Comment Letter CVRWQCB

CVRWQCB

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7 February 2006

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Mr. Paul Marshall
SDIP EIS/EIR Comments
State of California Department of Water Resources, Bay Delta Office
1416 Ninth Street
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SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT (EIS/EIR) FOR THE SOUTH DELTA IMPROVEMENTS PROGRAM (SDIP)

Thank you for the opportunity to submit the following comments on the subject document. Comments are provided regarding the potential impacts of the SDIP on dissolved oxygen (DO) and mercury impairments in the Sacramento-San Joaquin Delta (Delta), and issues related to the Clean Water Act (CWA) Section 401 Water Quality Certification that will eventually be required for this project from the State Water Resources Control Board (State Water Board).

DISSOLVED OXYGEN BACKGROUND

Several water bodies within the boundaries of the Delta have been included on the State Water Board's CWA Section 303(d) list as impaired due to low DO conditions. Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff believes the physical and operational components of the proposed SDIP, along with existing State Water Project (SWP) and Central Valley Project (CVP) operations, have the potential to impact three of these impaired water bodies: Old River, Middle River, and the Stockton Deep Water Ship Channel (DWSC) portion of the San Joaquin River between Stockton and Disappointment Slough.

In January 2005, the Central Valley Water Board adopted *Amendments to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control Program for Factors Contributing to the Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel* (DO Control Program). In November 2005, the State Water Board approved the DO Control Program with minor modifications. The DO Control Program identifies reduced San Joaquin River flow through the DWSC as a major contributor to the DO impairment. It also recommends to agencies responsible for existing and future water resources facilities, which impact or have the potential to impact flow through the DWSC, that they evaluate and reduce their impacts on the DO impairment in the DWSC. The DO Control Program identifies the SDIP as a water resources project with the potential to impact flow through the DWSC. Also, the State Water Board in Water Right Decision D-1641 encouraged the parties involved in constructing and operating the barriers to consider the effects of the barriers on DO in the DWSC. In accordance with Central Valley Water Board and State Water Board regulatory guidance, and the requirements of the California Environmental Quality Act (CEQA) and the National

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Environmental Policy Act (NEPA), an evaluation and mitigation of the impacts of the SDIP on DO conditions in the DWSC are required.

In 2002 the State Water Board adopted a revised 303(d) list of impaired water bodies. This list included DO impairments on Old River and Middle River within the Delta. Although the Central Valley Water Board has not yet developed control programs for these impairments, the EIS/EIR must evaluate and mitigate the potential impacts of the physical and operational components of the SDIP on these water bodies. **CVRWQ CB-2**

Central Valley Water Board staff has had numerous written and verbal interactions with Department of Water Resources (DWR) and U.S. Bureau of Reclamation staff during the preparation of the DO Control Program and the SDIP EIS/EIR. For reference, enclosed is a letter sent to DWR in October 2003 regarding some concerns we had with the administrative draft of the SDIP EIS/EIR. Also beginning in December 2003, Central Valley Water Board staff participated in California Bay Delta Authority (CBDA) sponsored Integrated Water Operations Forum & Framework (IWOFF) discussions aimed at developing the details of the Delta Improvements Package (DIP), of which the SDIP is a part. Central Valley Water Board staff participated in these meetings to provide input on the potential impacts of the proposed activities on the DO impairments in the Delta. For reference, enclosed is a letter sent to CBDA in November 2003, at the initiation of the IWOFF discussions, outlining our concerns regarding the proposed DIP actions. Many of the same concerns expressed in both these letters appear again in the comments below.

DISSOLVED OXYGEN COMMENTS

Comment #DO1 - References to Relevant Regulations Omitted **CVRWQ CB-3**

The following omissions in the SDIP EIS/EIR should be addressed:

a) There is no mention in Chapter 5.3, *Delta Water Quality Issues*, Page 5.3-6 of the DO impairments in Old and Middle Rivers, and DWSC, nor the ongoing and potential impacts of the existing Delta exports and the proposed operational alternatives on these impairments.
b) There is no mention of the DO impairments in Old and Middle Rivers in Chapter 5.3, *Delta Water Quality Variables*, Page 5.3-14 to 15.
c) In Chapter 5.3, *Assessment Methods*, at the end of the third bullet toward the bottom of the page 5.3-15, it should be clarified that the DO Control Program has been formally adopted by both the Central Valley Water Board and the State Water Board.
d) References to applicable sections of both the DO Control Program and Water Right Decision 1641 should be included in Chapter 8 *Compliance with Applicable Laws, Policies, and Plans and Regulatory Framework.*

Comment #DO2 - Significance Criteria **CVRWQCB-4**

In Chapter 5.3 (page 5.3-21) the EIR/EIS states, *"No change [of a water quality variable] is allowed if the baseline value exceeds the maximum objective."*

a) In the case of DO, it should be clarified that no change should be allowed if the baseline values are below the minimum objective.
b) By definition when a water body is listed as impaired on the State Water Board's CWA 303(d) list (as is the case for DO in the DWSC, Old and Middle Rivers) baseline values already violate the objective. By applying this proposed general significance criteria, no further decrease in the DO water quality variable in these portions of the Delta should be allowed.

Comment #DO3 – Applicable Criteria for Dissolved Oxygen
The following comments apply to the discussion of the DO criteria/objectives contained in Chapter 5.3 of the SDIP EIS/EIR (pgs. 5.3-23 to 24).

a) The Basin Plan DO objective applicable to the DWSC applies at all times and places. There is no allowance in the Basin Plan for a 10% cushion of monthly average violations as proposed in the EIR/EIS. Any reduction of the monthly estimated DO concentration below the objective, therefore, should be considered a violation of the applicable objectives and should be considered a significant impact.
b) Applying the general significance criteria on page 5.3-21 (and addressed in Comment #DO2 above), no change to the DO variable should be allowed by the proposed project when the baseline value already violates the objective.
c) The DO objective applicable at all times and places in Old and Middle Rivers is 5.0 mg/L. This objective needs to be established as a criterion in this section of the EIR/EIS, and analysis of the potential impacts of the proposed projects against this criteria need to be provided elsewhere in the EIR/EIS. No such criteria or analysis is currently provided in the EIR/EIS.

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Comment #DO4 - Methods for Assessing Impacts on Dissolved Oxygen
As proposed in EIS/EIR Chapter 5.3 (pgs. 5.3-18), using flow vs. DO curves developed from existing data is a reasonable approach to evaluating the impact of activities that reduce DWSC flow on the DO impairment.

The flow vs. DO model proposed in the SDIP EIR/EIS, however, is seriously flawed. The conclusion that DO is 6.0 mg/L when flow is 1500 cubic feet per second (cfs) is not supported by even a visual inspection of the data, nor is the conclusion that DO is 3.0 mg/L when flow is 0 cfs. A statistically valid model of the observed flow vs. DO relationship that considers variability is required if this approach is to be used.

Also, the flow vs. DO data presented in this chapter is for 1983 to 2001. Data exists through 2004 and part of 2005, which includes periods of particularly low DO conditions in the DWSC. All the most recent data should be used.

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Comment #DO5 – Incorrect Representation of Central Valley Water Board Report
The EIR/EIS states in Chapter 5.3, Alternative 2A, Stage 1, Impact WQ-13, Page 5.3-33 *"[o]nly flows of less than 1,500 cfs are assumed to have an effect on the DWSC DO concentrations"* and attributes this to the *Total Daily Maximum Load for Low Dissolved Oxygen in the San Joaquin River* (Central Valley Water Board, 2003). This is an incorrect citation and must be removed or modified. The cited document states *"[f]or net daily flow above 3,000 cfs, there were no violations of either the 5.0 or the 6.0 mg/L Basin Plan DO objectives. Below 3,000 cfs, the DO concentrations decrease with decreasing flow. At flows below 1,000 cfs, about half of the daily minimum DO concentrations were below 5.0 mg/L."* These same words were also used in the February 2005 final staff report for the DO Control Program. At no time has the Central Valley Water Board stated or endorsed 1,500 cfs as a flow rate that will address the DO impairment.

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Comment #DO6 - Balancing Operational Considerations

Chapter 5.3 (pg. 5.3-27) of the EIR/EIS describes the *"three major gate operation choices to provide maximum benefits from the tidal gate operations"*. Item 2 on this page describes the need to weigh the benefits of operating the head of Old River fish control gate to increase flow past Stockton (improving DO conditions in the DWSC) against the potentially negative impact of such operation on entrainment of larval and juvenile fish into the CVP and SWP pumps and the shifting of San Joaquin River salinity toward the Contra Costa Water District and SWP Banks facilities.

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The balancing of competing positive and negative impacts is understandable, but choosing to protect one beneficial use at the expense of another is unacceptable. Mitigation of impacts for all beneficial uses must be provided. To the extent that the flow split to the San Joaquin River at the head of Old River is reduced below what would occur naturally at that point, mitigation measures must be implemented, by one means or another, at the same time those impacts occur.

The DO Control Program suggests that alternate measures may be considered by the Central Valley Water Board as a means of mitigating the impact of activities that reduce flow in the DWSC. If the head of Old River fish control gates must be opened to prevent fish entrainment and undesirable salinity impacts in the Delta, alternate measures (e.g. aeration) may provide an acceptable mitigation for the associated flow reduction in the San Joaquin River past Stockton. Before such alternate measures would be acceptable to the Central Valley Water Board, however, the effectiveness of such measures would need to be demonstrated.

It is understood that DWR is initiating the construction and operation of a demonstration aeration project at Rough and Ready Island in the DWSC. This project should provide useful information on the efficacy and the extent to which aeration can be used to improve DO conditions in the DWSC.

Comment #DO7 - Cumulative Impacts

Title 14. California Code of Regulations, Chapter 3 (CEQA Guidelines) at Section 15355 defines the cumulative impact from several projects as:

> *"... the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."*

The SDIP EIS/EIR only evaluates the incremental impacts of the SDIP over and above baseline conditions. These baseline conditions (i.e. Alternative 1 - No Action) assume:

> *"... [a]ll of the temporary rock barriers (head of Old River fish control barrier, and Middle River, Grant Line Canal, and Old River flow control barriers) would continue to be installed and removed annually.*

The purpose of these ongoing temporary barrier operations, among other things, is to mitigate the water quality and quantity impacts of the current SWP pumping capacity of 6,680 cfs. According to the cumulative impact requirements of CEQA, the cumulative impact of the proposed SDIP components and the existing 6,680 cfs pumping capacity (a closely related past project) must therefore be evaluated and mitigated. Furthermore, as the temporary barriers were intended to provide mitigation for the impacts of

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the existing pumping capacity, the permanent barriers, which will replace them, also need to mitigate the existing 6,680 cfs pumping capacity.

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As the evaluation of all water quality impacts in Chapter 5.3 are based on the baseline assumption of current pumping capacity of 6,680 cfs with temporary barrier operations, the resulting analysis is incomplete. The tidal hydraulics analysis in Appendix D would need to be reworked accordingly. The discussion of these cumulative impacts should also be included in Chapter 10, *Cumulative Impacts*.

Comment #DO8 - Appendix D, DSM2 Modeling Methods and Results

Aside from Comment #DO7 above, please consider the following improvements to the tidal hydraulic analysis in Appendix D:

a) It would be useful to extend the time period of the DSM2 simulations to include more recent years when we also have data from the ultrasonic velocity meter (UVM) in the San Joaquin River near Stockton. This UVM meter was installed by the U.S. Geological Survey in 1995 and would provide useful comparison to DSM2 output for the same period.

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b) Once consideration of current pumping and barrier operations are included, the explanation and presentation of the DSM2 flow modeling results needs to be improved. (e.g. the modeling results presented qualitatively in Figures 5.3-21 and 41 were difficult to interpret). More quantitative analysis needs to be performed and presented to support the conclusions made.

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Comment #DO9 – Old River and Middle River DO Impairments

The draft SDIP EIS/EIR currently does not evaluate the impacts from various SDIP components (e.g. altered channel geometries in Delta waterways, or long-term barrier/pumping operations) on the Old River and Middle River DO impairments. Until such evaluation is performed, and the required mitigation measures are developed, the EIS/EIR is incomplete.

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METHYL MERCURY BACKGROUND

The Delta is on the State Water Board's CWA 303(d) list because of elevated concentrations of methyl mercury in fish. The Central Valley Water Board submitted a technical Total Maximum Daily Load (TMDL) report to the U.S. Environmental Protection Agency (USEPA) in the summer of 2005 (http://www.waterboards.ca.gov/centralvalley/programs/tmdl/deltahg.html). A draft amendment to the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) will be presented to the Central Valley Water Board for possible adoption in the summer of 2006. The technical TMDL report identifies the SDIP as having the potential to increase methyl mercury concentrations in Delta fish.

Methyl mercury is a developmental neurotoxicant. Most at risk are human and wildlife fetuses and young. The primary route of exposure is from consumption of mercury-contaminated fish. Statistically significant positive correlations have been observed in the Delta and elsewhere between average annual unfiltered methyl mercury concentrations in water and aquatic biota. The relationship suggests that aqueous methyl mercury is an important factor controlling methyl mercury bioaccumulation in the aquatic food chain.

Aqueous methyl mercury is produced by sulfate reducing bacteria in sediment. Sulfate is used by these bacteria as the terminal electron acceptor in the oxidation of organic matter. Sulfate additions have been

observed to both stimulate and inhibit methyl mercury production (see TMDL report for details). It is not known how sensitive methyl mercury production in the Delta is to changes in sulfate concentration.

Sediment sulfate concentrations are determined by the concentration in overlying water. Primary sources of sulfate to the Delta are the Sacramento and San Joaquin Rivers and seawater intrusion. Sulfate concentrations in the Sacramento River are about 7 times lower than in the San Joaquin and about 450 times less than in seawater. Therefore, changes in both the mixture of Sacramento to San Joaquin River water and in the volume of carriage water will alter regional sulfate concentrations in Delta sediment. These changes may significantly influence methyl mercury production in sediment and subsequent bioaccumulation in fish.

Sulfate amendment studies should be undertaken with sediment collected throughout the year from the Delta to determine whether methyl mercury production is sensitive to changes in sulfate concentration. If the results suggest that methyl mercury production is a function of sulfate, then the net change in methyl mercury concentration in water and biota should be determined for each SDIP operational alternative and the results considered when selecting the preferred alternative.

METHYL MERCURY COMMENTS

Comment #Hg 1. References to relevant Regulations Omitted
There is no mention in Chapter 5.3, *Delta Water Quality Issues*, of the CWA 303(d) listing for mercury in the Delta, or the tributary San Joaquin River and Mud Slough.

CVRWQC B-13

Comment #Hg 2. Applicable Criteria for Mercury
Chapter 5.3 needs to mention that the draft methyl mercury amendment to the Basin Plan recommends a small and large fish methyl mercury tissue objective and an average annual unfiltered aqueous methyl mercury goal to meet the tissue objectives.

CVRWQC B-14

Comment #Hg 3. Methods for Assessing Methyl Mercury Impacts
Chapter 5.3 should include DSM2 modeling results to quantitatively determine how the SDIP alternatives change ambient sulfate concentrations at various locations in the Delta. The DSM2 sulfate results should be integrated with laboratory and field methyl mercury production results to predict the magnitude of change in water and fish tissue methyl mercury concentrations for each SDIP alternative.

CVRWQC B-15

Comment #Hg 4. Cumulative Impacts
As stated in Comment #DO7 above, the methyl mercury analysis in the SDIP EIS/EIR needs to consider the cumulative effects of both the SDIP and the existing SWP and CVP operations. Chapter 10 should also include an analysis of how changes in ambient Delta sulfate concentrations might affect methyl mercury production in water pumped onto Delta Islands and exported south to the San Joaquin Basin and Mud Slough. Finally, the cumulative impact on the Delta of methyl mercury from both the SDIP alternatives and from agricultural return flow from Delta Islands and the San Joaquin River basin should be evaluated.

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GENERAL COMMENTS

Comment #G1 – Section 401 Water Quality Certification

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Comment #G1 – Section 401 Water Quality Certification
Any project involving in-stream construction activity requires a CWA Section 404 permit from the U.S. Army Corps of Engineers. As part of this process, according to CWA Section 401, the State Water Board must certify that the proposed project will meet applicable water quality standards. An application for a Section 401 Water Quality Certification for the SDIP needs to demonstrate that this project has no impact on water quality, whether short-term (e.g. impacts from construction activities) or long-term (e.g. effects of new dredged channel geometry or long-term barrier/pumping operations). A certified SDIP EIS/EIR would need to be part of that application. To support a Section 401 Water Quality Certification, the SDIP EIS/EIR would at least need to address the DO and mercury related comments above.

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If there are any questions regarding these comments please contact Jerry Bruns by e-mail at jbruns@waterboards.ca.gov or by phone at 916-464-4831. Thank you.

Sincerely,

Kenneth D. Landau
Acting Executive Officer

Enclosures (2)

cc: Jerry Bruns, Central Valley Water Board
Les Grober, Central Valley Water Board
Sue McConnell, Central Valley Water Board
Chris Foe, Central Valley Water Board
Gita Kapahi, State Water Board, Division of Water Rights

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TO: Paul Marshall
Department of Water Resources
Bay-Delta Office

FROM: Mark Gowdy
San Joaquin River TMDL Unit

DATE: 31 October 2003

SIGNATURE:

SUBJECT: ADMINISTRATIVE DRAFT ENVIRONMENTAL IMPACT STATEMENT / REPORT, SOUTH DELTA IMPROVEMENTS PROJECT (SDIP)

Thank you for the opportunity to comment on the subject document. Although, Regional Board staff did not have time for a detailed review, following are general comments relating to potential impacts on the dissolved oxygen impairment in the Stockton Deep Water Ship Channel (DWSC).

Water quality impact WQ-19 properly identifies reduced flow in the San Joaquin River past Stockton as having a potential impact on DWSC dissolved oxygen concentrations. Discussion of the assessment methods or significance criteria in Chapter 5.3 or elsewhere in the document was not found. For example, justification was not provided to support the assumption that only flows less than 1,500 cfs have an effect on DWSC dissolved oxygen concentrations. The analysis supporting the assessment of water quality impact WQ-19 should be provided, including detail on the nature of the potential impact during different months and flow conditions for the various alternatives.

Mitigation measure WQ-3 has the potential to provide some or all of the required mitigation for water quality impact WQ-19, however, a more detailed description of Old River tidal gate operations is required. It is the position of Regional Board staff that the SDIP facilities be operated, at all times, to either maintain flow rates in the San Joaquin River past the head of Old River that would exist without the full effect of the CVP and SWP pumping projects, or provide an alternate form of mitigation for that portion of the flow that cannot be maintained because of other project constraints.

A detailed review of the document was not possible in the time provided. Staff will continue to evaluate the material presented on the hydraulics governing the flow split at the Head of Old River and other topics. Additional comments will be provided on the public review draft.

Please feel free to contact me at (916) 255-6317 or by e-mail at gowdym@rb5s.swrcb.ca.gov to discuss our comments further.

California Environmental Protection Agency

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California Regional Water Quality Control Board

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Arnold Schwarzenegger
Governor

TO: Patrick Wright
Executive Director
California Bay-Delta Authority

FROM: Les Grober
San Joaquin River TMDL Unit

DATE: 17 November 2003

SIGNATURE:

SUBJECT: CONSIDERATIONS FOR PROPOSED ACTIONS IN THE SOUTH DELTA

California Bay-Delta Authority staff is preparing a draft resolution and staff report for consideration by the Authority at its 11 December 2003 meeting regarding a proposed set of actions in the South Delta that implement the CALFED Record of Decision. It is our understanding that the resolution will direct the staff of the Authority and various CALFED implementing agencies to develop a public process, including hearings and CEQA/NEPA strategy, for implementing this set of actions. The Central Valley Regional Water Quality Control Board (Regional Board) has regulatory authority over a number of legal requirements that may apply to different components of the proposed set of actions. At the request of Bay-Delta Authority staff, Regional Board staff has prepared an overview of regulatory concerns that should be considered by the public planning process for the these actions.

Impact on Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel (DWSC)
Proponents of the proposed set of actions in the South Delta have indicated the dissolved oxygen impairment in the DWSC will be addressed comprehensively as part of the CALFED process that implements the actions. Regional Board staff has determined that the dissolved oxygen impairment in the DWSC is caused by the combined effects of i) loads of oxygen demanding substances to the channel from upstream, ii) reduced flow through the channel caused by upstream reservoir operations and other diversions, and iii) the altered geometry of the channel itself. In order to achieve a balanced evaluation of alternatives, the CALFED process addressing this impairment will need to give consideration to the way each of these factors contribute to the problem and the potential ways they can be mitigated.

A TMDL implementation plan was developed by the Dissolved Oxygen TMDL Steering Committee and submitted to Regional Board staff in February 2003. With some further development, this implementation plan could provide an acceptable framework for a well-balanced evaluation of the causes and alternative solutions to this impairment. The studies outlined in this plan can provide entities responsible for the various contributing factors with the information needed to develop the required mitigation measures. Having the California Bay-Delta Authority manage the execution of this plan as part of the CALFED process would provide the leadership and coordination these efforts require.

Impacts on Old and Middle River Dissolved Oxygen Impairments

Old River (between the San Joaquin River and the Delta Mendota Canal) and Middle River (between the San Joaquin River and the Victoria Canal) have been included on the State Board's 303(d) list as impaired due to low dissolved oxygen conditions. Although the Regional Board has not commenced TMDLs to evaluate the causes and potential solutions to these impairments, it is very likely that flow conditions in the South Delta have an impact on how oxygen demand is exerted in these channels. The planning required for the set of actions in the South Delta need to include consideration of potential impacts on these impairments.

Impact on San Joaquin River Water Quality

Delta water delivered to the San Joaquin River via the Delta Mendota Canal is one of the largest sources of salt in the river. The effect that increases in salinity of Delta water has on the San Joaquin River salinity impairment must be considered. The San Joaquin River is currently listed as impaired for salt, boron, selenium, diazinon, chlorpyrifos, organochlorine pesticides, mercury, and unknown toxicity. The water quality impacts of sediment, pesticides, selenium, and other pollutants must also be considered with regard to the augmentation of San Joaquin River flow by recirculating flow from the State and Federal water projects via the Newman Wasteway. The planning process for this project will need to consider the water quality impact on Newman Wasteway and the San Joaquin River. Waste Discharge Requirements may also be required from the Regional Board.

Section 401 Water Quality Certifications and Waste Discharge Requirements

Under Clean Water Act (CWA) Section 404, projects that propose to discharge fill or dredged material into a water of the U.S. must obtain a permit from the U.S. Army Corps of Engineers (USACOE). If such a project has the possibility to affect water quality, the project must also apply for a Water Quality Certification under Section 401 of the CWA. In California, the State and Regional Boards are responsible for providing these CWA Section 401 certifications, which are enforceable orders under California law. In order to issue a CWA Section 401 certification, it must be found that the project will, in accordance with the Basin Plan, protect beneficial uses, comply with numeric water quality objectives, and not violate anti-degradation policy of State Board Resolution No. 68-16. Waste Discharge Requirements may also be required from the Regional Board for the disposal of dredging spoils.

The improvements addressed by the draft Bay-Delta Authority resolution include the proposed South Delta Improvement Projects (SDIP). The SDIP involves dredging and construction of other in-stream structures in the South Delta and will require a CWA Section 404 permit from the USACOE and a CWA Section 401 certification from Regional Board staff. In order to obtain this certification, the project will need to provide mitigation for any negative impact it may have on any water quality conditions in the Delta, including dissolved oxygen impairments in the DWSC and Old and Middle Rivers. It is the position of Regional Board staff that the SDIP must provide mitigation for the entire effect of State Water Project and Central Valley Project pumping on flows in the San Joaquin River.

Impacts on NPDES Permitted Facilities

The determination of effluent limitations for NPDES permitted wastewater facilities may consider the amount of flow available in the receiving waterbody for dilution of constituent concentrations present in the discharge. If flow in a receiving waterbody for a wastewater facility is decreased by the proposed set of actions in the South Delta, that facility could potentially be faced with more stringent NPDES effluent

limitations for which costly improvements or operational changes may be required. The planning process for improvements in the South Delta must include consideration of such potential impacts.

To the extent that these considerations can be addressed in the Bay-Delta Authority resolution and/or staff report it will provide assurance to the State and Regional Boards and various other agency and non-agency watershed stakeholders that they will be addressed in a thorough and well-balanced fashion under the leadership of the California Bay-Delta Authority. We appreciate the consideration given to our concerns by you and your staff and look forward to participating constructively in the upcoming planning process.

cc: Gita Kapahi - State Water Resources Control Board

Responses to Comments

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The potential effects of the SDIP tidal gate operations on the Stockton DWSC DO concentrations are fully described and evaluated in Section 5.3.

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Data for DO in Middle and Old River channels are very limited (See Figure 5.3-7). DO changes in these channels are speculative; however, the increased tidal flushing that will be provided with the tidal gate operations described in Section 5.2 will likely improve the periods of low DO that have been measured in these channels.

CVRWQCB-3

The effects of the SDIP on the DWSC localized area of low DO are fully described under Impact-WQ-13. No documentation exists on the causes and extent of impairment of low DO in Middle or Old River. The section describing RWQCB DO TMDL efforts in Section 5.3 has been modified as suggested. References in Chapter 8 of the Draft EIS/EIR have been added for the DO TMDL Implementation Plan and D-1641.

CVRWQCB-4 and CVRWQCB-5

Changes in Section 5.3 have been made to clarify that the DO objective is a minimum DO concentration and that no change in DO is allowed if the DO is already less than the DO objective. The significance criteria for DO are no changes if the DO is already below the objective and no reductions of more than 0.5 mg/l, when the baseline DO is greater than the objective plus 0.5 mg/l. The Basin Plan DO objective is 5.0 mg/l at all times in Middle And Old River channels. However, because no tool is available for evaluating potential changes in DO concentrations in Middle River and Old River channels, no DO impacts are identified for these channels.

CVRWQCB-6 and CVRWQCB-7

The simplified relationship between flow and DO was not given directly in the RWQCB staff report. The relationship between DWSC flow and DO that was assumed for the impact analysis is reasonable for comparative impact evaluations. This relationship is the general pattern shown in the referenced RWQCB staff report. The assumptions used in the SDIP Draft EIS/EIR

assessment are clearly stated, but the text has been changed so that the relationship is not directly attributed to the RWQCB staff report.

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

The future ability to increase DO with an oxygenation device in the DWSC will perhaps make these adaptive management decisions for the head of Old River gate somewhat easier. As a separate project from SDIP, DWR is proceeding with construction and testing of a full-scale pure oxygen aeration system for the Stockton DWSC. Construction is on schedule to have the facility completed by fall 2006 and begin testing and operational monitoring in spring 2007.

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Please see Master Response H, *Cumulative Impact Baseline Conditions*.

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In Appendix D, Figures D-23 and D-24 show comparisons of the DSM2 results and the Stockton tidal stage and tidal flow for the calibration periods of 1997–1999 and February 1996. The comparisons are generally good, although measured flows and stages appear to be higher than the simulated values for the high flow period of February 17–March 2, 1996. A more focused evaluation of the modeling results compared to the measured flows at the USGS Stockton (Garwood Bridge) station is available in the Temporary Barriers Program monitoring reports for 2003 and 2004.

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The description of the likely effects of the SDIP gate operations on flows and DO in the DWSC is in Section 5.2 of the SDIP Draft EIS/EIR. Additionally, Figure 5.3-21 indicates that Stockton flows will generally be increased with the proposed gate operations. Because the flows during the summer and fall period (June–October) will be higher, it is assumed that DO in the DWSC will increase. Figures 5.3-22 and 5.3-41 show the assumed changes in the DO from the baseline to Stage 1 and Stage 2 operations. More quantitative evaluation of the performance results (i.e., changes in DO in the DWSC) for the head of Old River gates will be made as part of the GORT review and adaptive management decisions.

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Please see the response to comment CVRWQCB-2.

CVRWQCB-13 to CVRWQCB-16

Only those water quality variables that might reasonably be affected by SDIP south Delta tidal gate operations or increased exports were selected for impact assessment. Because the projects do not discharge wastewater and SDIP does not significantly change circulation patterns in Delta water ways, there are no reasonably likely connections between SDIP facilities or operations and total mercury or methyl mercury concentrations. Because there are no established assessment methods for total or methyl mercury in the Delta no computer modeling to simulate effects has been conducted.

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DWR and Reclamation intend to submit an application for Clean Water Act Section 401 water quality certification to the State Water Board prior to implementation of Stage 1 of the SDIP. Measures to ensure that the project would not have any short-term or long-term effects on water quality are included in the SDIP Draft EIS/EIR. The State Water Board will issue a conditional permit, which may include additional measures to ensure that there is no overall degradation of water quality. Additionally, the comments in your letter regarding mercury and DO have been addressed in the Final EIS/EIR, which will become a portion of the 401 certification application.

Comment Letter DBW

STATE OF CALIFORNIA-THE RESOURCES AGENCY — ARNOLD SCHWARZENEGGER, *Governor*

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FEB 09 2006 00169

DBW

February 3, 2006

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

Dear Mr. Marshall:

The mission of the Department of Boating and Waterways (DBW) is to provide safe and convenient public access to California's waterways and leadership in promoting the public's right to safe, enjoyable, and environmentally sound recreational boating.

The Department is the lead agency for controlling Water Hyacinth and *Egeria densa* in the Sacramento-San Joaquin Delta, its tributaries, and the Suisun Marsh. These non-native aquatic plants form dense mats of vegetation that obstruct navigation channels, marinas, irrigation systems, and water intake structures. These weeds have a negative impact on the Delta ecosystem. They displace native plants; block light needed for photosynthesis, and reduce the amount of dissolved oxygen in the water, and deposit silt and organic matter at several times the normal rate.

The Department of Boating and Waterways reviewed the Draft South Delta Improvements Program EIS/EIR and has the following comments:

1. Table 6.2-S on page 6.2-1, VEG-4: Spread of noxious weeds as a result of gate construction and channel dredging: The mitigation measure to avoid introduction and spread of new noxious weeds may reduce the risk to less than significant for non established noxious weeds, however, it will not reduce the impacts to less than significant for existing noxious weeds particularly *Egeria densa*. If *Egeria* is present in the dredging areas (which is highly likely) dredging the area will spread it. *Egeria* reproduces by the spread of plant fragments. The dredging process will likely create fragments, many capable of creating new colonies of *Egeria*. The presence of vessels (especially the propellers) and other equipment in areas of *Egeria* infestations is likely to create fragments capable of generating new colonies in new locations. **DBW-1**

2. The DBW strongly recommends cleaning all vegetation off of equipment used in the water before entering another site to reduce the risk of spreading invasive vegetation by the equipment. **DBW-2**

3. The installation of the Department of Water Resources (DWR) temporary rock dams, if done prior to July 1, enabled the DBW to begin spraying to control invasive vegetation early. The current proposal for permanent dams and the method of **DBW-3**

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operation will most likely jeopardize early spraying based on concerns from National Oceanic and Atmospheric Administration (NOAA Fisheries). This loss of time will make control of both *Egeria densa* and Water Hyacinth much more difficult. DBW would like to work with DWR concerning the issue. DBW-3

4. Water Hyacinth is a floating plant and will drift around until some obstacle contains it. The rock dams function as an obstacle. Hyacinth plants back up behind the dams for extended periods of time. This has allowed the build up of a hyacinth seed bank. These areas will function as a nursery for hyacinth with the proposed dams and their operation. This will likely cause an increase in the spread of hyacinth. Hyacinth is currently a problem at the Clifton Court Forebay. The proposed project will likely increase this problem due to the seed bank that now exists. DBW-4

5. With the placement of permanent operable flow control gates and vessel locks, there is a potential and likely need for developing boating regulations to control the speed, direction, and size of vessels that will use the locks. Section 660 and 662 of the Harbors and Navigation Code address the areas and limitations of boating regulations enacted by political subdivisions of the state, including among others, cities, counties, and other state agencies, such as DWR. The four areas allowed include, establishing speed zones, establishing time-of-day use, establishing special use areas, as described in section 651 (v) of the Harbors and Navigation Code which are not in conflict with state laws. (For reference to these laws, please use the following web-site: http://www.leginfo.ca.gov/calaw.html.) DBW-5

6. In conjunction with the need to regulate vessel traffic in the areas with restricted passage, such as through the proposed boat locks, there may be a need to post signs, buoys, lights, or other markers, to control vessel traffic or to provide information for vessel operators, such as informing the vessel operators about speed limits, hours or days of operation, limitation on vessel by length of width, preferred channel, or other safety information. Such waterways markers must be placed in accordance with the federal waterways marking system or with the state's waterway marking system. DBW-6

   The U.S. Coast Guard's Waterways Management Unit in Alameda, California, may be contacted at (510) 437-3073.

   If the Coast Guard determines it does not have jurisdiction for this project then the state's waterway marker regulations should be used to place any waterway markers, signs or buoys necessary to manage the vessel traffic in these areas. The state's waterway marker regulations may be accessed by using the following link:

   http://government.westlaw.com/linkedslice/search/default.asp?RS=GVT1.0&VR=2.0&SP=CCR-1000, or you may call Mike Sotelo, of our regulations unit at (916) 263-0787 for a copy of the regulations.

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7. The width, length, and depth of the proposed locks should be of sufficient dimensions to facilitate the vast majority of vessels using the areas in question. Data to this end should be provided in the final EIS/EIR. **DBW-7**

8. The installation of boat locks on the waterways may cause delays in these restricted areas which could have an impact on recreational boaters and the surrounding environment. Vessel traffic on the Delta during the summer months may become heavy or congested with vessels trying to transit the locks. Vessels may have to drop anchor or tie up to the shoreline while they wait their turns. The waiting or staging of vessels to pass through the locks would likely create a need for restrooms, rest areas, and litter control. Human waste and/or litter would have negative impacts on the water and land environment. Therefore, it is recommended that these potential impacts be mitigated. **DBW-8**

   The types of mitigation we suggest would include the construction of restrooms, drinking fountains to keep vessel operators and their passengers hydrated, and other enhancements, such as landscaping and shade trees.

Thank you for the opportunity to comment on the Draft EIS/EIR. We would be pleased to work with you on any of the issues discussed in this letter. If you have any questions please feel free to contact me at (916) 263-0780.

Sincerely,

David L. Johnson
Deputy Director

Responses to Comments

DBW-1

DWR commits to working with the Department of Boating and Waterways (DBW) to consider chemical treatment of any Egeria beds in the vicinity of the dredging or construction area prior to dredging to reduce the risk of fragmentation and spreading.

DBW-2

An environmental commitment has been added to Chapter 2 of the SDIP Draft EIS/EIR to ensure that vegetation is removed from equipment used in the water.

DBW-3

DWR commits to working with the DBW to support the aquatic weed control program. The proposed gates can be operated to more fully close off each canal for some time period. The more effective closure of the canal will both prevent fish from entering the area and prevent aquatic weed spray from being flushed out. These combined effects have the potential of reducing impacts on fish and improving weed control.

DBW-4

The SDIP operable gates will no longer cause water hyacinth to back up. Water hyacinth will continue drifting toward the trash racks at the DMC Tracy intake and at the Skinner Fish Facility within CCF. Normal removal and disposal techniques will continue to be used.

DBW-5

DWR will work with DBW to develop these regulations.

DBW-6

The design of the boat locks at the gate structures includes signs, navigational lights, warning signs, and water level recorders, as described in Chapter 2 of the SDIP Draft EIS/EIR.

DBW-7

The boat locks are designed to pass multiple large boats. Boat surveys conducted by DWR indicate that the size of the boat locks will be adequate to allow passage of most boats using Delta waterways. DWR's personnel performed a study that determined the proposed locks would pass all Delta rental houseboats except for one very large houseboat 65 feet long. (McQuirk pers. comm.)

The bottom hinge lift gate designs can also be used to pass barges when upstream stage does not need to be maintained artificially high.

DBW-8

The proposed boat locks are designed to pass a number of smaller boats (which typically use the area) at a time. Four boats up to 30 feet in length can be passed in a single turn. The cycle time for the proposed lock is approximately 15 minutes (depending on the differential head). This equates to passage of about 16 large recreational boats an hour. Operators will be told to make notes of average wait times for boat lock users. If wait times become significant, other measures can be installed to reduce potential impacts on the environment. Public restrooms and trashcans are included in the current plans for the boat lock facilities.

Comment Letter DC

STATE OF CALIFORNIA, RESOURCES AGENCY — ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

DC

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January 31, 2006

Mr. Paul Marshall
Department of Water Resources
South Delta Branch
1416 9th Street
Second Floor
Sacramento, CA 95814

Ms. Sharon McHale
U.S. Department of the Interior
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Subject: SCH# 2002092065 – Draft Environmental Impact Statement/Report for the South Delta Improvements Program

Dear Mr. Marshall and Ms. McHale:

The Department of Conservation's Division of Land Resource Protection (Division) monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act, California Farmland Conservancy Program, and other agricultural land conservation programs.

The California Department of Water Resources and the U.S. D.I. Bureau of Reclamation have agreed to jointly pursue the development of the South Delta Improvement Project to address regional and local water supply needs as well as the fish and wildlife needs. Project objectives and purposes include a reducing in the movement of Central Valley fall/late fall juvenile Chinook salmon into the south Delta via Old River, maintaining adequate water levels and water quality for agricultural diversions in the south Delta, and increasing water deliveries and delivery reliability for water contractors, fish and wildlife by increasing diversion at Clifton Court Forebay to 8,500 cfs. The following construction and operation activities are proposed:

- A fish control gate at the head of Old River
- Up to three flow control structures to improve existing water level and circulation patterns for south Delta water users
- Flow control gates at Middle River, Grant Line Canal and Old River

The Department of Conservation's mission is to protect Californians and their environment by: Protecting lives and property from earthquakes and landslides; Ensuring safe mining and oil and gas drilling; Conserving California's farmland; and Saving energy and resources through recycling.

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- Dredging of various (minimally Victoria, North and Grant Line) channels and in the Middle River, Grant Line Canal and in Old River to improve conveyance
- Extension of up to 24 agricultural diversion intake facilities

Four alternatives, including the No Action alternative are considered and analyzed.

We offer the following comments:
Land and Water Use is discussed in Chapter 7.1. The land use in the vicinity of Old River Gate, Middle River at North Canal, Grant Line Canal at Delta Mendota Canal, Old River at Delta-Mendota Canal Gate, West Canal, Middle River, and Old River is predominantly agricultural. Impacts associated with land uses were assessed by basing the compatibility of construction and operation the project on adjacent land uses and the compatibility with local land use plans and policies. A Farmland Conversion Impact Rating prepared resulted in less than significant impacts to agricultural resources. The document cites nine CALFED programmatic mitigation measures that will be implemented to alleviate impacts to agricultural resources, as the project progresses.

The final EIS/R and any other documents prepared that support this project, such as the Delta Regional Ecosystem Restoration Implementation Plan should provide a detailed discussion of those agricultural lands that would be acquired and whether termination of Williamson Act contracts would result in order to accommodate the project, or Plan. It should also further discuss whether such Williamson Act contract termination would affect nearby properties also under contract. If any part of the project's affected acreage is under Williamson Act contract, and any part of it is to continue under contract after project completion, the document should discuss the proposed uses for those lands. Uses of contracted land must meet compatibility standards identified in Government Code Sections 51238 - 51238.3; otherwise, contract termination (see paragraph above) must occur prior to the initiation of the project. Although this information may be more appropriately included in another section of the document, it should be briefly discussed in the Land Use/Environmental Setting section of the EIR/S. DC-1

Please note that any acquisition of contracted land by a public agency must meet the requirements set forth in Government Code sections 51290 to 51295. Specific findings would need to be reported to the Department of Conservation in the required notice to the Director. The requirements for findings may, under certain circumstances, be waived under Government Code section 15993 (h).

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

Sincerely,

Dennis O'Bryant
Acting Assistant Director

Responses to Comments

DC-1

The text in Section 7.1 of the SDIP Draft EIS/EIR has been modified to provide quantitative information regarding Williamson Act contracts and land use changes.