Comment Letter NRDC

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NATURAL RESOURCES DEFENSE COUNCIL

February 7, 2006

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

Ms. Sharon McHale
U.S. Bureau of Reclamation, Mid-Pacific Region
Draft EIS/EIR Comments
2800 Cottage Way
Sacramento, CA 95825

Re: **Comments Regarding the South Delta Improvements Program DEIS/DEIR**

Dear Mr. Marshall and Ms. McHale,

On behalf of the 130,000 California members of the Natural Resources Defense Council, we offer the following comments regarding the SDIP DEIS/DEIR. NRDC believes that this document does not meet the requirements of CEQA and NEPA. In addition, the approach adopted by DWR and the Bureau regarding this project represents a major departure from the collaborative, open, science-based and balanced approach advocated by the CALFED Bay-Delta Program. A failure to address the fundamental flaws in this document would damage the credibility of DWR, the Bureau and CALFED. Given the precarious status of many of the estuary's fisheries, we urge the agencies to modify both the substance of the proposed project and the process by which they are seeking approval. The flaws in this document include, but are not limited to the following comments.

Relationship with the CALFED Bay-Delta Program

The document inaccurately describes the relationship of the project to the CALFED ROD. The document asserts that the proposed project is "consistent with the CALFED Program" (ES-1) and is "fully consistent with CALFED's overall goals of water supply reliability, water quality, ecosystem restoration and levee system integrity" (ES-1). This is not accurate. For example, the environmental protections (e.g. EWA)

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incorporated in this document are far less than required by the ROD and are inadequate to achieve the CALFED ecosystem restoration goals. The following list includes some of the inconsistencies between this project and related requirements in the ROD: NRDC-1

- The CALFED process is required by law to produce a balanced program. On the other hand, this project appears to sacrifice ecosystem health and water quality in order to increase water deliveries. NRDC-2
- The proposed project falls far short of the EWA assets required by the ROD (CALFED ROD, p. 54-58). This issue is discussed further below. NRDC-3
- The CALFED ROD requires annual funding for the CALFED ecosystem restoration program of at least $150 million per year, as a condition of maintaining ESA assurances for delta exporters. Given rapidly diminishing state bond funds, scarce federal funds, and the reluctance of water users to pay for this program, it is likely that these levels will not be maintained in the near future. However, the document does not discuss the likelihood of maintaining this funding level, which was found in the ROD to be necessary to ensure ESA compliance. The lack of funding for ecosystem restoration would significantly reduce the ability of fisheries agencies to implement restoration projects to mitigate the impacts of the CVP and SWP. NRDC-4
- State and federal agencies have failed to implement the $35 million annually in new user fees designed to support the CALFED Ecosystem Restoration Program (CALFED ROD, p. 38). These user fees would be of significant assistance in maintaining the required funding level for ecosystem restoration.
- The document does not discuss the ROD requirement that any increase in SWP pumping is "conditional upon avoiding adverse impacts to fishery protection" (CALFED ROD, p. 49.) Given the negative impacts of this project and the precipitous decline of delta health, the proposed project clearly does not comply with this requirement. NRDC-5
- The CALFED program established a target of "continuously improving delta water quality for all uses" (CALFED ROD, p. 65). However, this document predicts degradation of delta water quality (p. 1-30, 5.3-36, 5.3-42). NRDC-6
- The CALFED ROD emphasizes improvements to "water supply reliability" (CALFED ROD, p. 40). However, as discussed below, the proposed project would increase short-term supplies at the risk of reducing long-term reliability. NRDC-7

A revised DEIR/DEIS should be issued, clearly indicating the areas in which funding for environmental restoration, water dedicated to the environment, water quality and other characteristics of this project conflict with or undermine provisions of the CALFED ROD. We recommend that the project be modified to conform to the ROD.

The document fails to analyze the impacts that the proposed project could have on the CALFED Ecosystem Restoration Program. The goal of this program is:

> "To improve aquatic and terrestrial habitats and natural processes to support stable, self-sustaining populations of diverse and valuable plant and animal species through an adaptive management process. Implementation of the ERP includes recovery of

species listed under the State and Federal Endangered Species Acts." (CALFED ROD, p. 35)

As the comments in this letter and the analysis in this document indicate, the proposed project could have significant negative impacts on the Bay-Delta ecosystem. However, the document does not discuss how this project would affect progress toward and the likelihood of success of the CALFED Ecosystem Restoration Program. In particular, the document does not adequately analyze how it will contribute to the recovery of endangered species. NRDC-8

An adequate analysis of these potential impacts is particularly important because balanced progress towards the CALFED ecosystem goal is required by the state and federal authorizations for the CALFED program.

The document fails to analyze impacts on the CALFED Water Quality Program: The document acknowledges that the project is likely to degrade water quality (p. 1-30, 5.3-36, 5.3-42). However, the document does not adequately discuss impacts to the CALFED program's efforts to achieve "continuously improving Delta water quality for all uses" (CALFED ROD, p. 65). NRDC-9

Alternatives, Projected Water Demand and Potential Water Supply

The document fails to include a full range of alternatives. Specifically, the project description is impermissibly narrow to meet the requirements of CEQA and NEPA. The three operational alternatives retained for further consideration all include significant increases in water exports (Figure 4-2). The document rejects alternatives such as reducing exports (p. A-13) and fallowing agricultural land (p. A-34).

In rejecting land fallowing, the document states that this alternative does not meet the export objective (p. A-34). In this discussion, the project is improperly defined as increasing water diversions. It should properly be defined as striving to provide reliable water supplies. This correct definition would allow alternatives that would reduce demand to be considered on a level playing field with those that would increase supply. Rejecting alternatives simply because they are not the agencies' preferred method of providing water supplies (i.e. increasing delta diversions) violates the requirements of CEQA and NEPA. NRDC-10

If this approach were deemed to be acceptable, it would suggest, for example, that a proposed wetland fill or surface storage project could avoid evaluating any alternative sites simply by constraining the project purpose to a particular site.

The lack of a full range of alternatives is also reflected by the conclusion that the operational alternatives have similar potential impacts (p. 6.1-112 and 6.1-113). It is not credible to assert that the agencies do not have alternatives available to them that would result in varying impacts to the delta environment.

Further, the document states that a reduction in delta pumping is inconsistent with local delta-specific objectives regarding deliveries to the South Delta Water Agency (p. A-13). The document, however, fails to mention that in-delta water users support the evaluation of a reduced delta pumping alternative. Thus, this criterion is misapplied. Likewise, the criteria are misapplied when the document states that increasing water diversions "does not meet the fish objective" (p. A-34). In fact, reduced delta pumping could assist with reducing entrainment of salmon at the pumps, the two fisheries related alternatives (p. A-2). Such an alternative would also assist with the restoration of delta fisheries and the delta ecosystem, which should have been included as an objective of the project. NRDC-10

The revised document must include an analysis that significantly reduces delta diversions, per the Third District Court of Appeals decision in *RCRC et al v. State of California*. The need for such an analysis is clearly demonstrated by the fact that the alternatives considered by the Bureau to address the drainage problems in the San Luis Unit of the CVP include land retirement. Regarding drainage issues, the Bureau has found that land retirement is a legitimate alternative. It has been improperly excluded from this analysis.

The document improperly dismisses alternative water supplies highlighted by the State Water Plan. The newly released State Water Plan (http://www.waterplan.water.ca.gov/cwpu2005/) demonstrates the significant potential of a wide range of alternatives to provide reliable water. Indeed, this plan reveals that the potential supply from increased delta pumping is far lower than other water management tools, such as urban water conservation. The scale of potential supply benefits from other water management tools demonstrates that there are practical alternatives that would allow DWR and the Bureau to evaluate an alternative in this document that would reduce delta diversions. Finally, the document fails to discuss the demonstrated benefits of these alternative water supply tools. For example, the document fails to discuss the fact that several urban areas have grown substantially over the past several decades; however, as a result of investments in water conservation and other water management tools, these areas have not seen a proportional increase in their water consumption. Demand-side water management tools have are clearly demonstrated to be credible alternative sources of reliable water. They have been improperly excluded from this analysis. NRDC-11

The document fails to account for the likelihood of decreased agricultural water demand. The document assumes that future demands by south of delta agriculture will be the same in the future (Table 5.1-1). However, the new State Water Plan finds that agricultural demand south of the delta is likely to be significantly lower in the future. (Although this report was recently released, this analysis was performed by DWR and was available for inclusion in this document.) In fact, agricultural water leaders have advocated such a reduction. For example, Tom Birmingham, General Manager of the Westlands Water District, has advocated a land retirement program that would reduce irrigated acreage within that district by one third – 200,000 acres (Op-Ed by Tom Birmingham, Bakersfield Californian, May 1, 2002). Clearly, a land fallowing program NRDC-12

is acceptable to agricultural water leaders and could be incorporated in an alternative that would reduce delta pumping. NRDC-12

The document fails to include the Bureau's projections regarding future CVP water deliveries. As discussed above, the document fails to project reductions in San Joaquin Valley agricultural water demand. In addition, the document fails to incorporate the Bureau's projections regarding future CVP water deliveries in the Sacramento Valley. The document projects Sacramento River water demands to be unchanged in the future (Table. 5.2-2). However, in a letter to Congressman George Miller dated December 23, 2004, Bureau Commissioner John Keyes stated that the Bureau intends to make full deliveries of the water quantities included in renewed CVP contracts. NRDC has provided documents to both the Bureau and DWR that demonstrate that actual water use in recent years has been more than 560,000 acre-feet below these contract totals. If the Bureau intends to make full deliveries in the Sacramento Valley, the document must incorporate these projections, and modify the impacts analysis accordingly. NRDC-13

The document inaccurately constrains projected future demands for cross-delta water transfers. The document suggests that future demand for cross-delta water transfers will be a maximum of 600,000 acre-feet per year (p. 5.1-51). However, in the past, more water than this amount has been transferred in a single year. In addition, in personal conversations, staff from state and federal agency have indicated that actual demand for cross-delta transfers could be as much as 800,000 TAF to 1 MAF in a single year. The analysis of the hydrologic record in the document concludes that the project would lead to 601 TAF of transfers in at least 6 years (Table 5.1-15). This conclusion suggests that pumping capacity would allow transfers greater than this amount. Indeed, south of delta water users have cited increased transfer capacity as one of the benefits of the proposed project. Given that there is nothing in the proposed project that would prohibit transfers above this level, this assumption artificially lowers potential impacts. The revised document should analyze the potential impacts if actual demand for cross-delta transfers proves to be higher than 600,000 af/y. NRDC-14

Environmental Water Account and Water Supply Reliability Impacts

The document does not adequately analyze the weakening of environmental protections included in the CALFED ROD and inaccurately describes the Environmental Water Account. The CALFED ROD required many specific environmental protections measures. For example, the ROD required specific amounts of water for the Environmental Water Account. In the discussion of the EWA, the ROD included careful definitions of the water to be provided by tiers 1 and 2 of the Environmental Water Account (CALFED ROD, p. 54-58). It also required additional water to be provided under Tier 3, should this water be required. However, these assets have not been implemented as required by the ROD. NRDC-15

This failure has been widely observed. For example, Environmental Defense has prepared an analysis, entitled *Finding the Water*, of the failure of DWR and the Bureau

to implement the protections required by tiers 1, 2 and 3 of the Environmental Water Account. This document is available at the following site: http://www.environmentaldefense.org/documents/4898_FindingWater.pdf The Environmental Defense analysis reveals that, during the past several years, the EWA has been 300,000 to 400,000 acre-feet short of the requirements of the ROD, on an annual basis. As a result, fish protection and restoration actions have been severely curtailed.

In addition, during 2005, delta smelt and other delta fish species experienced a decline to historic lows. Fisheries biologists are now concerned that the smelt could become extinct in the coming few years. During 2005, however, because of the inadequacy of EWA assets, fisheries agencies curtailed EWA actions designed to protect the delta environment. Clearly, Tier 3 assets were required this year to meet the requirements of the ROD and the ESA. However, these assets were not provided. Thus, Tiers 1, 2 and 3 fall far short of the requirements of the CALFED ROD.

In the delta smelt OCAP Biological Opinion, the Fish and Wildlife Service acknowledged the potential impacts of this project and the unreliability of the EWA. That document states:

> "In summary, the threats of the destruction, modification, or curtailment of its habitat or range resulting from extreme outflow conditions, the operations of the State and Federal water projects, and other water diversions as described in the original listing remain. The only new information concerning the delta smelt's population size and extinction probability indicates that the population is at risk of falling below an effective population size and therefore in danger of becoming extinct. Although VAMP and Environmental Water Account have helped to ameliorate these threats, it is unclear how effective these will continue to be over time based on available funding and future demands for water" (Delta Smelt OCAP BO, p. 121-122).

NRDC-15

The document also does not discuss this possibility that Tier 1 or 2 of the EWA could be further reduced. For example, the Westlands Water District is continuing to seek further weakening of the implementation of CVPIA Section 3406(b)(2) (e.g. Letter to Lester Snow and Ryan Broddrick from Kern County Water Agency, Metropolitan Water District of Southern California, San Luis and Delta-Mendota Water Authority and Westlands Water District, November 8, 2004). This provision of federal law dedicated 800,000 acre-feet of CVP water annually to environmental protection and restoration. If the Department of Interior were to decide to weaken implementation of the CVPIA again, tier 1 of the EWA would be further reduced.

Further, the CALFED ROD described specific estimates of EWA assets (ROD, p. 58), establishing a relatively low target for north of delta purchases. However, in recent years, the EWA has purchased more water north of the delta than assumed in the ROD. This has resulted in increased delta pumping than assumed by the ROD. The document does not adequately address the potential impacts of this change on the environment.

The document further inaccurately describes the Environmental Water Account when it states that the EWA as described in the OCAP and this document is "greater than CALFED ROD EWA" (p. 6.1-2, 6.1-96, 6.1-115). In fact, as discussed above, the amount of water provided by the EWA pursuant to the OCAP today is significantly less than that provided by the ROD.

DWR and the Bureau have consistently refused to analyze the impacts of these dramatic changes. By failing to adequately describe baseline conditions and minimum EWA requirements, the document relies on a tool with little certainty, in terms of its potential to mitigate for the impacts of the proposed project. This document provides no mechanism to ensure that the EWA water assumed to be available will be provided with greater reliability than in the past. NRDC-15

If the agencies propose to rely on the EWA, the revised document should clearly state the minimum requirements of this tool. The document should provide a clear, reliable mechanism to provide all of this water. Finally, it should clearly state that all ESA delta assurances will be terminated if these minimum requirements are not met. Such a change would provide a clear mechanism to ensure compliance with the ESA and CESA.

The document inaccurately describes the water supply reliability impacts of the project. The document indicates that the project is designed to improve reliability (p. 1-15) and predictability (p. 1-19) of water supplies. However, an increase in delta diversions could harm the reliability of water supplies used by south of delta agencies. For example, such an increase in diversions would increase the vulnerability of south of delta water users to potential failure of delta levees. These risks are significant, as indicated by the recent and widely-cited study by Dr. Jeffrey Mount of the University of California at Davis. In addition, by further harming delta species and increasing the likelihood of additional ESA listings, the operational phase of the project could increase regulatory constraints on the CVP and SWP, thus decreasing water supply reliability. These risks are inadequately discussed in this document. In fact, the document reaches a contrary conclusion that the project will improve reliability. NRDC-16

In addition, water supply reliability is used as an objective for screening alternatives (p. a-2). However, this criterion is misapplied. The document does not indicate that an increase in delta diversions could reduce reliability, nor does the document discuss the higher reliability of many alternative supply sources.

Natural Resource Impacts

The document does not adequately describe potential impacts to the delta smelt. The document does not adequately review the current status of the smelt. The smelt index for the past year has been the lowest ever recorded (*e.g.*, Matt Weiser, "New Low for Tiny Fish," *Sacramento Bee*, October 31, 2005; Mike Taugher, "Environmental Sirens in the Delta are Screaming," *Contra Costa Times*, May 1, 2005.) The fall NRDC-17

midwater trawl index for September and October, 2005, and the delta smelt recovery index fell to 4. To put this in perspective, the Biological Opinion states that a recovery index of less than 74 should trigger "concern" and consideration of a number of management responses to halt the decline. Biologists are increasingly concerned that the smelt could become extinct in the coming few years (e.g., Bennett, W.W. and K.T. Honey, *Modeling the Canary: How Do We Assess Population Viability for the Threatened Delta Smelt?*, Proceedings of the 2004 CALFED Bay-Delta Program Science Conference.) The document similarly fails to present an adequate summary of the status of other delta fish species that have suffered similar declines in recent years (http://www.science.calwater.ca.gov/pdf/workshops/POD/CDFG_POD_Pelagic_Fishes_Trends.pdf).

The Fish and Wildlife Service's August, 2004 Delta Smelt OCAP Biological Opinion clearly indicates serious potential impacts of increased delta pumping.

> "In summary, the operations of the Projects under formal consultation as described in the Project Description will result in adverse effects to delta smelt through entrainment at the CVP and SWP and by drawing delta smelt into poorer quality habitat in the south delta (Delta Smelt, OCAP BO, p. 176).
>
> "Even if D-1641 X2 standard continues to be met, there could be adverse effects to delta smelt if X2 moves upstream of Chipps Island in the future Study (as modeled in the BA). Since delta smelt generally move with X2, a further upstream location of X2 near Chipps Island in the future Study could result in a distribution pattern wherein more delta smelt would be susceptible to entrainment and elevated mortality in the Central and South Delta due to high temperatures or predation." (Delta Smelt, OCAP BO, p. 140).

NRDC-17

The document does acknowledge that delta smelt salvage could increase "from 15% to 35% (p. 6-1.95). However, the document relies on an ineffective and unreliable EWA to reduce these impacts (6.1-96). Given the status of the smelt, the increasing probability of extinction, the potential impacts of the project and the proven inadequacy of the EWA, the document inappropriately concludes that the project will result in "less-than-significant" impacts (p. 6.1-96).

The document also states that "no specific reason should be assumed at this time," for the decline in delta pelagic fish. However, as discussed above, the Fish and Wildlife Service has already determined that proposed operations could further harm the smelt. In addition, the CALFED Science Panel review of the decline of pelagic fish concluded that exports may be a significant cause of the decline of pelagic species. (**http://science.calwater.ca.gov/pdf/workshops/IEP_POD_2005WorkSynthesis-draft_111405.pdf .**)

In addition, an analysis of the impacts of delta pumping has been prepared by the Bay Institute (attached). This analysis reveals potential impacts from increases in delta pumping, including interim operations, which are more significant than are included in

the document.

Some of the potential impacts of this project could be impossible to remedy. For example, a miscalculation regarding the impacts of the proposed project could contribute to the extinction of the delta smelt. The document fails to exercise appropriate caution in considering this issue. **NRDC-17**

The document fails to analyze potential impacts on longfin smelt. This species has suffered a significant decline in abundance and been proposed for listing under the Endangered Species Act. In addition, biologists have found that longfin is highly sensitive to delta outflow (see sources cited in previous comment). Therefore, longfin could be particularly vulnerable to cumulative impacts from water diversions and the specific impacts of the operational phase of this project. The document acknowledges that longfin smelt could be affected by the project (Table 6.1-1). These potential impacts, however, are not adequately discussed. In fact, longfin is excluded from the species-by-species analysis of vulnerable species (p. 6.1-4 et seq.) **NRDC-18**

The document incorrectly dismisses serious impacts to splittail. The document acknowledges that the project could increase splittail salvage by up to 40%, but incorrectly concludes that no mitigation is necessary (p. 6.1-99). The splittail has also been proposed for listing under the Endangered Species Act. Reductions in the frequency of floodplain inundation and increases in salvage could have a serious impact on the species. For example, a reduction in floodplain inundation prior to splittail spawning could have an impact on food availability. **NRDC-19**

The document incorrectly characterizes the entrainment impacts the project could have on juvenile spring and winter run Chinook salmon. The document indicates that the proposed project has the potential to cause a dramatic loss of juvenile salmon (p. 6.1-85-86). The document relies on the EWA as a mitigation tool; however, as discussed elsewhere in these comments, the document fails to analyze the potential impacts in the likely event of the failure of the EWA. **NRDC-20**

The document does not adequately describe potential temperature impacts on salmon. During the 1987-1992 drought, the Bureau proposed to drain Shasta Lake to "dead storage", in order to maximize CVP water deliveries. In fact, it was this proposal that led NMFS to impose a carry-over storage requirement on the operations of Shasta Dam, in an attempt to ensure adequate cold water to protect downstream salmon. The NMFS OCAP BO eliminated this storage requirement and weakened downstream temperature protections. The document does acknowledge that model runs reveal that end-of-year storage is likely to be lower than 1.9 MAF in Shasta in some years (p. 5.1-11). However, this document does not adequately discuss the extent to which the increase in pumping, and the agreement to wheel CVP water, could lead to re-operation of Shasta Dam, with serious impacts on downstream fisheries. In particular, the document should analyze the temperature impacts if Shasta Dam is operated to maximize water deliveries during extended droughts. The same analysis should be prepared for other SWP and CVP storage facilities. **NRDC-21**

The document does not adequately describe potential impacts to ecosystem functions on rivers below major CVP and SWP storage facilities. For example, the document does not adequately describe potential impacts on riparian recruitment and other important ecosystem functions on the reaches of CVP and SWP controlled rivers between storage facilities and the delta. These ecosystem functions could also be affected by the aggressive operational scenarios discussed above. NRDC-22

The document fails to adequately analyze the potential impacts of the project on San Joaquin River salmon. The document acknowledges significant potential entrainment impacts for San Joaquin Rivers Chinook salmon (p. 6.1-82). The document relies on EWA actions to minimize these impacts (p. 6.1-83). However, the document does not discuss the unreliability of the EWA, as discussed above. In fact, the document clearly suggests that, should the EWA fail to provide adequate resources, fisheries protection measures may not be implemented (p. 6.1-83). Further, in August of 2004, the federal district court in Sacramento found, in *NRDC v. Rodgers*, that flows to the dry upper San Joaquin River, below the Bureau's Friant Dam, must be restored. In a letter dated August 2, 2005, from the National Marine Fisheries Service to the State Water Resources Control Board, NMFS discusses this federal court ruling and concludes that "It is likely as a consequence of this decision that flows will be returned to the San Joaquin River." Thus, restoration of the San Joaquin is a reasonably foreseeable action. Clearly, salmon on the restored reach of the river could be harmed by the proposed project. These potential impacts are not adequately analyzed. NRDC-23

The document fails to analyze adequately the impacts of proposed interim operations. One hypothesis regarding the recent decline of delta pelagic organisms is that increases in winter pumping may not be as biologically benign as had been previously assumed. Given that the proposed interim operations would be focused during this period (p. 2-2), these operations could have substantial impacts. The document includes no reasoning to justify this increase in delta pumping prior to the completion of additional information regarding the decline of delta fisheries.

The EWA is the primary tool cited in discussions of efforts to reduce the fisheries impact of the operational phase of the project. However, the discussion of interim operations states that there will be "no impact on EWA." Thus, it is not clear if this tool has been excluded as a mitigation tool for interim operations, or if interim operations would provide EWA water in an attempt to self-mitigation. In short, the document includes no specific requirements to clarify the general statement that interim operations will not be allowed if they would result in "substantial fish effects" (p. 6.1-105). As is discussed above, the CALFED ROD contains very similar language regarding the proposal to increase delta pumping limits. However, the concerns in this letter clearly demonstrate that DWR and the Bureau have found it difficult to develop a project that complies with this requirement. NRDC-24

The document does not adequately describe potential impacts to the Trinity River. For example, the document focuses its analysis on coho salmon and fails to adequately NRDC-25

analyze potential impacts on steelhead and Chinook salmon. These species do not have the same life history as coho and may be more sensitive to some potential impacts from the proposed project. Cold water from the Trinity system contributes to survival of Klamath River salmon. However, this document fails to adequately analyze the potential for reoperation of Trinity Dam, as a result of this project, to harm the Klamath River. NRDC-25

The document incorrectly relies on a flawed NMFS OCAP Biological Opinion. The Department of Commerce Inspector General's review of the NMFS OCAP Biological Opinion found that the agency violated internal procedures regarding this document. In addition, the CALFED Science Program review of the NMFS OCAP BO found that it failed to include the best available science (http://science.calwater.ca.gov/pdf/workshops/OCAP_review_final_010606_v2.pdf). These two reviews suggest that political interference prevented the agencies from applying the best available science to the analysis of OCAP, including analysis of the proposed project. It is inappropriate for this document to rely on the flawed NMFS document, and its flawed conclusions regarding compliance with the ESA. The deficiencies cited in the CALFED review should be addressed and resolved in the revised document. NRDC-26

Water Quality Impacts

The document fails to discuss adequately the potential water quality impacts of the proposed project. For example, the document does not adequately analyze the water quality impacts of the delivery of water that would be provided by the project to drainage-impaired lands served by the CVP and SWP. Water used on these lands, which otherwise might be retired or subject to greater water conservation measures, is likely to exacerbate water quality problems in the San Joaquin River and in evaporation ponds. The inclusion of an alternative that would reduce delta pumping would demonstrate that different operational regimes for the delta pumps can result in different water quality impacts.

The document also does not adequately discuss violations of delta water quality objectives for which DWR and the Bureau are jointly responsible. For example, the document does not discuss the fact that the State Water Resources Control board is considering the issuance of a cease and desist order against DWR and the Bureau regarding violations of these objectives. The document does not discuss the impact that the proposed project would have on efforts to achieve compliance, or if other alternatives would be of greater benefit in terms of achieving compliance. NRDC-27

Cumulative Impacts

The document does not adequately analyze potential cumulative impacts. The discussion of cumulative impacts is remarkably brief, incomplete and inadequate, particularly for a project of this magnitude in a complex system that is so highly degraded. The decline of delta fisheries and of other resources in the Bay-Delta NRDC-28

watershed is a study in cumulative impacts. Upstream and delta diversions, water quality problems and invasive species have all played a role in the decline in the health of the Bay-Delta ecosystem. The SWP and the CVP control the two largest water projects in the watershed. Considered comprehensively, the construction of these projects and their ongoing operation has had a major impact on the Bay-Delta ecosystem. In addition, water use and agricultural return flows associated with these projects contribute to water quality degradation. Finally, water project operations have played a significant role in modifying the ecosystem and making that ecosystem more hospitable to invasive than to some native species.

Given the number of fish species currently listed pursuant to ESA and CESA, and the number of fish proposed for listing, an adequate analysis of cumulative impacts is particularly important. Given the precarious status of the delta smelt, a single project with limited direct impacts could, when considered from a cumulative perspective, provide the final blow leading to extinction. This issue was discussed recently in the Northern District's February 3, 2006 order granting a temporary restraining order regarding the Intertie Project in *PCL v. U.S. Bureau of Reclamation*.

NRDC-28

We will offer only one specific example of the failure of this analysis. The cumulative impacts analysis excludes the renewal of CVP contracts that will direct the delivery of millions of acre feet of water for at least 25 years (Table 10-1). The CVP is currently unable to deliver full contract quantities under the renewed and proposed renewed CVP contracts. In addition, as discussed above, the Bureau intends to make full deliveries in the future. This failure is particularly glaring, given the fact that the discussion of cumulative impacts does mention the importance of the OCAP and the OCAP Biological Opinions (p. 10-4), which are the ESA compliance documents for the renewal of CVP contracts.

Segmentation and CESA Compliance

The proposed environmental compliance process has been improperly segmented. The document states that the two phases of the project have been separated to allow the agency to analyze "additional information collected on the condition of pelagic organisms in the Delta." (p. ES-2) The document further states that the preferred alternative for the operational phase will be developed on the basis of this new information (p. ES-4). However, the document also states that the agencies do not intend to perform a full DEIR/DEIS on the basis of that new information. Rather, it states that a supplemental document will be circulated, immediately prior to the signing of the ROD (p. ES-2, 2-5).

NRDC-29

Clearly, the lead agencies anticipate the development of significant new information prior to the circulation of the proposed supplemental document. Indeed, the development of this information is the very reason why the project has been separated into two phases. Given that the agencies fully expect new information to be developed, and that this information will be used to develop a preferred alternative, CEQA and NEPA require the circulation of a full, new DEIR/DEIS.

The document does not adequately discuss compliance with the CEQA and the California Endangered Species Act. The document discusses the OCAP as a joint state/federal document (p, 10-4). It does not, however, discuss who this document complies with CESA or CEQA. This is particularly important because, given the phased nature of this project, it is not clear how CESA compliance will be achieved prior to the implementation of the operational phase of this project (p 8-20). NRDC-30

Climate Change and Energy Impacts

The document does not evaluate how the impacts of global warming would affect the impacts of the project. The proposed project would be in place for decades. It is reasonably foreseeable that climate change would change hydrological conditions in the Bay-Delta watershed. In fact, these potential impacts are anticipated by the new State Water Plan. For example, these changes could reduce spring and summer stream flows, and increase river temperatures. By failing to analyze these expected changes, the document fails to discuss how the proposed project could exacerbate expected impacts from climate change. NRDC-31

The document does not adequately analyze the energy and global warming impacts of the proposed project. NRDC's analysis of the energy impacts of water management decisions (*Energy Down the Drain*, 2004, http://www.nrdc.org/water/conservation/edrain/contents.asp) demonstrates that a large amount of energy is consumed by water use, particularly in urban areas, that extends far beyond the direct energy consumed to pump water from the delta. This analysis found, for example, that end use can consume more water than is consumed pumping water to its point of use. Recent analysis by the California Energy Commission has reinforced this conclusion. However, the document inappropriately limits the analysis of energy impacts to electricity directly required by the CVP and SWP (Table 7.5-3). Thus, it understates the energy, air quality and global warming impacts of the project. NRDC-32

Models

The document inappropriately relies on a flawed CALSIM II program. The 2003 scientific review of the CALSIM II model revealed major weaknesses in this tool. A recently completed CALFED evaluation of this tool also concluded that "large uncertainty remains", particularly regarding critically important salinity issues. (http://science.calwater.ca.gov/workshop/calsim_05.shtml). Given that salinity and related flow issues are critical to the analysis of impacts including but not limited to delta smelt, longfin smelt and water quality, this failure represents a major shortcoming. The document fails to correct these flaws or to discuss adequately these shortcomings. Continued use of CALSIM II in its current form does not represent the best science available. NRDC-33

Adaptive Management

The document inaccurately describes the existing and proposed adaptive management program. The document includes a discussion of adaptive management (p. 6.1-114), which explains how SDIP mitigation measures will be adapted over time, as a result of monitoring and research. This discussion, however, is contradicted by recent experience. As discussed above, DWR, the Bureau and state and federal fisheries agencies have not conducted a thorough analysis of the failures of the EWA. This led Environmental Defense to prepare their report *Finding the Water*. The agencies have failed to analyze and respond to that report or to analyze how the shortfalls in the EWA may have harmed delta resources. This refusal to analyze an issue as fundamental as the amount of water available to the EWA demonstrates a reluctance to engage in effective adaptive management.

NRDC-34

The proposed project does not include any mechanism that would lead a reasonable observer to conclude that the proposed EWA will be significantly more reliable than it has been in recent years. To the contrary, the document suggests that "normal EWA adaptive management decision-making procedures" (p. 6.1-117) will be used, suggesting that existing failed procedures will continue to be used in the future. The lack of an effective adaptive management program is very likely to result in impacts higher than those projected. If the agencies define the project as including an adaptive management program, they must include a more credible program than has been developed to date.

Impacts to Native American Communities

The document does not adequately describe potential impacts on Native American communities who have traditionally relied on salmon. Water projects, particularly the CVP, have a long history of failing to consider adequately the impacts of water project construction and operation on Native American communities. Tribes on the Sacramento, Trinity, Klamath and other river systems could be adversely affected by the proposed project. These impacts are not adequately discussed in Section 7.10.

NRDC-35

Recommendations: The above comments include several specific recommendations. NRDC also recommends that DWR and the Bureau take the following general actions to address the potential violations of legal requirements discussed above:

- Withdraw this document and reissue a new DEIR/DEIS to address the above concerns.
- Clearly commit to full new DEIR/DEIS to analyze the potential impacts of any change in SWP pumping levels, once additional detail is available regarding the decline of the health of delta fisheries.
- Prepare a preferred alternative that would significantly reduce total delta diversions, with the reduction focused on months during which fisheries agencies believe that the delta environment is particularly vulnerable.

- Prepare an alternative designed to provide maximum water supply reliability, as opposed to increased water deliveries. This alternative should focus on the reliability benefits of local water supply development and reduced delta diversions.

- Ensure that the amount of water dedicated to protection of the Bay-Delta ecosystem in the preferred alternative is equal to or greater than the amount of water dedicated to environmental protection in the CALFED ROD.

- Clearly indicate that existing ESA assurances for the delta pumps will be terminated, and uncompensated pumping reductions will resume, if the EWA does not receive the assets anticipated in the final EIR/EIS.

Thank you for considering our comments.

Barry Nelson
Senior Analyst

Att: Effects of Exports on Delta Smelt Population Abundance - Preliminary Analyses, Tina Swanson, The Bay Institute, November 2005

Letter from the National Marine Fisheries Service to the State Water Resources Control Board, August 2, 2005

Responses to Comments

NRDC-1 and NRDC-2

The SDIP is consistent with the CALFED ROD. The SDIP does not replace CALFED; it is one of the many projects described in the CALFED ROD. The CALFED program contains multiple projects that are intended to move forward together. Some of these projects are specifically intended to improve water quality and ecosystems.

NRDC-3

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*.

NRDC-4

SDIP mitigation measures are not dependent on other program documents or existing BOs. SDIP Stage 1 mitigation measures primarily are associated with the construction impacts of dredging and constructing the proposed permanent operable gates. SDIP Stage 2 mitigation measures are designed primarily to avoid impacts associated with additional Delta diversions. SDIP Stage 2 operations will not be decided on in 2006. Rather, Reclamation and DWR are waiting for results from studies on the decline of pelagic organisms before proposing an SDIP Stage 2 action.

NRDC-5

The SDIP includes mitigation of the incremental increase in entrainment attributable to increases in SWP pumping for Stage 2 of the SDIP. Mitigation of increased entrainment would be implemented through the EWA or an avoidance and crediting system. Each of these methods includes avoidance of increased entrainment during periods of high fish density. Therefore, the SDIP complies with the ROD requirements. Additional actions are included in the SDIP ASIP for purposed of meeting the requirements of CESA, and other plans are underway to develop restoration.

NRDC-6 and NRDC-9

The water quality impacts of the SDIP are fully evaluated in Section 5.3 of the SDIP Draft EIS/EIR. Impacts to water quality are determined to be less than significant. The SDIP does not interfere with nor hinder the implementation of any other CALFED water quality improvement action.

NRDC-7

The increased flexibility in operation of the SWP Banks Pumping Plant will increase opportunities for responding to varying conditions such as availability of water, fish presence, flows and water quality, and will therefore increase long-term reliability.

NRDC-8

The SDIP Draft EIS/EIR identifies and mitigates significant impacts from the SDIP Stage 1 and Stage 2 effects. It is assumed that responsible CALFED agencies will initiate other actions to continue the protection, habitat restoration, and recovery of listed species. These listed-species issues are directly addressed in the SDIP ASIP.

Analysis of the potential success of an outside program is not a CEQA/NEPA requirement. However, Reclamation and DWR are required to analyze impacts on the ecosystem. Significant impacts on the environment are summarized in Chapter 4 of the SDIP Draft EIS/EIR and explained in more detail in latter chapters.

NRDC-10

Please see Master Response D, *Developing and Screening Alternatives Considered in the South Delta Improvements Program Draft EIS/EIR.* Operational Scenario B does not significantly increase exports, and operations under this scenario would be dependent of fish presence and approval from fish agencies. Additionally, land fallowing in the south Delta was considered to meet local objective, not to meet the export objective.

NRDC-11

Please see Master Response L, *Relationship between the South Delta Improvements Program and the California Water Plan Update 2005.*

NRDC-12

The CALFED program includes a thorough evaluation of water-use efficiency and funded actions to improve efficiency statewide. The SDIP will increase the reliability of water deliveries from the Delta to CVP and SWP contractors. Reduced demands and efficiency can proceed independently from the SDIP. The SDIP contributes to the overall CALFED goals of making through-Delta conveyance work more efficiently and reducing conflicts with habitat restoration

and water quality improvements. The SDIP would allow an increased diversion capacity; however, the SDIP does not set the water delivery targets and cannot change the contracted water demands.

NRDC-13

The CALSIM model includes the best available estimates of both CVP and SWP delivery projections for the Sacramento and San Joaquin River basins. The changes expected between 2001 and 2020 conditions are included in the two sets of modeling results.

NRDC-14

The SDIP water transfer analysis is thorough, with all assumptions described in Section 5.1 of the SDIP Draft EIS/EIR. The analysis is adequate for identification and discussion of these potential indirect impacts of the SDIP.

NRDC-15

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*. The SDIP entrainment mitigation is consistent with the CALFED EWA program and requires an expanded EWA or an avoidance and crediting system compared to the baseline EWA actions. The SDIP assumes that the EWA actions are the best available method for entrainment impact mitigation. Additional information available at the time of the Stage 2 decision-making process will be included in the CEQA/NEPA document for that Stage. Also, please see Master Response B, *Relationship between the South Delta Improvements Program and the Pelagic Organism Decline*.

NRDC-16

CVP and SWP water supply reliability is described as the ability to deliver the full contract demands in all years. Reliability is generally controlled by three factors: the magnitude of the total demands (higher demands are less reliable), the volume of runoff and storage that provides the water supply (higher runoff and storage increases reliability), and the conveyance capacity (higher capacity increases reliability). The SDIP would slightly increase the conveyance capacity from the Delta and would allow more of the available water supply (including water transfers) to be pumped. The CALSIM model provides the evaluation of the increased reliability achieved with each Stage 2 alternative. The SDIP does not change the risk of levee failure that may temporarily interrupt pumping and may temporarily degrade water quality (i.e., higher EC and TOC).

NRDC-17

Please see Master Response B, *Relationship between the South Delta Improvements Program and the Pelagic Organism Decline* and Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*. Appendix J of the SDIP Draft EIS/EIR provides a review of recent abundance index values for delta smelt and the other pelagic fish that are being considered in the POD investigations. The actual salvage numbers for some of these fish are shown in Tables J-3 to J-12. The salvage of delta smelt and other pelagic fish (e.g., striped bass, splittail) in recent years is very similar to salvage in the last 20 years; no major change in abundance is apparent in the salvage numbers for these fish. Whatever the abundance each year, the SDIP entrainment effects on each species are assumed to be proportional to the change in pumping in months with greatest seasonal abundance. The analysis of entrainment effects from the SDIP Stage 2 on delta smelt is thorough. An expanded EWA or an avoidance and crediting system will be effective mitigation.

NRDC-18

The SDIP evaluated representative fish species; longfin smelt was not evaluated because it is generally found in the estuarine part of the Delta, and is not strongly affected by export pumping (low salvage numbers). Appendix J of the SDIP Draft EIS/EIR provides some information on the longfin smelt abundance index. The habitat for longfin smelt is much more estuarine than habitat for delta smelt (Bay Study, see IEP Technical Report 63). The effects of outflow, which regulates the salinity gradient and may control the available habitat for delta smelt and longfin smelt, are dominated by seasonal hydrology. Effects from SDIP pumping on longfin smelt are considered to be less than for delta smelt. The effects on longfin smelt are expected to be less than those found for delta smelt.

NRDC-19

Splittail are included in the representative species evaluated in Section 6.1 of the SDIP Draft EIS/EIR. However, all potential impacts (Fish-65 to Figh-69) are considered to be less than significant because the abundance of juvenile splittail is determined by flooded channel conditions in high flow years. In those years of high abundance, there may be high salvage numbers. For example, in June of 2006, there were more than 5 million splittail salvaged at the CVP and SWP facilities (1 million on June 6 at the CVP). However, export pumping is not considered to be a major factor in the population or abundance fluctuations of splittail.

NRDC-20

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*.

NRDC-21

Shasta Reservoir operations are fully described in the OCAP documents and properly simulated in the CALSIM modeling. As described in Section 5.1 of the SDIP Draft EIS/EIR, the carryover storage of Shasta Reservoir is one of the basic indicators of water management in the Sacramento River basin. Several dry years have storage below the 1.9 maf objective, which would require consultation under the OCAP BO. The SDIP does not result in any significant change in the Shasta Reservoir carryover storage or release flows that would change temperatures below Keswick Dam. Temperature effects are fully evaluated below each reservoir in Section 6.1, and these results are shown in Appendix K of the SDIP Draft EIS/EIR. Reclamation is fully committed to temperature monitoring and management below Keswick and works with NMFS each summer and fall to adaptively manage this important habitat condition, in accordance with the State Water Board temperature requirements.

NRDC-22

Changes in monthly flow are assumed to be a surrogate for all other riparian and aquatic habitat conditions below reservoirs. The changes from SDIP Stage 2 alternatives are found to be less than significant in Section 6.1 of the SDIP Draft EIS/EIR. Stage 2 of the SDIP will be reevaluated during the Stage 2 decision-making process.

NRDC-23

One of the major features of SDIP Stage 1 is the fish control gate at the head of Old River. It will increase the protection of migrating San Joaquin River Chinook salmon fry and smolts by remaining closed from April 1 through May 31, doubling the period of protection provided with the temporary barrier program and VAMP. Restoration of the San Joaquin River below Friant Dam is a potential cumulative action that may occur in the future. The SDIP protection of San Joaquin River fall-run Chinook salmon, and potentially spring-run, may be even more important if the population on the San Joaquin River and tributaries is increased as a result of these restoration efforts.

NRDC-24

Please see Master Response M, *Interim Operations*. Any pumping at 8,500 cfs, including Interim Operations, will not occur if EWA managers are requesting an export reduction action because of high fish salvage density. If EWA is not expanded, the avoidance and credit system would be used for mitigation of entrainment impacts for interim operations.

NRDC-25

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

NRDC-26

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

NRDC-27

Water quality effects from the SDIP are thoroughly evaluated in Section 5.3 of the SDIP Draft EIS/EIR. Land retirement of drainage-impaired lands will proceed independently of the SDIP and may reduce the demands by some CVP and SWP contractors. This may increase the reliability of deliveries to remaining contractors but will not likely be sufficient to reduce the need for the increased diversion limits to increase the flexibility of pumping from the Delta. Compliance with the 30-day running average EC objectives at Vernalis and south-Delta EC objectives at Brandt Bridge, Old River at Tracy Boulevard, and Old River at Middle River (Union Island EC station) is discussed in Section 5.3. The SDIP will not increase the EC at Vernalis or Brandt Bridge and will reduce the EC at the two Old River stations.

NRDC-28

The SDIP cumulative impacts are adequately described in Chapter 10 of the SDIP Draft EIS/EIR. A full review of water management (i.e., diversions, irrigation projects, dams, and levees) throughout California cannot be provided with quantitative detail. The SDIP cumulative analysis focuses on other similar future projects. Because the CVP and SWP water management facilities are generally completed, and water supply is currently limiting Delta exports in more than 50% of the years (as described in Section 5.1), cumulative impacts from these additional future projects are limited, and considered to be less than significant. The broader the view of the cumulative water management effects

evaluated, the smaller the incremental adjustments in CVP and SWP operation that are allowed by the SDIP become.

NRDC-29

The SDIP Stage 2 evaluations and documentation will fully comply with CEQA and NEPA. The OCAP BO(s) and the SDIP ASIP, following the mandated ESA review process for CALFED projects, are included in the full and complete ESA and CESA compliance for the SDIP. Information presented in the Draft EIS/EIR is considered to be the best available information at the time it was drafted.

NRDC-30

CESA compliance for Stage 1 will be achieved through the current ASIP process. The process for CESA compliance for Stage 2 has not been started. Possible methods for achieving CESA compliance for Stage 2 may include another ASIP process, development of an NCCP, or a traditional incidental take authorization process.

Stage 2, the Operational stage of the SDIP, will need both CESA and ESA coverage. The appropriate BAs or equivalent document (such as an ASIP) will be prepared for the Stage 2 actions. Consultation will be sought with all three fishery regulatory agencies.

NRDC-31

Please see Master Response F, *Relationship between the South Delta Improvements Program and Climate Change Effects.*

NRDC-32

The indirect effects and benefits to the people of California who receive these water supplies have been analyzed to the extent possible in Chapter 9 of the SDIP Draft EIS/EIR.

NRDC-33

Please see Master Response I, *Reliability of CALSIM and DSM2 Models for Evaluation of the South Delta Improvements Program.*

NRDC-34

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*, and Master Response O, *Gate Operations Review Team*. Reclamation and DWR are committed to improving the adaptive management and effectiveness of the CVPIA b(2) water as well as the EWA water acquisition and fish protection actions. The SDIP will increase the flexibility of pumping operations and will add controllable tidal gates to the facilities that can be adaptively managed by these interagency teams for improved Delta water supplies, water quality, and habitat restoration and management.

NRDC-35

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

Comment Letter OCTAX

OCTAX

OCTAX

JAN 12 2006 045

Orange County
Taxpayers Association

30205 Hillside Terrace, San Juan Capistrano CA 92675-1542
phone (949) 240-6226 • fax (949) 240-0304 • www.octax.org

January 8, 2006

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

Dear Director Snow,

The Orange County Taxpayers Association (OCTax) supports DWR's South Delta Improvements Program (SDIP). It meets OCTax's four criteria for government programs.

- It is fair. Water service, being mostly fee-based, is paid for by users in proportion to their consumption rather than by taxpayers;
- It is understandable. We can see and measure the value of the program, and the money will not be diverted to unrelated uses;
- It is cost effective. It would allow DWR to provide additional water during rainy periods to meet increasing demands through greater efficiency; and
- It is good for business. Water is essential to a strong economy, which in turn generates tax revenue for other uses (including environmental programs).

OCTax knows that water is the most important resource for a strong statewide economy. We want California to grow out of its perennial budget deficits, rather than taxing us more heavily.

OCTAX-1

Sincerely,

Reed L. Royalty, President

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

OCTax: fighting to make taxes fair, understandable, cost-effective, and good for business!

Jan 12 2006 2:22PM Red Gate Communications 818 784 1220 p.2

Responses to Comments

OCTAX-1

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

Comment Letter PCF

PCF

PACIFIC COAST FEDERATION
of FISHERMEN'S ASSOCIATIONS

Please Respond to:
California Office
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San Francisco, CA 94129-0370
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6 February 2006

FEB 07 2006 00153

Mr. Paul A. Marshall
California Department of Water Resources
1416 Ninth Street, 2nd Floor
Sacramento, CA 95814

RE: Opposition to the South Delta Improvements Program Draft Environmental Impact Statement/Environmental Impact Report

Dear Mr. Marshall:

The Pacific Coast Federation of Fishermen's Associations (PCFFA), representing working fishing men and women in the West Coast commercial fishing fleet, respectfully requests you to stop implementation of the South Delta Improvements Program (SDIP) and order the withdrawal now of the EIS EIR for this project. We ask this because the we find the foundation for this program to further increase diversions from the San Francisco Bay/Sacramento-San Joaquin Delta ecosystem to be fatally flawed and will result in further and significant damage to the most important estuary on the West Coast of North and South America.

The San Joaquin and Sacramento Rivers were once home to one of the largest Chinook salmon runs on the west coast – second only to the Columbia/Snake River system in the lower 48. In the early part of the 21st century, salmon were not counted but weighed by the tens of thousands. By the late nineties due in part to water allocation, dams, pumping stations and obstacles, many runs of steelhead and some Chinook salmon populations (i.e., winter and spring-run) were down to the hundreds. Under the guise of the improving the declining Bay Delta, the SDIP allows for further modifications and allocation of Delta waters, actually ncreasing pumping capabilities, subsequently allowing for the removal of more water instead of he return, furthering the current trend of providing little water to the Delta's important estuary nd resources.

Fifteen years ago the State Water Resources Control Board (SWRCB) issued a draft rder for water quality in the Bay and Delta finding the system at that time suffering an average nual deficit of 1.6 million acre-feet of freshwater inflow. That deficit has never been dressed. The Central Valley Project Improvement Act (CVPIA) was to provide for half of that ficit with its allocation of 800,000 acre-feet under (b)(2) of the act, but seldom has any of that

FEB 07 2006 60153

flow for the environment (when it has been provided) found its way all the way to the Bay for purposes of maintaining and restoring the most important estuary on the west coast of North and South America. Instead or helping to reduce the inflow deficit, the SDIP will exacerbate it!

At the Sacramento Public Hearing for the Draft Environmental Impact Report/ Environmental Impact Statement (DEIR/EIS), it was made clear that the three public hearings would focus on Stage 1, the physical components of the SDIP and at a later time, public comments would be taken on the operational component. The DEIR/EIS states:

> *No decision regarding the operational component of the SDIP will be made during the Stage 1 process.* Two paragraphs later the document goes on to say: *DWR and Reclamation will issue the necessary supplemental document for CEQA and NEPA compliance explaining the preferred operational component, the rationale for its selection, and any additional environmental effects. This document would be available for public comment and review for a period of at lest 45 days, consistent with CEQA and NEPA, and will provide opportunity for the public to submit additional comments on the environmental analysis of the operational component of the SDIP.* And then lower down in the paragraph: *In any decision for Stage 2, DWR will state in the Notice of Determination that DWR has relied in part upon the SDIP EIS/EIR certified in Stage 1 and intends that those aspects of the SDIP EIS/EIR relied upon in the Stage 2 decision will be subject to further judicial review (ES-9).*

PCF-1

These two paragraphs highlight the importance of weighing in on the Stage 1 process for the operational component of the project. For while sentence the first sentence states, "No decision regarding the operational component of the SDIP will be made during the Stage 1 process," the sentence is later contradicted by the sentence, " In any decision for Stage 2…DWR has relied in part upon the SDIP EIS/EIR certified in Stage 1…" The importance of the Stage 1 public review process to analyze the operational component Stage 2 is downplayed in the document and was downplayed at the public hearings. Stage 1 needs to be stopped, for while Stage 1 does not address the operational component, Stage 1 constructs and readies the delta for Stage 2 and increased pumping.

Despite it sounding like there will be hefty time for public review of Stage 2, as shown in Figure ES-3, the selection process for the preferred Operational component begins as soon as the structural components are in for Stage 1. The process timeline by which the DEIR/EIS for the SDIP is reviewed should be re-examined and the public should be given more than the allotted 90 days to review this large DEIR/EIS document and more than the allotted month and fifteen days to review the operational component which will begin increasing the amount of water pumped from the Delta by 27%.

The commercial salmon fishing fleet no longer relies on the Chinook salmon of the San Joaquin; the once abundant spring-run of that system were made extinct by the operations of the Friant Unit of the CVP. But the potential to bring back the once abundant runs is there and the need to

FEB 07 2006 00153

ensure that there is adequate water in the San Joaquin and Sacramento Rivers and the Bay-Delta to bring back those runs is of utmost importance. Along with the spring and winter The runs of Chinook salmon, the Delta River Smelt, are on the verge of extinction and the Striped Bass and steelhead are in serious decline.

As stated in chapter 6, 6.1, **Southern Oregon/northern California Coasts** Coho Salmon are listed threatened under ESA and CESA, **Sacramento River** winter-run Chinook Salmon are listed threatened under the ESA and CESA, **Central Valley** spring-run Chinook salmon are listed threatened under the ESA and CESA, **Central Valley** steelhead are listed threatened under the ESA, **Central Valley** fall/late-fall run Chinook salmon are candidates for listing under the ESA, the delta smelt are listed threatened under the ESA and CESA and the green sturgeon is proposed threatened under the ESA.

It is acknowledged in the South Delta Improvements Program Draft Environmental Impact Statement/Environmental Impact Report that Alternative 2A, Stage 2 (Operational Component) will affect fish. Page 6.1-74 of the report states, "Changes in flow diversions may affect fish and fish habitat in the reaches of the Trinity, Sacramento, Feather, American and San Joaquin Rivers and the Delta Suisun Bay."

Mitigation measures MM-1, MM-2 and MM-3, which are supposed to mitigate entrainment-related losses for Alternative 2A, Stage 2, do not adequately mitigate the significant actions of Alternative 2A Stage 2 to a less than significant impact for Chinook salmon and Delta Smelt. The mitigation measures for Alternative 2A, Stage 2 are the mitigation measures that are referenced for the other alternatives (besides Alternative 1, the no action alternative). Mitigation measure MM-1 for Alternative 2A Stage 2 does not reduce current pumping levels. Instead the delta is being pumped at the current maximum capacity 6,680 cfs, at a time when late/fall Chinook should be receiving more water for their migrations, not less. The SDIP does not reduce pumping levels, it increases pumping levels. It is already shown that Chinook salmon and delta smelt are suffering at current 2005/2006 export levels. It will not help to pump at current maximum levels, raise the maximum pumping level by 1,820 cfs to 8,500 cfs, and then conclude that the effects of additional pumping on entrainment casualities is mitigated because pumping levels will be "reduced" back to the current maximum pumping capacity of 6,680 cfs during crucial migration periods. There are no actual mitigations occurring. Instead the Bureau and DWR are proposing to keep pumping levels at the already high, current maximum capacity of 6,680 cfs during periods when fish are susceptible to entrainment. Instead of reducing pumping levels to assist fish, the Bureau and DWR are proposing to increase pumping from the delta for the rest of the year and keep pumping levels at the high 6,680 cfs during crucial migration periods.

PCF-2

Mitigation measure MM-2 for Alternative 2A, Stage 2, which mitigates entrainment-related losses of Juvenile Winter-and Spring-Run Chinook Salmon due to increased pumping from March 1-April 14 and May 16- may 31 and mitigation measure MM-3, which mitigates entrainment related losses for Delta Smelt due to increased pumping, do not reduce current

FEB 07 2006 00153

pumping levels. Instead, like for mitigation measure MM-1, the delta is being pumped at the current maximum capacity 6,680 cfs, at a time when pumping needs to be reduced to encourage survival rate of Chinook salmon and Delta Smelt and reduce fish loss due to entrainment. PCF-2

Flows to the Delta have been incredibly low and the alarm has been sounded since the 80's that the San Francisco Bay and delta are not functioning healthily. A comprehensive plan that will find a way to restore water to the Delta and its associated rivers, rather than pump more water from a suffering ecosystem, is what the Delta so desperately needs. The South Delta Improvements Program, a plan which will increase the pumping capacity by 27%, is exactly the kind of plan that will not work to bring about the ecological recovery of the most important estuary west of the Mississippi. Please scrap the SDIP and introduce a new program that will protect the beneficial uses of the Bay-Delta estuary.

With 14,000 pages of testimony and 44,000 pages of exhibits supporting that testimony, the State Water Resources Control Board Bay-Delta water rights/water quality hearings of 1987-1988 and the resulting Draft Water Rights/Water Quality Order for the Bay-Delta that was released 30 October 1988, should be used as a model for further plans pertaining to the Bay-Delta. This order called for an additional 1.5-1.6 million acre feet more of freshwater to reach the Bay-delta estuary each year to bring back a declining but very important ecosystem both economically and environmentally to the state of California.

Thank you for the opportunity to comment on this document. If you have any questions please do not hesitate to contact our offices.

Sincerely,

W.F. "Zeke" Grader, Jr.
Executive Director

Responses to Comments

PCF-1

The SDIP Draft EIS/EIR includes a full project-level analysis of Stage 1 and Stage 2 of the SDIP. A decision on Stage 1 will be made based on the Final EIS/EIR. A decision on Stage 2 will be based on the analysis in the Draft EIS/EIR and the additional information gathered through the many studies currently being conducted. This will be documented in a second document, as described in the Stage Decision-Making Process in Chapter 2 of the Draft EIS/EIR. Because some information relative to the Stage 2 analysis may not change (i.e., description of some alternatives), DWR and Reclamation may rely in part upon this EIS/EIR when making a Stage 2 decision.

Information presented in the Draft EIS/EIR is considered to be the best available information at the time it was drafted. To the extent that the information is still relevant and correct when analyzing impacts associated with the Stage 2 Operation Component, that information will be relied upon in any supplemental environmental document. Reclamation and DWR will consider a longer public review period (longer than the referenced 45 days) for the Stage 2 environmental document if the document size and complexity warrant it.

PCF-2

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*.

Comment Letter PCL1

PCL1

PLANNING AND CONSERVATION LEAGUE

Feb 07, 2006 00139

February 7, 2006

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

via facsimile to: (916) 653-6077
via email to: marshall@water.ca.gov and sdip_comments@water.ca.gov

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

via e-mail smchale@mp.usbr.gov,

Re: Comments on Public Review Draft of the South Delta Improvements Program Draft Environmental Impact Statement/Environment Impact Report (DEIS/R) of the Department of Water Resources (DWR) and the US Bureau of Reclamation (BOR) (released November 10, 2005)

Mr. Marshall and Ms. McHale:

The Planning and Conservation League (PCL) submits the following comments on the Public Review of the South Delta Improvements Program Draft Environmental Impact Statement/Environment Impact Report (DEIS/R) prepared by the Department of Water Resources (DWR) and the US Bureau of Reclamation (BOR) (released November 10, 2005) http://sdip.water.ca.gov/documents/vol-1/vol-1-eir.html.

PCL commends DWR and the Bureau for acknowledging the need to address water quality and fisheries impacts of the SWP and CVP. PCL appreciates that DWR and BOR acknowledge that a full EIR/S is required to address the serious impacts associated with the proposed SDIP.

However, we are disappointed in the limited scope of DWR's and BOR's analysis. As the following comments will explain in detail, the current DEIS/R represents an enormous missed opportunity, for it indicates that DWR and the BOR remain determined, notwithstanding their recent decision to delay formal approval of increased pumping, to proceed with pumping increases without considering any other options.

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That tunnel-vision approach is unnecessary. As PCL's comments will explain in detail, DWR's own California Water Plan 2005 clearly indicates that California has no need for increased South Delta pumping. South-of Delta demand could *decrease* dramatically, even as California's population grows, with implementation of feasible and cost-effective conservation and recycling technologies. Even under current trends, DWR projects a net decrease in south-of-delta water demand. Other independent studies have concluded that demand reductions could be significantly greater than estimated by DWR, and that conservation could provide water more cheaply and far more reliably than south Delta pumping increases.

DWR's tunnel vision approach is also unfortunate, for reduced Delta pumping would bring extraordinary benefits to the State of California. For example, reduced delta pumping would:

- **Improve water quality**. Water quality in the Bay-Delta and San Joaquin River chronically fails to meet state and federal standards. These violations create health risks for people and wildlife, increase water treatment costs and lower drinking water quality, and require taxpayer money to be spent on ecological restoration projects. Export pumping exacerbates those problems by sucking saltwater into the Delta and increasing pollutant inflows from upstream areas. Decreasing exports would be a less expensive way to reduce those problems.

- **Protect fish and wildlife**. Numerous Delta-dependent wildlife species, including several types of salmon, are threatened or endangered, and several fisheries populations are currently collapsing. Export pumping is a primary cause of those species' dire straits, and reducing pumping would help recover those populations—and ensure compliance with federal and state law.

- **Increase water supply reliability**. Partly because of the Bay-Delta's poor environmental condition, water deliveries have been unreliable for years. When violations of environmental standards and laws threaten or occur, as they often do, the pumps must temporarily slow down or be turned off. Reducing environmental stresses on the Delta by reducing pumping could vastly increase the predictability and reliability of pumping by improving ecological resiliency and avoiding these crises.

- **Reduce energy consumption and greenhouse gases production**. Delivering water from the Bay-Delta is an energy-intensive exercise, particularly if that water then must also be pumped over the Tehachapi Mountains to Southern California. The SWP is already a net energy consumer and is the largest single consumer of energy in California. Energy production results in greenhouse gases emissions, exacerbating climate change impacts to California. Reducing Delta dependence, and substituting greater use of conservation, recycling, and local supplies would vastly reduce the amount of energy California spends and greenhouse gases produced delivering water.

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- **Reduce California's vulnerability to earthquakes and floods**. Increasing Bay-Delta exports will increase California's dependence upon Bay-Delta exports, for demand is likely to adjust to supply. That increased dependence is shortsighted, however, for an earthquake or serious flood could limit or even eliminate California's ability to deliver water through the Bay-Delta. Reducing Bay-Delta deliveries and substituting conservation or other less vulnerable supplies will increase California's preparedness for the next earthquake.

- **Save Money**. For the federal and state governments, Bay-Delta diversions are financial losers. Federal water recipients are enormously subsidized and state water recipients, while they have paid a greater share for the infrastructure costs for their water, do not pay the costs of providing environmental mitigation for the deliveries they receive. That burden instead falls to the taxpayers, and though taxpayers have spent millions, mitigation efforts still have been under funded and often ineffective. Reducing deliveries may be the most effective way to reduce taxpayers' bills. Additionally, despite the subsidies they receive on Bay-Delta water, many local entities still could provide water more economically through conservation and recycling. Reducing Delta exports thus makes financial sense.

But the DEIS/R does not evaluate that option. Neither does it even consider any option that holds pumping steady. In short, the DEIS/R does not even consider the most obvious of environmentally-beneficial alternatives

That tunnel-vision approach is not merely misguided; it also is illegal. NEPA and CEQA both require consideration of alternatives designed to avoid environmental harms. Without substantial revision, the DEIS/R will not fulfill that mandate. PCL1-1

In the comments that follow, PCL will explain in detail that central problem, as well as several other areas in which the analyses must be substantially improved before they will be sufficient for the public to review as a DEIS/R. It would be impermissible to insert all of this necessary information in a final EIS/R without allowing the public to review the information in draft form. Due to the inadequacies of the current DEIS/R it must be withdrawn.

The DEIS/R fails to properly divide the multiple components of the project

The Planning and Conservation League is encouraged that DWR and BOR have stated they are not formally announcing plans to increase allowable export levels from the Delta until after the Pelagic Organism Decline (POD) studies are complete. PCL believes that the current problems in the Bay-Delta Estuary require DWR to proceed with caution.

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However, PCL is deeply concerned, as it has explained to DWR repeatedly, that DWR/BOR's division of the project into multiple phases is largely illusory. While DWR and BOR are promising two separate approvals, they have prepared one DEIS/R for what both clearly define as one unified project. And while formal second-stage decision may in theory be delayed, the DEIS/R indicates in multiple ways that the actual decision already has been made.

First, the DEIS/R defines the project objectives and purpose as "…increasing the maximum permitted level of diversion through the existing intake gates at CCF to 8,500 cfs" (ES-3). This overly narrow definition leaves no room to increase water delivery reliability through means other than increased diversions at CCF, as might be proposed by the POD studies. Similarly, the DEIS/R specifically relied on the assumption that deliveries must be increased to exclude from analysis any first-stage alternative that did not involve pumping increases, even though an alternative without pumping increases would probably be the best way of achieving the water quality and fisheries improvements the first project stage is theoretically intended to provide. PCL1-2

Second, other than in the "No Action Alternative" the DEIS/R fails to examine the operable barriers or any measures to improve water quality and fisheries conditions at 6,680 cfs, the current rate of allowed pumping (see attached email from Paul Marshall to Mindy McIntyre dated 2/1/2006). Therefore the public is unable to ascertain how these projects will impact the environment if DWR/BOR decides not to increase allowable export levels to 8,500 cfs. In essence, the DEIS/R does not analyze a scenario under which 8,500 cfs is not chosen as the preferred alternative.

If DWR and BOR truly wish to follow through on their stated commitment to phased decision-making, the analysis in this DEIS/R cannot assume that pumping will increase. DWR must consider alternative ways of improving water quality and fisheries conditions even if they do not involve increased pumping; must re-defined the project purpose so that it does not mandate increased pumping; and must analyze the impacts and benefits of the first-stage alternatives without assuming increased pumping. PCL1-3

The DEIS/R defines an unreasonably narrow project purpose

A properly prepared EIR/S should define the purpose of a project in a non-tautological manner, and not define the purpose so narrowly that no alternatives can be considered. Stating that the project purpose is improving water supply reliability, water quality, or environmental restoration is would be appropriate, but defining the project purpose as building operable barriers and allowing increased pumping is not. PCL1-4

The DEIS/R defines unreasonably narrow project purpose which has determined the result. The DEIS/R states:

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DWR and Reclamation have, therefore, identified the following project objectives and purpose:

- Reduce the movement of San Joaquin River watershed Central Valley fall-/late Fall-run juvenile Chinook salmon into the south Delta via Old River
- Maintain adequate water levels and, through improved circulation, water quality available for agricultural diversions in the south Delta, downstream of the head of Old River; and
- Increase water deliveries and delivery reliability for SWP and CVP water contractors south of the Delta and provide opportunities to convey water for fish and wildlife purposes by increasing the maximum permitted level of diversion through the existing intake gates at CCF to 8,500 cfs. (DEIS/R Executive Summary 2)

PCL1-4

The first two purposes could be significantly improved by simply stating that the project purpose is to increase water quality and fisheries conditions in the South Delta, since those are, or should be, the underlying project goals. Such a changed purpose would allow DWR and BOR to evaluate whether other infrastructural or operations changes would accomplish those goals with fewer financial costs and environmental impacts.

The third purpose is absurdly narrow. Rather than defining an appropriate project purpose, such as increased water supply reliability, the DEIR defines a purpose divorced from functional goals, and that as written predetermines the outcome and inappropriately excludes almost any alternative. As written the DEIS/R project purpose requires an increase in the amount and the rate of water exported from the Bay Delta Estuary Such a narrow project purpose does not meet the required scope of CEQA and NEPA.

DWR and BOR inappropriately excluded alternatives during the scoping period

During the scoping period, DWR stated that the SDIP project was part of the CALFED program and the SDIP EIR would therefore tier from the CALFED Programmatic ROD. Several public commenters requested that DWR analyze alternatives for increase water supply reliability that would not require increased export capacity or increase water exports from the Bay Delta Estuary. (See SDIP public scoping comments meeting summaries http://sdip.water.ca.gov/public_outreach/pub_doc/scoping_summary.htm and public comments http://sdip.water.ca.gov/public_outreach/pub_doc/scope_catalog.htm that we submit by reference).

PCL1-5

Commenters suggested decreased exports, water conservation, water recycling and implementation of other regional water management options. DWR responded that these suggested alternatives were

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analyzed in the CALFED Programmatic EIR/S, and that therefore the suggested alternatives would not be analyzed in the project specific SDIP EIR/S.

The DEIS/R now states, "This SDIP EIR/EIS stands alone, and includes an independently developed analysis of the impacts of the SDIP, including the direct, indirect and cumulative impacts, alternatives, and avoidance/mitigation measures" (DEIS/R, page 1-8). This statement confirms that the DEIS/R does not tier from the CALFED Programmatic EIR/S as indicated by DWR and BOR during the scoping period.

DWR therefore cannot have it both ways; if the DEIS/R is to stand alone, its process of screening alternatives also must stand alone, and it cannot tier from the CALFED EIR/S's alternatives analysis. This change from tiering to an independent EIR requires that those alternatives that were rejected during scoping must now be addressed.

Under CEQA requirements, a lead agency, DWR in this case, that fails to analyze the environmental consequences of a proposed project raised during the scoping process has failed to comply with CEQA. (See *Sierra Club v. State Board of Forestry* (1994) 7 Cal. 4th 1215). PCL1-5

In addition, recent events have undermined any basis for tiering from the CALFED EIS/R's alternatives screening. For instance, the CALFED agencies have recommended removal of water conservation and other such regional management strategies from the CALFED program. As a result, these alternatives are no longer being implemented as envisioned in the original CALFED environmental documents. Furthermore, the current collapse of the Bay-Delta pelagic fisheries was not analyzed in the CALFED EIS/R.

It is appropriate that during the scoping period DWR and BOR implied that the SDIP would be implemented as part of the CALFED programmatic EIR, and then subsequently issue a DEIS/R as a stand alone project. It is also inappropriate for this DEIS/R to exclude water supply reliability, water quality and ecosystem restoration alternatives rejected due DWR and BOR's implied reliance on a programmatic document that is not in fact the basis for the DEIS/R. A new scoping process based on development of a stand alone EIR/S must be initiated, should this project move forward.

The DEIS/R inappropriately relies on the CALFED Programmatic EIR baseline

During the scoping period for this DEIS/R, Mr. Paul Marshall of DWR stated that the baseline for the DEIS/R would the same baseline included in the CALFED Programmatic EIR/S. But if this is a stand-alone DEIS/R, it needs a stand-alone baseline, and cannot simply incorporate the baseline of a different, outdated EIS/R completed over five years ago. It is inappropriate to use the baseline of the CALFED ROD for this DEIS/R, which DWR has stated is not tiered from the CALFED ROD. PCL1-6

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The DEIR/S inappropriately assumes full implementation of the Monterey Amendments

The DEIR/S assumes that the Monterey Amendments have been finalized and will be implemented without change into the future. While these amendments are in effect on an interim basis pursuant to the DWR settlement with the Planning and Conservation League and the accompanying court order, DWR has yet to complete its environmental review of the these amendments or make its new project decision. It is inappropriate for this DEIS/R to assume that DWR has made a decision on long-term implementation of the Monterey Amendments before DWR has completed the Monterey Plus EIR and issued its Notice of Determination. Accordingly, if DWR and BOR decide to move forward with the SDIP, the DEIS/R must analyze all alternatives under both pre-Monterey rules and operations, and under the rules and operations specified by the Monterey Amendments. **PCL-7**

The DEIS/R contains an incomplete analysis of project alternatives

The DEIS/R analyzes three operational alternatives in conjunction with three scenarios for operable barrier locations and operations. The analysis of these alternatives is inadequate and incomplete. The DEIS/R states that an increase to 8,500 cfs is necessary to increase reliability of exports. However, while the DEIS/R identifies an increase in maximum delivery capability, the DEIS/R fails to provide an analysis of the effect on reliability from such actions.

The Department of Water Resources' Draft 2005 State Water Project Delivery Reliability Report (Reliability Report) estimates that as State Water Project (SWP) water deliveries increase, water reliability actually decreases.[1]

PCL-8

According to DWR's analysis, the SWP cannot reliably deliver higher levels of water. For instance, according to the Reliability Report the SWP is estimated to be capable of delivering at least 1.2 maf about 90 percent of the time, while SWP deliveries of around 3 maf are only reliable in less than 65 percent of years. The DEIS/R fails to analyze how increasing water export affects the reliability of actual SWP deliveries.

In fact, the reliability effects will be greater than DWR acknowledged. Existing pumping levels are a primary cause of the Bay-Delta's chronic violations of environmental standards and laws, and those violations in turn reduce reliability. By reducing overall stresses on the system, decreased pumping could avoid many of those actual or threatened violations, ultimately increasing the

[1]PCL has many criticisms on the reliability analysis, which it has explained in detail in past comments, but this particular observation is exactly right.

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reliability with which the SWP and CVP deliver water. Increased pumping, by contrast, will increase environmental strains, increasing the frequency with which the pumps must slow or be shut down. In short, allowing higher pumping rates could ultimately decrease the predictability of water deliveries.

A simple analogy can explain the problem. A business could try to increase salaries to retain qualified staff. However, if they raised salaries more than their income would allow, their business would be jeopardized and their retention of qualified staff would actually be less reliable. PCL1-8

The DEIS/R should analyze this problem, for it could undermine the utility of the proposed changes. That analysis, however, is not present.

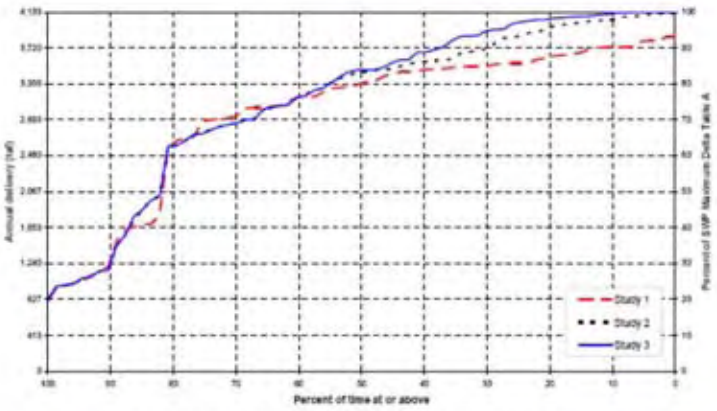

Figure B-1 SWP Delta Table A delivery probability for studies 1, 2 and 3

(Above figures are from the Draft 2005 State Water Project Delivery Reliability Report page 57.)

The DEIS/R relies on an inappropriate analysis of need for the SDIP

The DEIS/R cites water demand analysis from Bulletin 160-98 to justify the need for additional water exports south of the Bay Delta Estuary. However, DWR's Water Plan Update 2005 projected that under 'Current Trends Continued' water demands statewide and south of the Bay Delta Estuary actually decrease in 2030, even with accounting for water use of 12 million more residents. Furthermore, the 2005 Water Plan provides a feasible scenario under 'Less Resources Intensive' PCL1-9

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assumptions that indicates that water use statewide could decrease by up to 500 thousand acre feet, even without additional water conservation efforts taken by water agencies in California. Strikingly, the greatest reductions in demand will be located in exactly the areas to be served by SDIP's increased pumping.

The figures included below were taken from the California Water Plan Update documents. The first figure presents data indicating that the net South of Delta demands could decrease in both the Current Trends Continued and the Less Resources Insensitive scenarios. The second figure reports the estimated net statewide demand changes under all three scenarios. The second figure indicates that statewide, demands will decrease in both the Current Trends Continued and the Less Resources Intensive scenarios.[2]

In addition to DWR's own Water Plan Update 2005, the recent Pacific Institute report, *California Water 2030: an efficient future* determined that it is feasible for total water use in California to decrease by as much as 20 percent by 2030.

PCL1-9

Additionally, as part of its ongoing San Joaquin Drain environmental studies, BOR is considering the option of retiring huge amounts of salinity-impacted agricultural land in the San Joaquin Valley. Many land areas served by DWR also suffer salinity and drainage problems, and retirement of these lands similarly could cause enormous reductions in south-of-Delta water demands. Such reductions would meet the legitimate objectives of fisheries and water quality improvements.

These studies indicate that, despite the DEIS/R assertion that there are unmet needs south of the Delta, increased exports from the Bay Delta Estuary are unnecessary. In fact, the water demand data from DWR's Water Plan Update 2005 and the Pacific Institute report demonstrates that exports from the Bay Delta Estuary could actually decrease to match decreased demands.

Yet the DEIS/R does not even acknowledge these studies. It is inappropriate and misleading that DWR based its analysis of project need on outdated assumptions about South-of-Delta demand, yet omitted from this DEIS/R its most recent information on water demand trends.

[2] The net statewide demands figure from the California Water Plan Update includes a note that demand numbers do not include 1 to 2 million acre feet of water 'needed' to meet groundwater overdraft. However, the 1 to 2 million acre feet of groundwater overdraft was based on decades old data, and has never actually been verified by DWR or any other agency. DWR's California Groundwater Bulletin 118-05 states that a "comprehensive assessment of overdraft in the State's basins has not been conducted since Bulletin 118-80" (Bulletin 118-05 page 2). The unverified estimate does not take into account the many groundwater recharge programs that have helped communities address overdraft problems regionally. In addition, the SDIP DEIS/R does not attempt to address groundwater overdraft.

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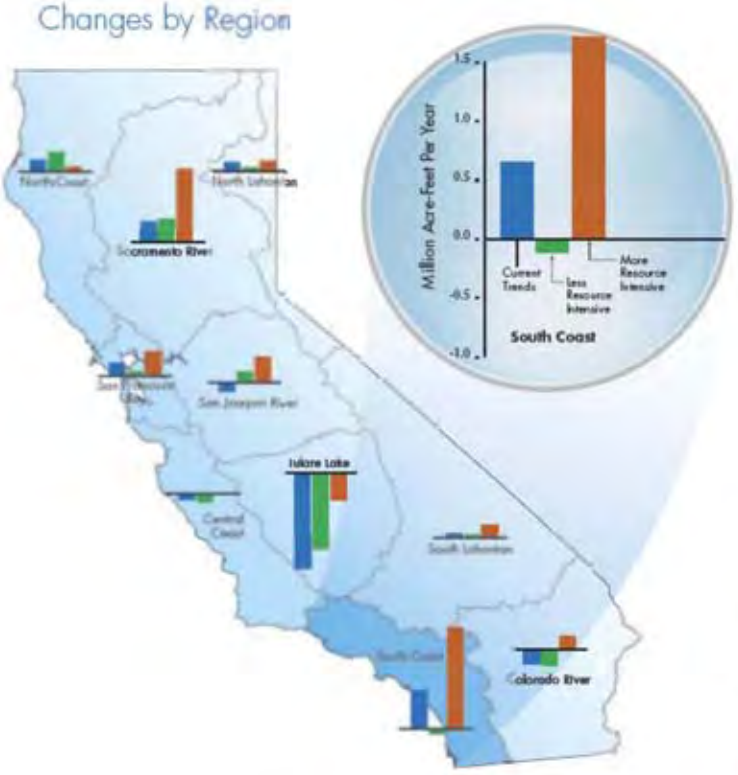
2030 Water Demand Changes by Scer

Changes by Region



http://www.waterplan.water.ca.gov/docs/cwpu2005/cwphighlights/highlights.pdf page 6

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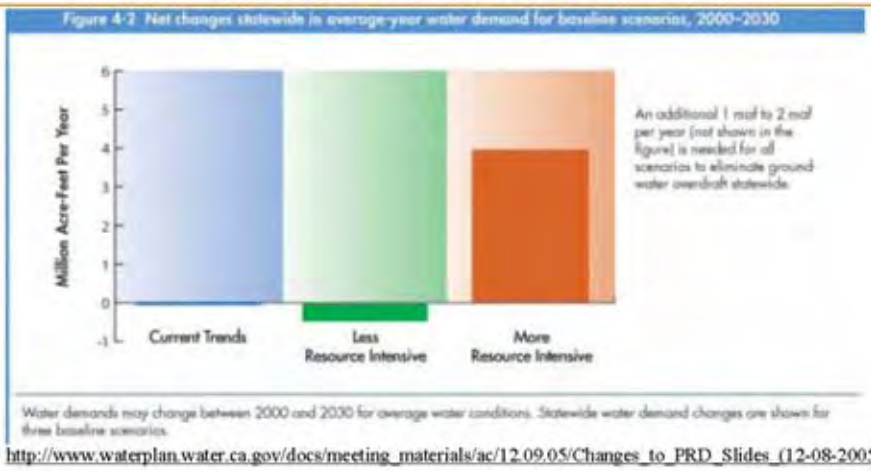

http://www.waterplan.water.ca.gov/docs/meeting_materials/ac/12.09.05/Changes_to_PRD_Slides_(12-08-2005).pdf

The DEIS/R analyzes an unreasonable range of alternatives:

Under the requirements of CEQA and NEPA a DEIR/S must analyze a reasonable range of project alternatives that mitigate or avoid environmental harm.

The SDIP DEIS/R fails to meet these requirements. The DEIS/R analyzes an unreasonably narrow set of alternatives, all of which, other than the no-project alternative, involve increasing water exports and pumping capacity from the Bay Delta Estuary and installing operable barriers. No other feasible or less environmentally damaging alternatives capable of achieving the purposes of improving water quality, contributing to environmental restoration and increasing water supply reliability were analyzed in this DEIS/R.

PCL1-10

Yet, such alternatives clearly do exist, as is illustrated by DWR's own California Water Plan Update (http://www.waterplan.water.ca.gov/docs/cwpu2005/cwphighlights/highlights.pdf), the Pacific Institute's *Waste Not, Want Not* and the *Investment Strategy for California Water*, November 18, 2004. These alternatives must be addressed by a proper EIS/EIR. According to the figure below taken from the Water Plan Update, there is a potential to achieve 3.1 million acre feet of functionally new water supply from urban water use efficiency and an additional 1.4 maf of water from water recycling. With a potential of 4.4 maf, these two options alone would provide more water if implemented, than the contracted annual yield of the SWP, and much greater increase in water supplies and water supply reliability than the 119 to 290 taf potential of the alternatives included in

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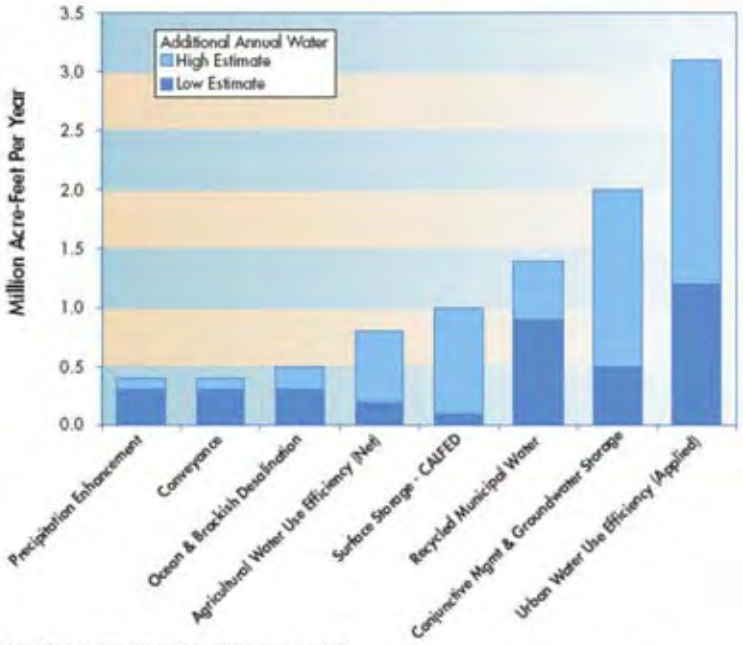
the DEIS/R. Yet the SDIP EIR fails to analyze these alternatives in conjunction with decreased exports from the Bay Delta Estuary.



From the Water Plan Update 2005 page 16
http://www.waterplan.water.ca.gov/docs/cwpu2005/cwphighlights/highlights.pdf

PCL1-10

As explained above, the draft Reliability Report issued by DWR in November 2005 estimated that the reliability of water deliveries from the SWP decreases as quantity of deliveries increases. Reliability of 1.2 maf in deliveries, for instance is 90 percent, while reliability falls to around just 50 percent when project deliveries reach 3.3 maf (see figure from Reliability Report above).

It follows that water reliability would be more effectively increased by decreasing contractor reliance on SWP imports and developing reliable alternative local water supplies through water

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management strategies identified in the State Water Plan Update rather than the currently-proposed alternatives, all of which would increase contractor reliance on high levels of SWP deliveries. PCL1-10

As with the operational component, the DEIR fails to analyze an adequate range of alternatives for the physical component. The reported purpose/objective for the DEIR physical component, or the operable barriers, is to address water level and quality impacts, as well as impacts to salmon from the operation of the SWP and CVP. The DEIR identifies flow changes resulting from CVP and SWP operations as the cause of salmon losses and water quality problems for the South Delta farmers. The DEIR states:

- Under natural conditions, about half the flow in the San Joaquin River flowed down Old River. The operations of the SWP and CVP export facilities in the south Delta can change flow patterns in the local channels. These factors can cause migrating San Joaquin River fall-/late fall-run Chinook salmon, a candidate for listing under the federal Endangered Species Act, to move into the south Delta, primarily through Old River where fish mortality increases due to predators and higher levels of exposure to export facilities and agricultural diversions. Keeping fall-/late fall-run Chinook salmon in the main channel of the San Joaquin River until they reach the central Delta may increase survival.
- Local South Delta water users downstream of the head of Old River are affected by water quality and water levels at each intake location. Water levels are influenced by many factors, one of which is diversions in the south Delta by the SWP and the CVP. In addition, there are opportunities to improve circulation and therefore water quality in the south Delta.

PCL1-11

However, the DEIS/R fails to analyze how reduced exports from the SWP and CVP could reduce impacts to San Joaquin River fall-/late fall-run Chinook salmon and the South Delta farmers. In fact, all alternatives included in the DEIR actually decrease water quality for other Delta municipal water users, thus creating a significant redirected impact. In addition, the analysis of the barrier at Old River does not address whether fish survival will increase due to barrier operations. When operational components of the DEIR are implemented, it is likely that many of the San Joaquin River fall-/late fall-run Chinook salmon that have been directed to the main channel will be pulled back into the South Delta due to the increased pumping.

Two of the feasible and beneficial alternatives that meet the project purposes of improving water quality, improving conditions for fisheries and increasing water supply reliability that should be analyzed in the DEIS/R are discussed below.

Central Valley Land Retirement Alternative:

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The SDIP DEIS/R fails to explore an alternative that improves water quality and fish conditions while increasing the available supplies of water for human use and the environment through retirement of drainage impaired land in the Central Valley.

According to the 2000 San Joaquin Valley Drainage Monitoring Program Report, there are 1,361,000 total acres of "present and potential drainage problems" where the water table is between 0-20 feet of the ground surface. This report most likely underestimates the total area because the monitoring program stopped monitoring drainage in the Northern Area in 1979. In fact, as part of its environmental review of the proposed San Joaquin Drain, BOR already has considered retirement of thousands of acres served by its San Joaquin unit.

Retiring those lands would bring immense benefits to the South Delta. Agricultural return flows are the primary source of pollutants in the San Joaquin River and South Delta, and retiring those lands would minimize the amount of salt, selenium, and pesticide-laden return flow currently entering the river and Delta. Additionally, retiring those lands would reduce BOR's already-enormous task of finding a place to dispose of the polluted groundwater now sitting beneath many of those impacted lands, and would reduce the extent to which disposing that water threatens the Bay-Delta. *See Firebaugh Canal Co. v. United States*, 203 F.3d 568, 571 (9th Cir. 2000); United States Geological Survey, *Forecasting Selenium Discharges to the San Francisco Bay-Delta Estuary: Ecological Effects of a Proposed San Luis Drain Extension, Open Report 00-416* (2000), *available at* pubs.usgs.gov/of/ofr00-416/.

PCL1-12

The DEIS/R must explore the actual acreage available for retirement, acre feet of water that could be saved, cost, and environmental impacts of such an alternative. It must also describe how the rights to the water previously used for irrigation would be properly transferred to ensure that the water is used for environmental purposes and to reduce the impacts of the operations of the SWP and CVP, as is the purpose of the project. And it must consider the cumulative impact of the San Joaquin drain project and other related projects in combination with the SDIP structural and operational projects.

San Joaquin River Restoration:
The DEIS/R also fails to include an alternative that analyzes San Joaquin River Restoration. Increased flows entering the South Delta from a restored San Joaquin River could significantly improve water quality. Such an alternative could substantially improve Delta water quality without the installation of additional dam or dam-like devices in the Delta. Following the United States District Court's recent decision in NRDC v. Patterson, such restoration will be legally required, yet the DEIS/R does not analyze the ways in which that restoration could also accomplish some of the underlying goals of the SDIP project.

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The description of these alternatives must show in language that the public can easily understand how the decreased pumping alternatives will reduce the power consumption of SWP and CVP operations and the financial effects of this decrease in energy demand.

The failure to analyze a reasonable range of alternative to the physical components of the DEIS/R requires DWR and the BOR withdraw the DEIS/R. Any subsequent DEIS/R should analyze a more reasonable range of alternatives that would more effectively reduce impacts of the SWP and CVP to fisheries and farmers. **PCL1-12**

The DEIS/R inappropriately identifies increased funding of the Environmental Water Account (EWA) as the sole mitigation for its Operational Component.

Despite the lack of documented success with the Environmental Water Account (EWA), the SDIP DEIS/R relies on the EWA as its sole mitigation for its Operational Component:

> "An expanded Environmental Water Account (EWA) program as described in the CVP/SWP Operation Criteria and Plan (OCAP), or the implementation of an avoidance-and-crediting system augmenting the current EWA program, would be implemented to avoid diversion effects on fish resulting from implementing the Stage 2 decision. Therefore, these measures would be adopted if necessary during the Stage 2 decision-making process." (ES-6)

There has been no credible study demonstrating that the EWA has mitigated the environmental impacts of water exports from the Bay-Delta. In fact, the Pelagic Organism Decline coincides with the five years in which the EWA has been in operation and in which winter exports have been increased to their highest levels on record. The Pelagic Organism Decline (POD) studies currently being carried out by the CALFED Interagency Ecological Program (IEP) have recently discovered that more smelt are being killed by the pumps in the winter and that this could be a significant contributor to the recent population declines. Although the SDIP DEIS/R proposes to rely on the EWA, it fails to examine how increased pumping in the winter will increase the killing of threatened and endangered fish in the winter. **PCL1-13**

Additionally, the EWA has faced chronic funding shortages in the past, has rarely been fully implemented, and faces a highly uncertain funding future. *See* Environmental Water Account Multi-Year Program Plan (Years 5-8), pages 16-17, *available at* www.calwater.ca.gov/ProgramPlans_2004/ Environmental_Water_Account_Program_Plan_7-04.pdf (showing funding shortfalls).

A 2005 report by Environmental Defense entitled *Finding the Water: New Water Supply Opportunities to Revive the San Francisco Bay-Delta Ecosystem* states, "Unfortunately, due to a

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combination of insufficient operational assets and dwindling funding, early on the EWA was effectively robbed of some of its potential…The EWA has never received the amount of water anticipated by the CALFED plan. On average, only 29% of the expected 195,000 acre-feet of operational assets have been available…It is uncertain how the EWA will be funded in the future." http://www.environmentaldefense.org/documents/4898_FindingWater.pdf.

In its Environmental Assessment/Initial Study (EA/IS) of the "Intertie" proposal finalized in April 2005, BOR specifically noted that the continued existence of the Environmental Water Account is "speculative."

For these reasons, the EWA is simply not reliable or adequate source of mitigation.

These and other critiques have been well documented in public hearings and workshops regarding the EWA. The DEIS/R must address all of the current information regarding the EWA, especially those documents made available to the public on-line from the December 2005 EWA workshop http://science.calwater.ca.gov/workshop/ewa.shtml (as visited February 1, 2006).

PCL1-13

In addition to the functional problems that have been identified with the EWA, funding of this program has relied on public subsidies in violation of the broadly accepted beneficiary-pays principle used in the CALFED process and other water infrastructure planning processes. That principle requires those who benefit directly or indirectly from a project to pay for its benefits. The EWA, however, effectively requires the public to pay water districts for water that under federal and state law already should be devoted to environmental needs; it provides payments for compliance with existing law.

Because the DEIS/R states that these measures would carried out "if necessary" it is unclear that the SDIP would implement any mitigation measures whatsoever to address the impacts of its operational component. The DEIS/R must clearly define its mitigation measures and provide legally enforceable assurances that will be put in place to ensure that these mitigations will be carried out.

The DEIS/R fails to include any of the interim findings of the Pelagic Organism Decline (POD) studies

Ecosystem degradation poses a significant risk to the ability to convey SWP water reliably through the Bay Delta Estuary. Recently, data from the Department of Fish & Game's Fall Mid Water Trawl signaled that there is a serious ecosystem collapse in the Estuary, with four important pelagic fish populations at historic lows, including the California and Federally Endangered Species Act listed Delta Smelt and the CVPIA-protected striped bass (*See* California Department of Fish & Game Fall Mid Water Trawl Indices: http://www.delta.dfg.ca.gov/data/mwt/charts.asp; http://www.acwa.com//issues/calfed/Smelt_10_20_05.doc).

PCL1-14

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As Secretary for Resources Mike Chrisman stated in an October 20, 2005 press release on the *Science-Based Framework to Guide Partnership, Evaluate Progress in Identifying Causes for Pelagic Organism Decline and Promote Future Stability*, "the threat facing the delta smelt could be a threat that impacts the entire health of the ecosystem. It is important that we do everything possible to find causes and provide recommendations to reverse the decline."
http://www.acwa.com//issues/calfed/Smelt_10_20_05.doc

In response, many agencies, including DWR are participating in an emergency science review called the 'Pelagic Organism Decline' (POD) investigation. One of the most recent reports from the POD investigations indicates that increased exports, which increase fish entrainment and decrease available habitat, may be a primary contributor to the fisheries declines ("Interagency Ecological Program Synthesis of 2005 Work to Evaluate the Pelagic Organism Decline (POD) in the Upper San Francisco Estuary," November 2005
http://science.calwater.ca.gov/pdf/workshops/IEP_POD_2005WorkSynthesis-draft_111405.pdf).

The central research to accomplish the goals outlined by Mr. Chrisman is currently being carried out by the Interagency Estuary Program (IEP) Pelagic Organism Decline (POD) studies. As the document above shows, DWR and BOR have increased IEP's budget by $1.7 million to support research that will attempt to identify causes for the decline. (*See* Contra Costa Times article "Scientists Explore Ways to Rejuvenate Troubled Waterway" 1/22/06
http://www.contracostatimes.com/mld/cctimes/living/science/13685412.htm)

PCL1-14

Although DWR and BOR have demonstrated their support for the work of these scientists through public statements and funding increases, and although they have said they will include the final results in their supplemental studies of the operation SDIP component they fail to include any of the initial findings in their analysis of the SDIP. Yet that information could be crucially important to an analysis of the first-stage decision.

The SDIP DEIS/R must include all of the information obtained by the IEP POD studies and disclose the possibility that decreases in exports may be necessary in order to reverse those declines.

While the pelagic species decline currently is the most salient of the Bay-Delta Estuary's environmental problems, it is not the only problem that might compel delivery reductions. Bay-Delta water currently does not meet federal or state water quality standards, and many other species are listed as threatened or endangered. Studies have concluded that there is in fact a relationship between Bay Delta water exports and fisheries declines (*See attached* Status and Protection of the San Francisco Bay- Sacramento-San Joaquin Delta Striped Bass Population, by Tomas Cannon).

The DEIS/R should analyze these issues and acknowledge that addressing these other environmental problems may require export reductions.

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The DEIS/R fails to analyze impacts of physical/structural components upon Delta smelt

In addition to the impacts of increased exports, the installation and operation of the physical/structural components may have negative impacts upon the Delta environment, including the threatened Delta smelt. U.S. Fish & Game's Biological Opinion describes increased impacts to Delta smelt when the barrier at the head of Old River is in place. The DEIS/R does not adequately address how this impact will be mitigated or how operations of the barrier will be monitored and altered in order to minimize the impacts to the already endangered Delta smelt. PCL1-15

The DEIS/R fails to analyze impacts of increased or continued irrigation of drainage impaired lands

Increasing allowable export levels will result in increased water deliveries to CVP/SWP customers. A number of these customers use CVP/SWP water to irrigate drainage impaired lands. As discussed earlier, acreage of drainage-impaired lands in the Central Valley may total more than 1,361,000 total acres. The DEIR/S fails to analyze the environmental impacts of providing continued or additional water to these areas and therefore must be withdrawn. PCL1-16

The DEIS/R fails to analyze impacts on the Areas of Origin

The 2005 draft California Water Plan Update (CWPU) describes predicted changes in regional water demand in 2030 under three scenarios: current trends, less resource intensive, and more resource intensive. The CWPU predicts that as Southern California water demands decrease over the next thirty years under a less resource intensive scenario and demand in the Tulare Lake region decreases under all three scenarios, water demand in the Sacramento River area, North Coast and North Lahontan areas will increase under all three scenarios. This information demonstrates that more emphasis should be placed on protecting water supplies north of the Delta instead of moving it away from areas of predicted future demand.

Increasing the allowable export levels at CCF and therefore increasing the pressure to export water through the Delta and into the SWP/CVP aqueducts will cause significant impacts to Areas of Origin. PCL1-17

The DEIS/R does not adequately analyze the impacts to these Areas of Origin including groundwater, water temperature, water quality, flow changes and water dependent species on the Sacramento, American, Feather, and Trinity Rivers.

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The DEIS/R fails to clearly explain the water quality impacts and impacts to species dependent on the Delta Estuary of the installation and operation of operable barriers

The SDIP DEIS/R fails to present an alternative that clearly improves water quality across the Delta in accordance with the CALFED ROD. The DEIS/R describes several of the negative impacts on water quality posed by the operational component of the SDIP including increased salinity in Delta channels and exports, and increased concentrations of dissolved organic carbon which could indirectly increase trihalomethanes as well as impacts on dissolved oxygen concentrations in the San Joaquin River downstream of the Stockton Deep Water Ship Channel (DEIS/R 5.3-1). PCL1-18

Unfortunately the DEIS/R fails to provide clarity describing the water quality impacts of the installation and operation of the operable barriers. The DEIS/R fails to include information exploring the wide range of possible water quality issues including, but not limited to, salinity and methylization of mercury in language the general public can easily understand.

The DEIS/R fails to adequately assess impacts to the environment from proposed water supply actions

The DEIS/R relies on a determination that hydrological or water supply conditions changes do not affect the environment (DEIS/R 5.1-32). This determination is without merit. Hydrologic changes including altered releases from upstream reservoirs affect salinity in the Delta, directly affecting X2, a key environmental protection. In addition, the relationship between Delta hydrological conditions, including inflow and outflow are the basis for water quality regulations, further indicating that hydrological changes directly affect water quality and environmental resources that depend on the Bay-Delta habitat. PCL1-19

In addition, the U.S. Fish & Wildlife Service's delta smelt OCAP Biological Opinion that this DEIR/S relies on acknowledges this relationship. The delta smelt BO states:

> In addition to the degradation and loss of estuarine habitat, delta smelt have been increasingly subject to entrainment, upstream or reverse flows of waters in the Delta and San Joaquin River, and constriction of low salinity habitat to deep-water river channels of the interior Delta (Moyle *et al.* 1992). These adverse conditions are primarily a result of the steadily increasing proportion of river flow being diverted from the Delta by the Projects, and occasional droughts (Monroe and Kelly 1992). (page 120).

It is inappropriate to exclude analyses of the impacts to the environment and water quality resulting from hydrological changes due to the proposed project.

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The SDIP DEIS/R fails to present adequate information on the future of California's levees and their relationship to the proposed project

Significant risks to the ability of the SWP to export water from the Bay Delta Estuary are posed by the vulnerability of levees to flood, sea level rise and earthquake. Any project that would increase Bay-Delta exports, and thus induce greater reliance on Bay-Delta water, increases California's vulnerability to floods or earthquakes, but the DEIS/R does not disclose or discuss those risks.

Dr. Jeffery Mount from the University of California, Davis, recently completed a risk analysis estimating that there is a 64 percent probability that the Bay Delta Estuary will experience abrupt changes resulting from flooding or seismic activity within the next fifty years. These changes would permanently alter the hydrology, water quality and ecosystem of the Estuary. Furthermore, Dr. Mount found that there is no institutional capacity to address these permanent changes. (Subsidence, Seismicity and Sea Level Rise: Hell AND High Water in the Delta; presented by Dr. Jeffery Mount to the California Bay-Delta Authority October 14, 2004. http://calwater.ca.gov/CBDA/AgendaItems_10-13-14-04/Presentation/Item_13_6_Subsidence_Seismicity_Sea_Level_Rise.pdf)

In recent testimony to a joint committee of the California Legislature, Lester Snow, Director of DWR, outlined the serious risks to SWP water supply availability associated with Bay Delta levee failure. In his presentation, "How a Delta Earthquake Could Devastate California's Economy," Director Snow stated that extended impacts to water availability would include:

PCL1-20

- Using most optimistic projection, levee repairs will require at least 15 months. More realistically, the repairs will take much longer.
- Southern California water agencies are drawing from reserves. Some will last up to 36 months; others will go dry sooner.
- Extreme water conservation measures enacted
- Ground water basins drawn dangerously down – may lead to contamination
- Water conservation and transfer programs enacted

(Slide 16 of Lester Snow's presentation to the joint legislative committee, November 1, 2005 http://www.publicaffairs.water.ca.gov/newsreleases/2005/11-01-05DeltaEarthquake.pdf)

Director Snow further indicated that recovery of the conveyance through the Delta could be abandoned. (Slide 19 of Lester Snow's presentation). Director Snow told the Legislature that "… we also need to recognize the statewide impacts …if Delta water supplies are reduced or eliminated as a result of a catastrophic failure of our levee system." (Quote taken from DWR Press Release, November 1, 2005, http://www.publicaffairs.water.ca.gov/newsreleases/2005/11-01-05flood.cfm)

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Accordingly, the SDIP DEIS/R should incorporate Director Snow's recommendation to recognize the risk to SWP reliability from flood, sea level rise and earthquake. Instead, The DEIS/R fails to analyze impacts from catastrophic failure in the Bay Delta Estuary from earthquake or flood on either the physical/structural components or the operational components. It also fails to adequately analyze the possible impacts on California levees from implementation of either the physical/structural components or the operational components. PCL1-20

Because of the costly investment being contemplated, the description of these risks must include an economic analysis that clearly shows the economic impacts of failure of the projects various components.

The DEIS/R was prepared prematurely before a Delta Visioning Process has been initiated or concluded

Due to the vulnerability of the Bay Delta Estuary, the largest estuary on the West Coast of the Americas, numerous stakeholders have agreed that a Delta Visioning Process must be initiated to develop a long-term vision and corresponding strategy to ensure the region's viability.

Because of this strong interest in creating a Delta Vision in October of 2005, Governor Schwarzenegger signed AB 1200 (Laird) which among other things requires the Department of Water Resources and the Department of Fish and Game to identify, evaluate, and comparatively rate the principal options available to implement certain objectives that relate to the Bay-Delta or the Sacramento and San Joaquin river systems. The bill requires the departments to jointly report to the Legislature and the Governor the results of their evaluations and comparative ratings, as specified, no later than January 1, 2008. PCL1-21

The visioning process required under AB 1200 may result in a profound re-evaluation of the various conflicting and overlapping services currently obtained from the Bay Delta.

Because DWR/BOR commissioned and released the SDIP DEIS/R before this two year process has been concluded, they have avoided essential policy information that may show that their proposal does not align with a consensus vision for the region. The DEIS/R should be withdrawn until a Delta Visioning Process which includes broad stakeholder input has been concluded and this information has been received by the Legislature and the Governor.

The DEIS/R relies heavily on environmental review documents of compromised validity PCL1-22

OCAP Biological Opinion:

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We strongly agree with the comments submitted by the Trinity County Board of Supervisors regarding the SDIP EIR/S's unacceptable reliance upon 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 by an independent technical review team convened by the CALFED Bay-Delta Program whose findings were made public January 3, 2006.

We remind DWR and BOR that a report by the Department of Commerce's Inspector General also found the NMFS BO process violated government procedures, and concluded that a supervisor "circumvented key internal controls established to ensure the integrity of the biological opinion." The Inspector General's report quoted NOAA fisheries scientists saying that their jobs in the review process were cut short by superiors and that there was "a basic disconnect between the scientific analysis and the conclusion." (See attached report.)

In fact, in a letter to Senator Michael Machado sent in Spring 2005, the Director of the Department of Water Resources, the Director of the Department of Fish and Game, and the Chair of the State Water Resources Control Board admitted that the revised OCAP threatens "potential increased adverse impacts to salmon and steelhead in some Central Valley rivers" and that the "State anticipates increased impacts to winter-run and spring-run Chinook will occur as a result of the changes in water project operation and less stringent temperature compliance requirements." (See attached letter). PCL-22

Now that the technical review team has presented its findings, it is unclear what steps are planned regarding a valid version of the BO. This information is critical to understanding the impacts of the SDIP on California's environment.

The DEIS/R also relies on a Biological Opinion regarding the impacts of the long-term contract renewals of the Operations, Criteria and Plan (OCAP) upon Delta smelt that is currently under litigation and appears to have several deficiencies. http://www.fws.gov/sacramento/ea/news_releases/2004%20News%20Releases/Delta_Smelt_OCAP_NR.htm Among other problems, that BO, like the SDIP DEIS/R, relies heavily on the EWA for mitigation of environmental effects without considering the EWA's tenuous status and inadequate funding.

Deliverability Reliability Report:
The SDIP DEIS/R also references the DWR's 2002 State Water Project Deliverability Reliability Report (2002 Reliability Report) http://swpdelivery.water.ca.gov/ (DEIS/R 9-5).

The 2002 Reliability Report is currently being revised and an update was released in draft form in November 2005. Both versions have serious deficiencies that, if left uncorrected, would dangerously overestimate DWR's future ability to deliver water and compound the risk that local planning decisions will be predicated on "paper" rather than deliverable water. For additional critiques of PCL-23

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these documents, please see PCL's *comments on public review draft of the State Water Project Delivery Reliability Report 2005* (attached).

Because of the well-documented flaws in these documents, the DEIS/R cannot simply rely on them as a substitute for independent analysis. PCL1-23

The DEIS/R does not provide clear information about the required amount of energy, the source of energy or the related impacts of additional energy generation, including project cost, energy availability, air quality and global climate change

Implementation of the operational components of this project would require a considerable amount of energy. . The South Delta pumps consume a huge amount of energy, as does the pumping of water over Southern California's mountain ranges. The physical/structural components will also require large amounts of energy. This increased energy consumption will have far reaching impacts on California's economy, energy availability and environment. . The DEIS/R fails to properly analyze those impacts.

Amount:
The DEIS/R is not clear as to the specific amount of energy required for either the physical/structural components or the operational components and is therefore inadequate. Of the physical components, it fails to analyze the energy demand of dredging operations. Of the operational components, it fails to describe the quantity of additional water used in its CALSIM II analysis of energy consumption. This failure is systemic to the document, as it both claims to allow increases of permitted capacity for diversions of up to twenty-seven percent yet claims to analyze increases of the "average amounts of water diverted for SWP and CVP contract deliveries and environmental uses from less than 1% to 3%" (ES-5). PCL1-24

This remarkable variation in numbers makes it impossible to appropriately assess the analysis of energy consumption in the DEIS/R. For example, if diversions increase from 6,800 cfs to 8,500 cfs (a twenty-seven percent increase from current allowable pumping rates) this would result in roughly an additional million acre feet per year pumped from the Delta into the SWP and CVP aqueducts. If this additional million acre feet of water were then pumped down the aqueduct only as far as Bakersfield it would still require a net energy input of 366 million kilowatt hours (see http://www.energy.ca.gov/pier/iaw/industry/water.html), substantially higher than the "47 million kilowatt-hours per year, or about 3.8% relative to the No Action Alternative" as predicted under the DEIS/R's CALSIM II modeling (page 7.5-7).

Also, the DEIS/R states that "changes in SWP electricity generation and consumption were assessed using the CALSIM II model" (7.5-3). It appears that this was the only model used for the majority of

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energy consumption modeling. As we have addressed in the comments below regarding CALSIM II, because of the limitations of CALSIM II the DEIS/R must disclose the limitations and cannot rely on this single model.

The DEIS/R must analyze the energy consumption based upon the total possible pumping rates. It should also include a comparison between energy consumed under the total allowable pumping rates (the twenty-seven percent increase), DWR/BOR's predicted pumping rates under SDIP, current pumping rates, and reduced pumping rates so as to provide decision makers with the ability to weigh the various energy consumption alternatives.

Source and Availability:
The State Water Project is already the single largest electrical energy user in California. The DEIS/R also fails to identify the source energy for the project, which makes it impossible to adequately analyze the related impacts. The energy sources for this project are important because the sources will affect the cost of this project and the impact of the project on the availability of energy in the various areas of California and on the greater Pacific Northwest energy grid. The sources will also determine the project's effect on and contribution to global climate change, as well as the project's impact on source area air quality. Without a clear description of the type and location of this energy source, the DEIS/R must be withdrawn.

Costs:
Not identifying an energy source obfuscates the operating costs of the operable barrier facilities and intensified export operations, essential information for the DWR/BOR officials tasked with deciding between the various project alternatives as well as the larger community as they weigh various strategies for achieving cost-effective water supply reliability. The cost of operation and the economic feasibility of this project will be based in part on the costs of energy which have fluctuated substantially in the past and will continue to fluctuate. Increased energy costs could result in much higher operations cost, which would then increase the cost of delivered water. The claimed benefits of this project would be greatly reduced if the price of water from the facility became prohibitively expensive. A discussion of the impact on energy costs and energy availability must be included in the DEIS/R and made available to the community in order for the full impacts on California and the Pacific Northwest to be understood prior to a decision on this project.

PCL1-24

Significance Thresholds:
The DEIS/EIR disregards the significance of the immense energy demands, incorrectly comparing them to the total SWP operations energy requirements.

The impacts of the energy demand for operational components, which as noted above, may be more than 366 million kilowatt hours per year, are dismissed in the DEIS/R as insignificant and not requiring mitigation, because they do not increase electricity demand by more than ten percent above the current SWP net energy requirements. Arbitrarily selecting ten percent to determine significance

instead of utilizing ecologically-based metrics violates the basic standards of the EIR/S process. This threshold is especially inadequate considering that the SWP uses an average of five million kilowatt hours per year, two to three percent of all the electricity consumed in California http://www.energy.ca.gov/pier/iaw/industry/water.html. If every proposed action creating 366 million kilowatt hours of new energy demand were deemed insignificant, environmental review might no longer address energy impacts at all.

Increased Energy Use and Air Quality:
The production and consumption of energy has clear and undeniable impacts on the environment and human health. Decreased air quality created by power plants in California has had a documented deleterious health effect on California's residents. After several pages describing proposed measures to mitigate for air quality impacts from the physical/structural components, the DEIS/R summarily dismisses impacts from the operational component, which again, may require hundreds of millions of kilowatt hours per year:

> "Increased diversions would result in the emission of criteria pollutants well below the established thresholds of significance. Therefore, impacts on air quality associated with the operational component would be less than significant. No mitigation is required." (5.9-15)

PCL1
-24

As the amount, source type and source location of required energy are not clearly described in the DEIS/R it is impossible to analyze whether or not the emissions from increased diversions will in fact exceed the significance criteria. Considering the severe air quality problems in many areas of the state, especially the Central Valley, it is very likely that they would. The DEIS/R must evaluate how the energy required for the physical/structural components and the operational components of the project will affect statewide and local air quality and propose mitigation measures for the affected communities.

Increased Energy Use and Global Climate Change:
Because the DEIR/S has made no indication that DWR or BOR would seek out alternative, environmentally preferable energy sources, it is safe to assume that the additional energy required for the operational and physical/structural components of this project will most likely come from power plants and hydropower, both of which are related to global climate change.

Power plants have been identified as some of the largest sources of CO2, the leading contributor to global climate change.

The effect of climate change upon California's water supply will impact hydropower energy production. In June 2005, the California Energy Commission released a report entitled, *Potential Changes in Hydropower Production from Global Climate Change in California and the Western*

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United States.[3] The report confirms that in dry periods, hydropower production capacity will decrease. The DEIS/R must include an analysis of this report, specifically addressing how climate change will affect the energy sources for all of the SDIP components and the reliability and cost of that water supply.

PCL1-24

The DEIS/R must evaluate how the energy required for the physical/structural components and the operational components of the project will be affected by and contribute to global climate change. It must also include impacts on the energy grid for California and the Pacific Northwest and how the increased energy demand from the project may contribute to global climate change. Any increase in CO2 emissions from increases in energy production must be fully mitigated. Full implementation of reduced water pumping from the Bay-Delta alternative could reduce CO2 emissions below current levels by reducing power generation and must be included in this analysis.

The DEIS/R fails to provide the public with an analysis of planned operations under the anticipated effects of climate change

PCL1-25

The SDIP DEIS/R fails to discuss and incorporate known and recognized information regarding the substantial adverse impacts climate change will have upon California's water supply. In fact, the DEIS/R bases nearly all of the predictions in its several hundred pages of documentation upon a fundamentally flawed and outdated assumption; that environmental conditions in California have been static and will continue to be static in the future. The scientific community knows that assumption to be deeply flawed, and that flaw infects DWR's entire analysis. DWR has in fact acknowledged that climate change will affect the way water can be managed and that climate change will alter the impacts of water management. The recently completed California Water Plan Update 2005 states:

> "Managing water resources with climate change could prove different than managing for historical climate variability because climate change could produce hydrologic conditions, variability, and extremes that are different from what current water systems were designed to manage; may occur too rapidly to allow sufficient time and information to permit managers to respond appropriately; and may require special efforts or plans to protect against surprises or uncertainties." (Page 4-32)

This omission of climate change information from the DEIS/R is particularly troubling because DWR has committed to including such information in its documentation regarding statewide water policies. Yet, DWR has not acted uniformly in its fulfillment of that promise, creating the impression that the department withholds climate change research where the findings do not support the aims

[3]California Energy Commission Potential Changes in Hydropower Production from Global Climate Change in California and the Western United States - Consultant Report, CEC publication # CEC-700-2005-010 http://www.energy.ca.gov/2005_energypolicy/documents/index.html#062105

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and goals of its proposals or where responding prudently to the findings of those studies would require modification of current operations.

In prior documents DWR has acknowledged that a primary factor in determining reliability of State Water Project supplies is the availability of water in source areas. In 2002, DWR's first State Water Project Deliverability Reliability Report (reliability report) recognized that climate change could significantly alter availability of water in source areas. The 2002 report stated that information on climate change impacts to California was being developed in the California Water Plan Update process, and that such information would be incorporated into the 2005 reliability report.

The April 7, 2005 draft of the Water Plan Update stated:

> California's relies on snowpack as its largest means of annual water storage. Runoff from the Sierra Nevada mountains during April through July of each year averages 14 million acre-feet and comes primarily from snowmelt. Computer modeling of global climate change scenarios predict significant future reductions in the Sierra snowpack. A reduced snowpack will reduce the total water storage for the state. Figure 4-7 (Model simulation of potential changes in snowpack during the 21st Century) shows a 52 percent reduction in the annual April through July runoff for a 2.1 degree C (3.8 F) of warming, well within the 1.4 to 5.8 degree C (2.5–10.4 F) range predicted by global climate models for this century.
>
> Changes in the timing of snowfall and snowmelt, as a result of climate change, may make it more difficult to refill reservoir flood control space during late spring and early summer, potentially reducing the amount of surface water available during the dry season. Changes in reservoir levels also affect lake recreation, hydroelectric power production, and fish habitat by altering water temperatures and quality. Reductions in snowpack may require changes in the operation of California's water systems and infrastructure, and increase the value of additional flood control space in reservoirs. (Public Review Draft California Water Plan Update, April 7, 2005, Vol. 4, page 4-27)

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Despite the commitments made in the 2002 Reliability Report, the information above is not included in the recent draft of the 2005 Delivery Reliability Report. Nor is it included in the current SDIP DEIS/R.

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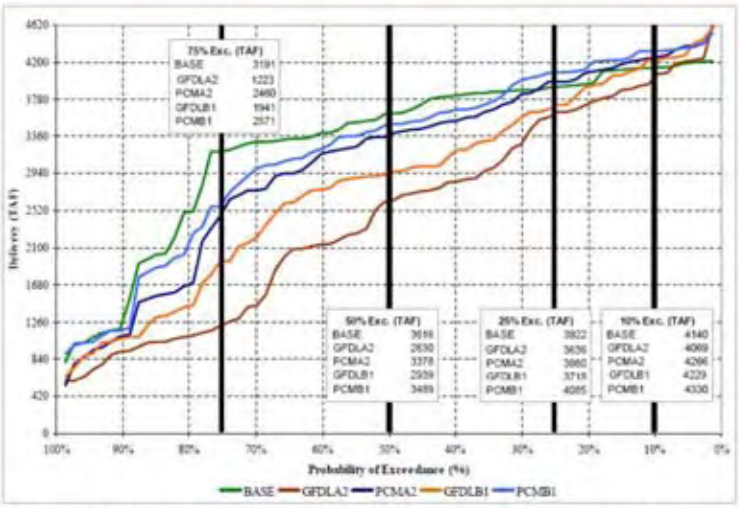

Figure 7. Exceedance probability plot of SWP Annual Deliveries under climate change scenarios PCM B1-A2 and GFDL B1-A2 for 2070-2099

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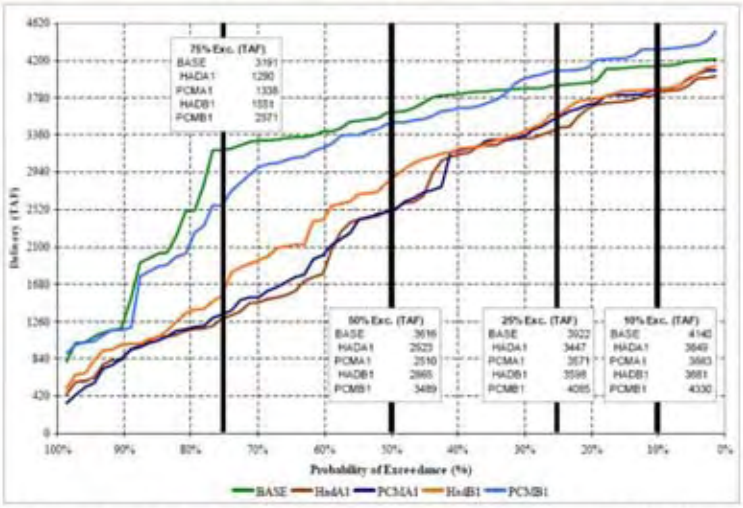

Figure 8. Exceedance probability plot of SWP Annual Deliveries under climate change scenarios PCM B1-A1 and HadCM3 B1-A1 for 2070-2099

(California Energy Commission, draft Predictions of Climate Change Impacts on California Water Resources Using CalSim-II: A Technical Note, December 2005 page 14 & 15
http://www.energy.ca.gov/2005publications/CEC-500-2005-200/CEC-500-2005-200-SD.PDF)

Since the release of the Draft Reliability Report 2002, a large amount of analysis on potential climate change impacts on water management in California has been published. Estimates of the deliveries from the SWP under climate change conditions have been modeled and analyzed. The California Energy Commission recently completed such an analysis in their report, "Predictions of Climate Change Impacts on California Water Resources Using CalSim-II: A Technical Note" (CEC report); Katherine Hayhoe et al., *Emissions Pathways, Climate Change, and Impacts on California* (2004) *at* http://www.fypower.org/pdf/NatAcadSciClimateChange.pdf.

PCL1-25

The CEC report concluded that modeling, "results show great negative impacts on California hydrology and water resources associated with most of climate change scenarios analyzed (only one scenario PCM run under B1 emission scenarios show just mild negative impacts)." (page 4)

This information demonstrates the range of outcomes that state and local decision makers must be prepared to encounter and address. The CEC's important assessment of the delivery capability of the SWP should be included in the SDIP DEIS/R.

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Most climate change models predict sea level changes that will have ripple affects deep into the Delta. This calls into question the viability of the physical/structural components of this proposal. The DEIS/R must discuss whether the operable barriers would fulfill their stated purpose, how their performance would be modified, and how they would affect the surrounding hydrology under climate change scenarios that predict periodic or permanent increases in mean sea level. It must also describe what reasonably foreseeable actions might be carried out to ensure that the operable barriers function properly under these new conditions and what environmental impacts may be expected from those actions. PCL1-25

This DEIS/R fails to discuss and incorporate known and recognized information regarding the substantial adverse impacts climate change will have upon California's water supply. It therefore must be withdrawn and if re-submitted, must provide accurate, realistic information that fully discloses the foreseeable uncertainty and risks presented by climate change.

The DEIS/R may significantly underestimate the increase in diversions which could be facilitated by SDIP

The DEIS/R relies on a limited analysis based entirely on modeling to estimate increases in water diversions from the Bay Delta Estuary resulting from the SDIP. The DEIS/R indicates that SDIP would result in a limited amount of additional water, from 119 taf to 290 taf. However, in the past, DWR and BOR have indicated that other projects would result in limited export increases, and then as those projects were implemented, diversions turned out to be much higher than anticipated.

For example, in the past few years, exports of Article 21 water have increased dramatically. Fisheries agencies have indicated that this increase was unexpected. The recent biological opinions that this project relies on include statements that increases in Article 21 water will be insignificant. The DEIS/R indicates that Article 21 water exports would increase only marginally with the increase in export capacity. The baseline for this assumption is unclear. At the same time, the Draft Delivery Reliability Report indicates up to 1 maf of Article 21 water could be exported by the SWP. Given the impact from the past, unforeseen high Article 21 water exports, and the underestimation of those deliveries impacts, it is imperative that operational conditions and export expectations are explicitly and accurately reported in the final DEIS/R. The same is true of federal 215 water, transfer water and other additional water exported from the Bay-Delta. BOR and DWR must clarify the baseline assumptions for Article 21, federal 215 water, water transfers and project deliveries, and explicitly state the expected total exports and expected increases of each type and the cumulative total of additional water exports from the Bay-Delta In addition, DWR must indicate where that water additional water originated from, and what beneficial uses, including environmental uses, the water had previously utilized for. PCL1-26

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Lastly, an adequate DEIS/R must specify the enforceable assurances that will limit the increases pumping to the amounts analyzed. PCL1-26

The DEIS/R inappropriately relies on CALSIM II

The DEIR/S supports its analysis of water availability, environmental impact, export potential and project effectiveness conclusions almost entirely on the basis of modeling. While the models DWR and BOR have used may be useful tools, this complete dependence upon modeling is inappropriate, because the models the agencies have used are highly uncertain tools. CALSIM II, for example, while a sophisticated model, has been criticized by a panel of expert reviewers for several weaknesses, including its lack of amenability to proper calibration. (*See* A. Close, *et al.*, *A Strategic Review of CALSIM II and its Use for Water Planning, Management and Operations in Central California* submitted to California Bay Delta Authority Science Program, December 4, 2003.

In addition, CalSim II assumes foresight on the part of planners, and thus assumes that they will not take actions that will result in later violations of environmental standards or other operating constraints. This assumption can lead to great underestimation of environmental impacts, for in the real world operators do not have such foresight and thus can make decisions without realizing the consequences those decisions ultimately will have. PCL1-27

Furthermore a recent analysis has revealed additional flaws in the statistical basis for CALSIM II. ("Analysis of CALSIM's Statistical Basis,"by Arve Sjovold, December 28, 2004, previously provided to DWR).

Models' predictions also can be no more accurate than their input data, and those input data depend upon numerous assumptions about future conditions. Here, those assumptions may be wrong; for example, the DEIS/R's assumption that future water flow patterns will be similar to those that have occurred in the past is inconsistent with the ample literature on the substantial effects of global warming on California water flows (see comments on incorporating climate change above).

The DEIR/S should, but does not, acknowledge and come to terms with these limitations (not only of CalSim, but also of the other models employed), and explain their implications for the environmental analysis. Similarly, it should provide some sense of the error ranges of the modeled predictions. Absent such information, the DEIR/S's reliance on modeling does not meet the requirements of applicable law.

The DEIS/R fails to adequately assess growth inducing impacts

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The DEIS/R states that each of the proposed project alternatives would result in growth inducing impacts. The DEIR/S then fails to include an analysis of those growth inducing impacts. Instead, the DEIS/R states, "The impacts of this growth, if any, would be analyzed in detail in either General Plan EIRs for the local justifications or in the project-level CEQA compliance documents" (DEIS/R 9-1). Impacts resulting for growth induced by the increased availability of water due to the SDIP must be analyzed, fully disclosed and mitigated should this project move forward. It is inappropriate for DWR and BOR to pass through responsibility of accounting for and mitigating these impacts. In addition, there are statewide impacts from growth inducement that local agencies are ill-suited to analyze or mitigate. For instance, water reliability for existing residents would be decreased as water exported for the Bay-Delta increases.

PCL1-28

The DEIS/R fails to analyze the full growth inducing impacts of the SDIP project by excluding increases in export and delivery of Article 21 water. The DEIS/R states, "Article 21 water was not included in the growth analysis because of the uncertainty and variability of deliveries" (DEIS/R 9-8). PCL agrees that growth should not be based on Article 21 water. However, in the DWR's Draft 2005 Delivery Reliability Report, DWR recommends that local water agencies include Article 21 water in their table of average annual values (Draft 2005 Delivery Reliability Report pages 28-31). The average annual values tables are used by local agencies to determine water availability for growth. Therefore, DWR is inconsistent. When advising locals for planning to accommodate growth, DWR recommends accounting for Article 21 water. When analyzing the impacts of DWR's own project, DWR states that Article 21 water is too variable and uncertain to analyze. Since DWR has recommended that locals include Article 21 water in water accounting that will be the basis of growth, DWR must also analyze the growth inducing impacts of delivering that water.

The DEIS/S fails to adequately account for cumulative impacts

As noted in the DEIS/R, the SDIP is part of package of projects that DWR and BOR are moving forward as part of the OCAP. However, the DEIS/R relies on the questionable and inappropriately developed OCAP Biological Opinions for smelt and salmon. As stated above, the NOAA Biological Opinion as been reviewed by both the U.S. Inspector General and the scientific peer review panel coordinated by the California Bay Delta Authority. Both reviews determined that the NOAA OCAP BO, and the therefore the SDIP BA were significantly flawed. The CBDA peer review found that NOAA did not use the best available science in determining the impacts of OCAP to fisheries. It is inappropriate for DWR and BOR to rely on the OCAP BO to determine cumulative impacts when those agencies are aware of the significant flaws and questionable conclusions of those documents.

PCL1-29

The DEIR/S is deficient because it does not answer, in a scientifically credible and independently peer-reviewed manner the central question, "How much water can be diverted from the Bay Delta

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Estuary, and under what conditions while maintaining a healthy ecosystem?"

The Pelagic Organism Decline Team has established that the decline of pelagic species in the Delta Estuary is most likely due to a combination on three factors, water project operations (including pumping, entrainment, and predation at Clifton Court Forebay, reverse flows, and effects on the food chain), toxics, and non-native species. Toxics are related to existing and proposed increased pumping operations because some of the water diverted from the Delta Estuary is used to irrigate contaminated lands and the polluted drainage from those lands then returns to the Estuary. Furthermore the existing operations, including reverse flows caused by the pumping, concentrate the toxics in certain areas of the Estuary.

The prevalence and distribution of non-native species may also be increased by water project operations. Sucking so much water that the saline – freshwater interface is moved closer to the pumps could create conditions more favorable to non-native species.

PCL1-30

An adequate Draft EIR/S must determine how much water can be diverted while maintaining a healthy ecosystem. It could well be that the exiting levels of pumping need to be cut back and feasible alternatives such as water conservation and recycling need to be implemented to make up the difference.

This question is so important that any determinations need to be subject to rigorous peer review by independent scientists.

We also request that the comment period be extended another 45 days in order to allow adequate time to review the several volumes of this proposal.

PCL1-31

Sincerely,

Mindy McIntyre
Water Program Manager
Planning and Conservation League

Attachments submitted via email and US mail

cc:
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Lester Snow, Director, Department of Water Resources

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Senator Denise Ducheny
Senator Don Perata
Assemblywoman Lois Wolk
Susan Kennedy, Chief of Staff to the Governor
John Herrick, South Delta Water Agency
Dante Nomellini, South Delta Water Agency
Tom Zuckerman, Central Delta Water Agency
David Nesmith, Environmental Water Caucus
Alisha Dean, Environmental Justice Coalition for Water
Steve Macaulay, California Urban Water Agencies
Wes Banister, Metropolitan Water District
Debra Man, Metropolitan Water District

Responses to Comments

PCL1-1, PCL1-2, and PCL1-4

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

PCL1-3

For each alternative for each resource, the impacts of Stage 1 are evaluated first. This analysis of Stage 1 assumes no change in the operations of the SWP and CVP. Therefore, an alternative that includes the four gates, dredging, agricultural diversion modifications, and the assumption that 6,680 cfs operations would continue, is analyzed. Secondly, the effects of each operational component are evaluated assuming that the permanent gates are operating (except in the case of the No Action alternative). Decisions made during each of the Stages are independent; analysis of Stage 1 actions is stand-alone and a decision on Stage 1 is not dependent on a decision on Stage 2.

PCL1-5

Please see Master Response J, *Relationship between the South Delta Improvements Program and the CALFED Record of Decision and EIS/EIR Programmatic Documents*.

PCL1-6

Please see Master Response G, *No-Barrier Conditions Compared with the No-Action Baseline*.

PCL1-7

As described in Chapter 1 of the SDIP Draft EIS/EIR, in July 2000, DWR, the Central Coast Water Authority, and PCL reached an agreement on principles for settling the lawsuit. DWR commenced preparing a new EIR, and the interested parties continued mediation to prepare a Settlement Agreement. Under this Settlement Agreement, the Monterey Amendment remains in effect. Implementation of the Settlement Agreement and preparation of the new EIR are underway. Because the Settlement Agreement allows the Monterey Amendment to remain in effect, and no decision has been made to change the amendment, it is the most reasonable assumption for the baseline.

PCL1-8

Delivery reliability does depend on the total demand for water delivery. For the CVP and SWP exports, this total demand is the full contract amounts for the CVP and SWP contractors. As described in Section 5.1 of the SDIP Draft EIS/EIR, the current facilities and Delta objectives (i.e., D-1641) will allow full deliveries in only about 50% of the years with relatively high runoff and correspondingly high water supply. The SDIP Stage 2 alternative would allow increased exports during periods of high Delta inflows, when the existing Corps limits on CCF diversions are limiting SWP exports. The SDIP will increase the delivery reliability in these water supply limited years, but will only increase total exports by about 3% of the current average CVP and SWP exports.

PCL1-9

Please see Master Response L, *Relationship between the South Delta Improvements Program and the California Water Plan Update 2005*.

PCL1-10 and PCL1-11

Please see Master Response D, *Developing and Screening Alternatives Considered in the South Delta Improvements Program Draft EIS/EIR*. The benefits from the fish control gate compared to the temporary barrier at the head of Old River are assumed; only potential fish impacts resulting from the SDIP Stage 1 alternative physical/structural components and Stage 2 operational changes were evaluated in the Draft EIS/EIR.

PCL1-12

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

PCL1-13

Please see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*.

PCL1-14

It is the opinion of Reclamation and DWR that Stage 1 of the SDIP should be decided as soon as possible so the permanent, operable gates can be operational by April 2009; and that the Stage 2 decision should incorporate any new

information from the POD studies, DRMS, and other on-going Delta studies and be made within a timeframe that allows for its implementation when the gates are operational. Also see Master Response B, *Relationship between the South Delta Improvements Program and the Pelagic Organism Decline*.

PCL1-15

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

PCL1-16

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

PCL1-17

Section 5.1 of the SDIP Draft EIS/EIR shows results from the CALSIM modeling of system-wide CVP and SWP operations. Section 6.1 describes the subsequent evaluations for fish habitat conditions, including river flows and temperatures. The SDIP will not change water supply conditions in any area of origin. Area of origin counties would continue to have first priority water rights.

PCL1-18

The potential water quality impacts from Stage 1 and Stage 2 of the SDIP are clearly described in Section 5.3 of the SDIP Draft EIS/EIR. No significant impacts were identified, and several substantial improvements in south Delta salinity will be achieved with Stage 1 operable tidal gates. Additionally, CALFED drinking water quality goals are expected to be achieved through multiple projects.

PCL1-19

The possible effects on water quality and fish habitat resulting from hydrologic fluctuations and CVP and SWP reservoir and Delta operations are fully evaluated in Sections 5.3 and 6.1 of the SDIP Draft EIS/EIR. The Draft EIS/EIR indicates in Section 5.1 that flow changes themselves are not considered environmental impacts.

PCL1-20

Potential impacts of the SDIP on levee stability were found to be less than significant in Section 5.5 of the SDIP Draft EIS/EIR. Additional CALFED, federal (Corps), and state programs (e.g., Delta Risk Management Strategy) are evaluating potential actions to reduce risk and manage water supply conveyance following future levee failures. Economic evaluations of levee failure are not required for CEQA or NEPA, since SDIP is not expected to directly or indirectly result in levee failures.

PCL1-21

The SDIP is designed to incorporate and respond to new information, and is consistent with the CALFED vision for the Delta, which is the current interagency collaborative approach to water supply, water quality, levee stability, and ecosystem protection and restoration.

In addition, a decision addressing the feasibility and durability of a sole through-Delta approach to conveying water supply will be made by CALFED in December 2007. This decision along with the information on the fish decline and the DRMS will be incorporated into the process for the SDIP Stage 2 decision. The time frame for implementing any change from the current reliance upon south Delta diversions would take many years and may continue to include a reduced level of diversions from the south Delta. The permanent operable gates would improve water management in the Delta for many years and increase the options for managing for the local water supply and quality and fish conditions in the future.

PCL1-22

Please see Master Response A, *Relationship between the South Delta Improvements Program and the Operations Criteria and Plan.* The SDIP Stage 2 mitigation for entrainment impacts does not necessarily rely on the expanded EWA. An expanded EWA would provide sufficient mitigation. However, if the expanded EWA is not implemented, the avoidance and crediting measures will provide sufficient mitigation. Please also see Master Response E, *Reliance on Expanded Environmental Water Account Actions for Fish Entrainment Reduction*.

PCL1-23

Please see Master Response L, *Relationship between the South Delta Improvements Program and the California Water Plan Update 2005*.

PCL1-24

The proposed project operations will not necessitate the construction of any new power generation facilities. Rather, the increased need for power to operate the gates and SWP Banks will be fulfilled by existing power generation facilities designed to accommodate existing and future power demands. All environmental effects (e.g., air quality) associated with the operation of existing power generation facilities have already been addressed within the context of project-specific environmental assessments completed prior to construction of all existing power generation facilities either pursuant to the provisions of CEQA or NEPA or both CEQA and NEPA. Table 7.5-1 of the SDIP Draft EIS/EIR shows SWP power usage for recent years, and Table 7.5-2 shows the expected changes in power usage for each alternative. The overall increase in consumption is below 3% for all of the alternatives evaluated, with changes ranging from -0.02% to 2.4%.

PCL1-25

Please see Master Response F, *Relationship between the South Delta Improvements Program and Climate Change Effects.*

PCL1-26 and PCL1-28

Please see Master Response P, *Effects of the South Delta Improvements Program on State Water Project Article 21 Deliveries*.

PCL1-27

Please see Master Response I, *Reliability of CALSIM and DSM2 Models for Evaluation of Effects of the South Delta Improvements Program*.

PCL1-29

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

PCL1-30

As described in Chapter 2 of the SDIP Draft EIS/EIR, DWR and Reclamation will defer a decision on changes in export operations until Stage 2. This is to allow time to study and monitor the Delta and to resolve the POD issues. Results of these investigations will become a part of the Stage 2 analysis. This analysis

will be used to decide whether and how to proceed with SDIP Stage 2. The Draft EIS/EIR impact assessment for species moving through the Delta or species living in the Delta suggests that any impacts of increased SDIP pumping can be mitigated to a less-than-significant level with additional EWA actions or an equivalent avoidance and credit method (if an expanded EWA is not implemented). Please also see Master Response B, *Relationship between the South Delta Improvements Program and the Pelagic Organism Decline*.

PCL1-31

Please see Master Response C, *Extension of the Comment Period on the South Delta Improvements Program Draft EIS/EIR*.