introduction to water rights. Riparian water users in the Delta are always permitted to divert water for beneficial uses. Water quality for agricultural uses is protected by salinity objectives in the 1995 WQCP and D-1641.

SDWA-22

All graphs for tidal elevations, flows, and EC conditions show monthly minimum, average, and maximum values for each month.

SDWA-23

Reclamation is evaluating recirculation of water from the DMC to the San Joaquin River. However, this is not an SDIP purpose or action. A recirculation pilot study was completed in August 2004 and a report on the study was released in June 2005. The priority list of uses of the water does not preclude use in recirculation actions similar to what was studied in 2004.

SDWA-24

Tom Paine Slough is physically isolated from tidal fluctuations. The one-way siphons are used to fill the slough for agricultural diversions and are influenced by tides. This is similar to other Delta sloughs (e.g., Trapper Slough along State Route 4 irrigating Upper Jones Tract) that have been isolated as irrigation canals.

SDWA-25

The SDIP is not proposing SWP pumping of 10,300 cfs and did not evaluate any effects from 10,300 cfs pumping. Section 5.2 includes a comparison of the tidal fluctuations in water surface elevations for the full range of combined CVP and SWP pumping, from 0 cfs to 14,900 cfs. The only effects being evaluated for the SDIP are the increased SWP pumping from a maximum of 6,680 cfs to a

maximum of 8,500 cfs, which is equivalent to a combined maximum pumping of 11,280 cfs to 13,100 cfs (when CVP pumping is at a maximum of 4,600 cfs).

SDWA-26

The tidal gates can be operated in a variety of ways; the minimum water level can be independently controlled by the weir elevation of the Grant Line Gates. Adequate tidal circulation can generally be provided for a range of minimum water levels, although higher minimum water levels will reduce the tidal flushing.

SDWA-27

Figures 5.2-39 to 5.2-45 show representative monthly tidal elevations and tidal flow volumes for the basic and circulation tidal gate operations. Elevations upstream from the tidal gates do remain above the 0.0 foot target elevation. These figures also show the tidal elevations downstream from the gates, which do regularly fall below minus 1.0 foot msl, reflecting the normal minimum tidal levels in Delta channels. SDIP also includes the extension of agricultural diversions that are higher than –2 feet msl, which would ensure that even when tidal levels fall to –1 foot msl, diversions will operate efficiently.

SDWA-28

D-1641 objectives apply at specific compliance locations, although it may be the intent of the State Water Board that these objectives protect beneficial uses of water in nearby channels. The monthly criterion of 10% (of the objective) was used to evaluate the monthly EC changes resulting from the CALSIM monthly exports and Delta outflow values. However, the overall significance for salinity changes was judged with the long-term criteria of 5% increase in average EC. Salinity changes from potential future water transfers were assumed to be avoided by appropriate “carriage water”, which will slightly increase Delta outflow at the same time that exports are increased. All increases when the baseline salinity already exceeded the salinity criteria are considered significant. No additional pumping would be allowed unless Delta inflows were increased to provide sufficient Delta outflow to satisfy the EC objective.