

MEMORANDUM

To: Paul Marshall
 From: Tim O’Laughlin for San Joaquin River Group Authority
 Date: February 7, 2006
 Re: SDIP Comments

1-6	Specific Actions are listed in the CALFED ROD	<p>“To ensure adequate quantity of water to agricultural diverters in the South Delta.”</p> <p>This statement is general and conclusory. Nowhere in the document does it quantify the amount of water South Delta agricultural diverters are entitled to. The quantification must look at those lands that are claiming a riparian right as opposed to those lands claiming an appropriative right. This distinction is key to understanding water available for diversion by riparians. It must also be done by year class under a 60-20-20 San Joaquin River Basin Index.</p> <p>The SJRGA pointed out in its comments to SWRCB Periodic Review and S & B TMDL, see attached documents. ”The Effects of the CVP on Southern Delta Water Supply, Table V-21” shows that inflow to the South Delta in Dry and Critical Years would had only been 20 cfs per day. How are all the riparians going to share 20 cfs and have viable agriculture?</p> <p>As was also pointed out in those proceedings, the SDWA are lower priority appropriators. They can only take what water is abandoned by upstream diverters, but have no legal right to call on stored water.</p> <p>CEQA documents have been ruled inadequate for failing to adequately describe water rights, the environmental impacts of supplying additional water, or the manner in which additional water would be supplied, and that water rights must be quantified. (<u>Stanislaus Natural Heritage Project v. County of Stanislaus</u> (1996) 48 Cal.App.4th 182; <u>Santiago County Water Dist. v. County of Orange</u>, (1981) 118 Cal.App.3d 818; <u>Galante Vineyards v. Monterey Peninsula Water Management District</u> (1997) 60 Cal.App.4th 1109.)</p>
1-6	Future Actions	<p>We do not see how a program that will increase pumping and bring more fish into Clifton Court Forebay says only in the vaguest terms that screening will be improved. We provided you with the City of Stockton’s and CCWD’s screening projects for their diversion facilities as to what is an appropriate level of analysis to understand if the impacts of the diversion are being mitigated by the screens.</p>
1-7	“Install and operate temporary barriers.”	<p>Recent declines in Delta Smelt have caused the resource agencies to review whether or not to install a temporary barrier at the Head of Old River. If the temporary barrier is not</p>

		installed then what are the impacts on Fall Run Chinook Salmon? More importantly, what mitigation has DWR/USBR proposed? There is no analysis in the document of this issue.
1-7	CVPIA PL 102-575	It makes no sense to install an operable barrier at the HORB if it isn't operated to protect out-migrating Fall Run Salmon Smolts as was contemplated by PL 102-575. The operable gate was a physical solution to try to obtain the doubling goal stated in both Federal and State law.
1-8	CALFED EIR-EIS	You can assent that this is a stand alone EIR-EIS but the document clearly tiers off the CALFED EIR-EIS. Since the Appellate Court has invalidated the CALFED EIR-EIS, please describe the process by which this document will not be tiered from the CALFED EIR-EIS; especially since many of the impacts analysis and significance criteria come from the CALFED EIR-EIS.
1-9	Need for Action	<p>We agree with your action plan to keep Fall Run Chinook Salmon Smolts out of Old River. However, we disagree with your analysis and implementation to keep Fall Run Chinook Salmon Smolts out of Old River.</p> <p>We agree that the operations of the CVP and SWP export facilities change flow patterns. Please see the attached work done by Flow Sciences for the SWRCB Periodic Review Process. (Periodic Review SJRG Exh-27) In the past the Flow Split was roughly 50-50. The model, using particle tracking, shows 100% of San Joaquin River Flows arriving at the pumps <u>under current conditions</u>. Water in the San Joaquin River that does not go down Old River, goes down Turner and Columbia Cut and Middle River. This problem is magnified in BN, Dry and Critical Years as defined by the San Joaquin River Basin Index. This causes two problems.</p> <p>The first problem is that the proposed operation of the pumps and the proposed operation of the HORB will not adequately protect Salmon Fry and Smolts moving in the SJ River in the first instance. It is proposed that pumping will increase from March 15-December 15 to 8,500 cfs. This proposal is for all year types. (See attached VAMP reports.) In BN, Dry, and Critical Years please note the amount of Fall Run Chinook Salmon Smolts at the Export Facilities from March 15-April. Under the proposed operations the HORB would not be closed and 100% of the San Joaquin River Flow would go to the pumps. Unlike Wet or Above Normal Years, agricultural diversions would be operating in BN, D, and C years in the March-April 15 time period. (SDWA Exh-02.) So, either directly or indirectly from March 15-April 15 more Salmon</p>

		<p>Smolts will be killed increased pumping or indirectly. This also hold true for the time period of May 15-June 1. The evidence submitted at Period Review by the SJRGA on the Fish flow issue, (See Periodic Review SJRG Exh-19) indicates in these drier years that fewer salmon smolts are in the San Joaquin River after May 15. Based on real time monitoring, we believe a mitigation measure could be developed based on a percentage of the outmigrating smolts to have increased pumping from May 15-June 1 if the HORB is closed.</p> <p>The comments above are also applicable to the time period December 15-March 15. This document is “vague” as to what operations will occur from December 15-March 15. It only says “modify existing pumping criteria.” Our question is from what existing baseline level to what new level? Given the uncertainty of the change we cannot comment specifically. San Joaquin River Salmon Fry are present in the lower San Joaquin River as early as January 1 and Smolts as early as March 1. (See VAMP annual reports) Increasing pumping operations will cause more salmon fry and smolts to enter the Southern Delta in BN, D, C years and not escape.</p> <p>This leads to the second problem not analyzed by the SDIP. Mr. Dave Vogel’s work (Periodic Review SJRG Exh-28, Appendix A.) on radio tracking fish through the Delta clearly points to a significant problem. Fish that do not go down Old River and end up at Clifton Court Forebay go down Turner and Columbia Cut and are lost. They appear to be moved back into the South Delta by the change in hydraulics in the South Delta due to export pumping.</p> <p>One last point is not addressed in the SDIP concerning Fall Run Chinook Salmon Fry migration and survival through the Delta. (See Periodic Review Periodic Review SJRG Exh-31, p10-11.) Fry contribution to San Joaquin River Salmon escapement is not well understood. However, Sacramento Basin studies have found that most fall-run Chinook salmon leave the Sacramento system as fry, with the majority gone by the end of March. (See McEwan, Debbie, “Feather River Study: Highlights of the Salmon Emigration Surveys, 1996-1998, IEP Newsletter, Vol. 12, No. 4 (Fall 1999).) The following should be included in the SDIP as part of Project monitoring requirements: (1) Real-time trawl monitoring at Mossdale conducted seven-days per week every year from January 1 through June 1 with proper net gear to capture fry; (2) implementation of a study to determine Fry contribution to</p>
--	--	---

		San Joaquin River Fall Run Chinook escapement; and (3) implementation of study to determine where in the water column salmon fry and smolts travel during the day and during the night as they pass the HOR gates. This issue is of importance again in BN, D, and C years when flows are low in the San Joaquin River and SDIP proposes to modify (by presumably increasing) pumping operations December 15-March 15 when Fry are present in the Lower San Joaquin River and South Delta.
1-9	“There are unmet water supply needs....”	We have looked and could not find a quantification of the need and how the SDIP meets the need for both quantity and reliability. Can you please provide?
1-10	Project Objectives/ Purposes	We commend DWR/USBR for listing as the first project objective and purpose to reduce the movement of San Joaquin River Fall Run Chinook juvenile salmon into the south Delta via Old River. The EIS/EIR cites no evidence to validate the claim of a so-called “late fall-run” in the San Joaquin River Basin. The assumed life stage timing for such species (see Table 6.1-2) if present in the San Joaquin River would further compound deficiencies in the proposed San Joaquin River Fall Run Chinook Salmon mitigation program for the SDIP.
1-10	Indirect losses should not be understated.	By redirecting flows in the South Delta, salmon fry and smolts are subjected to direct and indirect take at thousands of unscreened diversions. NOAA has typically included indirect loss as part of the loss index at the export pumps.
1-14	VAMP	The VAMP and the San Joaquin River Agreement recognize the installation of the HORB as an integral part of the experimental design. It is only due to hydrologic conditions that the HORB is not installed. The purpose of the VAMP is NOT to identify the true salmon smolt and Delta smelt populations. It is for the purpose of determining the relationship of San Joaquin River salmon smolt survival to the San Joaquin River flow/export ratio, with the HORB installed, and the appropriateness of the 1995 WQCP pulse flow objective. San Joaquin River flow increases and export reductions prior to or following the VAMP, as implemented by USFWS, are intended to provide additional protections for Delta Smelt, but these actions are <u>not</u> part of the VAMP.
1-15	SDWA	We agree that water supply in the South Delta is influenced by San Joaquin River inflow. Please see our comments above about water quantification and water rights. DWR was part of the SJRWQMG Plan. In preparation of that plan the group did extensive modeling of San Joaquin River Flows showing the impacts of proposed actions on flow. The Plan proposes to

		<p>reduce approximately 28,000 af of drainage water to the San Joaquin River. The modeling also showed that New Melones dilution Flow releases could also be reduced because there would be less salt concentration in the river. These runs showed flows in Dry and Critical Years below 1,000 cfs at Vernalis in July, August, and September. We could find no such analysis in this report of those conditions. Do they exist?</p> <p>Also, the SWRCB has recently adopted a TMDL to control discharges of salt and boron into the Lower San Joaquin River. (SWRCB Resolution No. 2005-0087.) Has DWR modeled the lack of return flow or drainage water due to the implementation of the Salt & Boron TMDL?</p> <p>In other words, the CVP and SWP may feel an obligation to supply project supply to SDWA landowners in order to get this project approved. Upstream water right holders in the San Joaquin River Basin have no legal obligation to provide water in the San Joaquin River to meet SDWA water demand. They are either junior to the SJRGA member entities as appropriators, or in BN, D, and CD years, they are only entitled to the natural flow.</p> <p>Finally, the Secretary of the Interior’s determination as to the “Basin” for the New Melones project clearly excludes the South Delta. Of note here is that while the SWRCB may have found it to be a reasonable and beneficial use of CVP and SWP to maintain EC levels in the South Delta, no such determination was made as to any other party. Also, maintaining water levels is strictly “project mitigation” for the pumps. We would anticipate that parties will move to have New Melones releases excluded from meeting Interior Delta Salinity Standards as those locations are outside the “Basin” as defined by the Secretary of the Interior’s decision, i.e., your analysis should not count on New Melones water to meet those standards.</p>
1-19		<p>We strongly disagree with the assessment or position in the document that “exports should be increased when there are fewer criteria for environmental needs controlling in the Delta.” This statement directly contradicts the project purpose of protecting San Joaquin River Fall Run Chinook Salmon as they migrate through the Delta. Just because there isn’t a Biological Opinion on Fall Run Chinook Salmon doesn’t mean they should not be afforded protection.</p>
1-24		<p>We understand that the EIR-EIS simulated the 1986 COA. What is unclear in the document is how the integrated</p>

		operations are proposed to be changed or will be changed in accordance to the Napa Agreement. Also the EIR-EIS does not describe the Napa Agreement and those changes.
1-30	Effects of Water Quality in the South Delta	<p>This misstates the problem. The USBR and DWR are responsible for meeting EC at Brandt Bridge. The lower San Joaquin River goes to the confluence with the Sacramento River. It does not stop at Vernalis. Also, increased pumping <u>will</u> have a deleterious impact on DO at the Stockton DWSC. Increased pumping without the HORB operated in a closed position will allow more water to go down Old River and less water to arrive at the Stockton DWSC. (See Periodic Review Periodic Review SJRG Exh-11) This is especially true in BN, D, and C Years in July, August and September. Less freshwater reaching the ship channel causes Dissolved Oxygen levels to be depleted.</p> <p>While we are on the Dissolved Oxygen point, the SWRCB adopted a DO TMDL, but we could find no modeling of how the DWR-USBR will meet their “load allocation” under the DO TMDL. Also, is SDIP subject to approval/permitting by the CVRWQCB on this issue? The work done by the SRWQMG Plan and the work submitted by the SJRGA in Periodic Review indicates that more water than what was historically present is at Vernalis in July, August September and October in BN, Dry and Critical Years. (SJRG Exh-07.) If the HORB is open and 100% of San Joaquin River flow is going to the pumps, then little or no flow is reaching the Stockton DWSC. (Periodic Review Periodic Review SJRG Exh-04.) This lack of flow at the DWSC is due to export pumping and in Delta diversions and not upstream flow. The SDIP does not propose how it will mitigate for Dissolved Oxygen.</p> <p>The SJRGA has been supportive of the SDIP as long as three conditions were met. One of those conditions was resolving the DO problem in DWSC. This EIR-EIS does not address this issue, nor does it address SDIP’s impacts to DO at the DWSC. If operation of the HORB is contemplated, or will be operated closed in the July-September time period, then this EIR-EIS should describe this, a preferred alternative, and identify and analyze its respective impacts. It is a violation of CEQA to piecemeal a project. The USBR/DWR know that to <u>assist</u> in meeting the DO levels at the Stockton Deep Water Ship Channel, the HORB must be closed or at least substantially closed July-September.</p>
2-2	Operational	The second bullet is part of the Napa Agreement. Please

	Component	describe the Napa Agreement or the parts of the Napa Agreement analyzed as part of this EIR-EIS.
2-4	Interim Barriers	Stage 1 is to be the decision of whether to continue the temporary barrier or install the permanent barriers. Decision making for Stage 2 will begin after the Stage 1 decision. Where is the decision for the interim operations described on page 2-2?
2-10	Interim Alternatives	Here and in Table 2-1 the operational scenarios are described as the existing conditions, and A, B, and C. The document also includes references to Interim Operation scenarios, yet any impacts of these scenarios have not been analyzed.
2-12	No Action Alternative	The No Action alternative is to include the current EWA. What is the current EWA? It is unclear if this is the EWA as proposed and documented in the 2004 EIS/EIR for the long-term EWA.
2-13	Interim Ops	The interim operations alternative is a subset of Alternative 2A but it is not analyzed against the No Action alternative for impacts.
2-16	Priority of Use	On July 10, 2000, the USCOE approved increasing the SWP export pumping by 500 cfs for the period July-September. This increase is also part of the long-term EWA as approved in CALFED the EIS/EIR. So is this part of the No Action alternative or 2A?
2-17	Diversion and Use	Where does 9,000 cfs come from? We could find no justification or basis in the EIR/EIS for such a three day running average.
2-18		Are the July-September 7-day/3-day average diversion 8,500/9,000 cfs or 9,000/9,500 cfs based on the Final EIS/R for the EWA that includes the additional 500 cfs as approved by the USCOE? The Annual Commitments described here are part of the NAPA agreement. What other components of the NAPA agreement are being considered?
2-25	Fish Control Gate	The HOR gate is now designed with bottom-hinged gates. It is surmised that Fall Run Chinook Salmon Fry and Smolts travel near the surface of the water during the night and may travel in the upper 50% of the water column during the day. DWR and USBR need to perform a pre-project study on this issue. The prior designs of the HOR gate featured a radial gate, such as the Delta Cross-Channel gates. A radial gate would have allowed the HOR gate to be partially opened to allow some flow in Old River for south Delta agricultural use while shunting Fall Run Chinook Salmon Fry and Smolts down the main San Joaquin River. The new bottom-hinged gate design

		would require the gates to be fully closed in order satisfy Project Objective/Purpose #1, i.e., to reduce the movement of juvenile salmon into the south Delta via Old River.
2-29	Gate Operations	The CVRWQCB and the San Joaquin River Group Authority should be included on the Review Team.
2-30	HORB Gate Operations	<p>The operation of the Gate should be tied to real-time trawl monitoring at Mossdale conducted seven-days per week every year from January 1 through June 30 (with proper net gear to capture fry) to detect the movement of Salmon Fry and Smolts through the system. The HOR gate should be closed when large numbers of Salmon Fry are being moved down the San Joaquin River normally as a result of winter storm events. (See p. J-37. Tri-Dam’s Stanislaus River fry flushing experiment was conducted January 27-28, 2003, and resulted in a significant amount of fry being found at the pumps.)</p> <p>The 1995 WQCP’s Footnote 18 states that the April-May pulse flow “time period may be varied based on real-time monitoring. One pulse or two separate pulses of combined duration equal to the single pulse should be scheduled to <u>coincide with fish migration in the San Joaquin River tributaries and the Delta.</u>” The project should protect salmon smolts when they move through the South Delta and not based on a set arbitrary and capricious time period. Thus, protection can be afforded to migrating salmon smolts from March 15-May 15. The HORB gates would close when fish are present and exports would be reduced.</p>
2-30	Spring Ops/VAMP	<p>The closing of the gate on April 1 is too late, especially in BN, D and C years. The gates should be closed when outmigrating Fall Run Chinook salmon smolts are present. Salmon smolts can be present starting approximately March 1 of the year. Salvage at the pumps is higher in BN, D and C years in March. Maintaining the gate closed after May 15, provides little or no benefit in BN, D, and C years because up to 95% of Salmon Smolts have already outmigrated. Also, water temperatures in low flow years after May 15 are, according to CDFG, lethal. Salmon smolts left in the system under such conditions have very little chance of successful outmigration. (see Periodic Review Periodic Review SJRG Exh-10.)</p> <p>The third criteria regarding SDWA diversions should not be a condition for operation of the HORB. If the gate is closed on a real time basis, then SDWA will finally have to implement an operation plan for diversion, rather than taking water at any time under any condition. We are unaware of how their water supply is deemed to be “adequate.” If it is based on water</p>

		<p>levels, then that is solely the responsibility of the USBR and DWR. However DWR can use low lift pumps, reduce exports and take other measures so the barrier can remain shut and water surface elevations can be maintained.</p>
2-30	Summer and Fall	<p>This operation description. As provided in our comments above and the modeling done by the SJRWQM Plan, the HORB should be closed in July, August, and September when it is necessary to improve flow through the Stockton DWSC. (Periodic Review Periodic Review SJRG Exh-11.)</p> <p>Attached is published material by SP Cramer and Associates regarding Salmon migration on the Stanislaus River. San Joaquin River Fall Run Chinook do not move into the system in appreciable numbers until after October 1. (see Periodic Review Periodic Review SJRG Exh-28, Periodic Review Periodic Review SJRG Exh-19.)</p> <p>As currently proposed, the HORB gate will never be shut in July and August and some Septembers to improve DO in the DWSC because the second criteria will not be met. Salmon and Steelhead will not be present at the HORB. Since Salmon and Steelhead will not be present in July, August, and most of September, the HORB will remain open.</p> <p>This is a major flaw in the project. The project will cause more water to flow down Old River, with increased pumping causing further degradation of DO at the DWSC. The modeling runs we have provided you show this problem.(See FlowScience FDM Tracer Report for WY 1964 and 1988; FlowScience Paulsen FDM Tracer Report for WY 2000 and 2001; SJRG-EXH-24 - Fate of San Joaquin River Water 2000-2001; SJRG Exh-04.)</p> <p>Can you please provide a citation or computer run to verify that at flows of 5,000 cfs and increased exports there is no need for the operation of the HORB? It says this is “expected.” “Expected” based on what?</p>
2-39	Total Project Cost	<p><u>Fishery Investigations.</u> Investigations are not mitigation pursuant to CEQA. Please describe the investigations and how they will mitigate for impacts to Fall Run Chinook Salmon due to increased exports, HORB operations, less flow, and higher DO in the Stockton DWSC. What pumping restrictions will occur when salmon fry or smolts are entrained. See CCWD restrictions on pumping for mitigation caused by their impacts.</p> <p>The following should be included as part of Project monitoring</p>

		and investigations: (1) Real-time trawl monitoring at Mossdale conducted seven-days per week every year from January 1 through June 1 with proper net gear to capture fry; (2) implementation of a study to determine Fry contribution to San Joaquin River Fall Run Chinook escapement; and (3) implementation of studies to determine where in the water column salmon fry and smolts travel during the day and during the night passed the HOR.
	Table 3.2	<p>The citation should be specific. What Resource Agency contacts? What did they say? The literature search should include bibliography and citation where appropriate in the EIR-EIS. This has not been done and it makes it very difficult for the reader to understand the basis of the analysis and conclusory statements. What do IEP and CDFG mean? What assessment did they provide? Is there a report or analysis?</p> <p>Likewise, Impacts Assessments are cited as “conceptual models.” The EIR-EIS needs to describe and disclose the conceptual models. Are they accepted models? How was CALSIM II a flow/WQ model, used to assess impacts to the fishery?</p>
4-3	Reduce the Movement of San Joaquin River Fall-run Juvenile Chinook Salmon into the South Delta	The summary is correct about the gate at HOR affording the same protection under all three scenarios. The impacts to Salmon Fry and Smolt survival outside the 30 day gate closure period are not discussed.
4-7	Provide Opportunities to Convey Water for Fish and Wildlife purposes	<p>The project does not disclose how diverting more water South of the Delta will provide a fishery purpose. Please describe the fishery resource and the projected benefits.</p> <p>Likewise for wildlife it is our understanding, although it is not disclosed in the document, that the purpose of water for wildlife is to firm up supplies to Westside Refuges in the San Joaquin River Basin. Please describe the water amount and benefit to ducks. Also describe the mitigation which will occur due to increased saline discharges back to the San Joaquin River caused by this increased benefit. Please tell us how your project will comply with SWRCB Resolution No. 2005-0087 (Approving An Amendment To The Water Quality Control Plan For The Central Valley Region To Incorporate A Total Maximum Daily Load (TMDL) For The Control Of Salt And Boron Discharges Into The Lower San Joaquin River.)</p>
	Table 4.1	<u>Fish-6, Effects of Gate Operation on Juvenile and Adult Chinook Salmon Migration</u> - We disagree with your analysis that it is beneficial. It is not beneficial if the HOR gate is not

		<p>closed and more salmon fry and smolts are entrained at the pumps.</p> <p><u>Fish-7</u>, Effects of Head of Old River Gate Operation on Juvenile Chinook Salmon Entrainment. See comment for Fish-6 above.</p> <p><u>Fish 46</u> says minimize entrainment losses from May 15 to May 31. Pumping will increase from March 1-April 15. As the page 6.1-82 discussion of Fish-46 states, “More than 90% of the fall-run Chinook salmon historically entrained by SWP and CVP pumping are believed to have originated from the San Joaquin River basin. * * * Calculated loss of fall-run Chinook salmon at the SWP, however, is several times greater than the calculated loss for the CVP” due to predation in CCSF prior to salvage. Furthermore, p. J-10 states, “If the combined CVP and SWP pumping is greater than the San Joaquin River inflow, there is a good chance that all of the San Joaquin River fish will be entrained in either the CVP or SWP pumping.” Fishery protection for Fall Run Chinook Salmon Smolts like Winter and Spring Run must be extended to March 1-April 15 if pumping is to increase in that time period.</p> <p><u>Fish 47</u> protects salmon moving out of the Sacramento River during the time period March 1-April 15, but no protection or mitigation is given for Fall Run Chinook Juvenile Salmon on the San Joaquin River, which is the Project’s first Objective/Purpose.</p> <p><u>HY-4</u>. We strongly disagree that the effects on tide level and flow at the HORB is “less than significant.” You clearly did not model the dry water year sequence and increased pumping. We will provide you with our analysis by Flow Science. (see Periodic Review Periodic Review SJRG Exh-04; Periodic Review Periodic Review SJRG Exh-11.) The impacts are significant in BN, D and C years. The SJRWQMG Plan modeling showed those impacts.</p> <p><u>WQ-13</u>. We strongly disagree with your analysis. In low flow years, BN, D and C, when the pumps are above their current pumping levels in July, August, September and October, more water will go down Old River and less water will go down the San Joaquin River. This will exacerbate the DO problem at the DWSC. (A Tracer Investigation of Aerated Water Dispersion and Tidal Exchange in the San Joaquin River and</p>
--	--	---

		<p>Stockton Deep Water Ship Channel.) This is especially true given the fact that the HORB gates will not be closed because Salmon and Steelhead are not present in this time period.</p> <p><u>WQ-27.</u> Same comment as above.</p> <p>We note a serious omission under the WQ section. No mention is made of how increased supplies to CVP contractors and the wildlife refuge will affect salinity upstream of Vernalis. If salinity concentrations upstream are increased then New Melones will need to release additional water.</p>
5.1-29	EWA	<p>The EWA Operations only describe the water acquisition aspects and obtaining water through regulatory variance. EWA also obtains water through a share of the Joint Point of Diversion, and the additional 500 cfs during the July-September period.</p>
5.1-30	Environmental Consequences	<p>A CEQA document cannot self-limit impacts only to riparians and appropriators. If increased supplies South of the Delta are going to cause increased saline discharges to the San Joaquin River, for instance refuge water, and New Melones has to release more water, then that “impact” must be disclosed. Otherwise, any change to any CVP or SWP facility would, by this description, not have to disclose an impact such as decreased storage, decreased storage to maintain cold water pool adequate to meet fishery resources, recreation, power production, etc....</p>
5.1-33		<p>We strongly disagree with your water supply effects bullet point number 1. This document equates water supply levels to a right to divert. We are unaware of any such right in the State of California.</p> <p>SDWA claims riparian rights. Your analysis does not break down by water the amount of “natural” flow of the San Joaquin River that would be present in the South Delta under W, AN, BN, D and C years. D-1641 and previous SWRCB opinions have found, based on the evidence, that little or no natural flow would be available in the South Delta for diversion from the San Joaquin River in BN, D and C years. In critical years, only 20 cfs would be at Vernalis July – September. How then are these riparians being impacted? What SDWA is doing is stealing water from the SWP and CVP in BN, D and CD years July – September. The water in those months is stored project water from the SWP-CVP. This same issue is raised in the San Luis & Delta-Mendota Water Authority’s lawsuit over the City of Stockton’s EIR for Stockton’s San Joaquin River water supply project.</p>

		<p>The SWP and CVP have a responsibility to maintain adequate water levels in the Delta. However, maintaining adequate water levels in the South Delta do not then give a riparian the right to divert (steal) stored water.</p> <p>This same analysis holds true for appropriative rights. The water in the Delta in July-September in BN, D, and C years is already appropriated by the CVP-SWP pursuant to their permits. It is not subject to appropriation by Delta Diverters. We do not disagree that there may be un-appropriated flow subject to appropriation in the Delta, but in BN, D and C years this amount is negligible. The appropriator in the South Delta would have to be diverting unappropriated water. Once again, maintaining a water level does not confer a right on an appropriator to divert water that is under someone else's permits (CVP-SWP).</p> <p>As we stated above, we would like to see a quantification of SDWA's water rights broken down between riparian and appropriators. Then run the CALSIM II model and Delta model to show what water would be available without the projects. Then run the model to show conditions with the project. Then filter these runs based on rights to truly see water available to appropriations.</p> <p>This very important point was made by the DWR and SWP in the D-1641 litigation. It should not be lost or misapplied in this EIR-EIS.</p> <p>The CALSIM simulation results shown on Table 5.1-12 include a DMC VAMP release of 4,000 acre-feet. As described on page 5.1-15, the VAMP supplemental water is supplied by upstream water districts. It is unclear what the DMC VAMP release is. If this is to be the VAMP portion provided by the San Joaquin River Exchange Contractors, then is the water delivery to the Exchange Contractors adjusted accordingly?</p>
5.2-30	6	We support such an operation at the HORB for DO.
5.3-1	3	<p>The document states that salinity downstream of the Head of Old River at Brandt Bridge will not change substantially from Vernalis and is dependent upon the salinity at Vernalis. Brandt Bridge is a D-1641 compliance point and at a minimum the EIS/EIR should show the analysis to support the statement. Agricultural drainage and other inflows between Vernalis and Brandt Bridge may not change the salinity at the lower</p>

		compliance point irrespective of the SDIP but this must be shown.
5.3-13	4	The statement that South Delta EC values are higher than at Vernalis because of additional salinity from agricultural drainage contradicts the statement on page 5.3-1 that Brandt Bridge salinity will not change, but is dependent upon agricultural drainage between Vernalis and Brandt Bridge.
5.3-13	4	That last sentence states that San Joaquin River flows will not change due to SDIP and therefore would not affect the EC values. However, the simulation results, Table 5.1-12 show an average increase in CVP deliveries of up to 107,000 acre-feet. This is equivalent to about 40,000 tons of additional salt to the valley each year.
5.3-14	2	The opening statement that Vernalis salinity govern the salinity at other locations is in error. The range of minimum DO reduction is between 0.20 mg/L to 0.009 mg/L as flows increase from 500 cfs to 2,000 cfs, not 1,500 cfs. Additionally, based on information provided in the CVRWQCB 2003 DO TMDL the reduction in DO varies logarithmically, not linearly.
5.3-33	3	The simulation model assumes complete closure of the HORB during the months of April and May. However, over the past six years of the VAMP, the temporary barrier has been operated based on DWR water level modeling of the South Delta channels. As a result, the flow to Old River during the VAMP pulse flow period has ranged between 200 and 500 cfs. The simulation model would be better served by assuming a diversion to the Old River to provide a more conservative analysis.
5.3-24	2	Average DO values are provided here and in Table 5.3-2. The DO objective for the DWSC is an absolute minimum at any location throughout the channel, not a daily, 30-day, or 5-month average. The analysis should indicate the worse case condition and mitigate accordingly.
6.1	Fish	
6.1-2		The EIR-EIS states: “Increased SWP pumping during March through June increases entrainment –related losses of San Joaquin River Fall Run Chinook Salmon ...”, yet the proposed mitigation, Fish-MM-1, identifies protection for only the time period of May 16-May 31. Please explain.
6.1-2	Avoidance measure	We do not endorse or support the EWA. The EWA is a water accounting methodology and does nothing to protect fish. The fish mitigation as set forth in this document is to reduce pumping, operate the HORB closed or both. How water is accounted for is irrelevant.

		<p>The EIS-EIR claims that “Mitigation Measures Fish-MM-1, Fish-MM-2, and Fish-MM-3 would together mitigate all significant impacts on fish to a less than significant level during the specified months.” However, Fish-MM-1 is the only mitigation measure directed at San Joaquin River Fall Run Chinook Salmon and the specified “month” is only May 16 to May 31. Therefore, as to San Joaquin River Fall Run Chinook Salmon, the above quoted statement and the further statement that “The relatively simple avoidance of impacts during periods of EWA actions...will reduce the entrainment impacts to a less than significant level” are merely conclusory statements, not supported by any information in the document.</p>
Table 6.1-2	<p>Late Fall-Run Chinook Salmon</p> <p>Fall-Run Chinook Salmon</p>	<p>All references to “San Joaquin River Tributaries” should be deleted from this portion of the table. Your discussion at page J-10 does not mention late fall-run Chinook salmon in the San Joaquin River basin.</p> <p>In contrast, there is no reference at all to San Joaquin River Tributaries in this portion of the table.</p>
6.1-7		<p>Adult Fall Run Chinook Salmon do not enter the system in July. Please see SP Cramer material on Weir Operations. (see Periodic Review Periodic Review SJRG Exh-28, Appendix D; 2004 Weir Report.) A small percentage of Fall Run Chinook Salmon adults, 5-10%, enter the San Joaquin River and its tributaries in September. The greatest percentage of the run occurs from October 15-December 1.</p> <p>Fall Run Chinook Salmon Smolts do not migrate to the ocean from October-June. Fall Run Chinook Salmon Fry can begin outmigration by January 1 until February, then Parr and then Smolts March 1-June 1. Most of the smolt outmigration occurs March 15-May 15. Seasonal fluctuations based on hydrology and temperature can cause the peak migration period to fluctuate.</p> <p>This is a basic fundamental problem with the EIR-EIS. The project purpose is defined in terms of three important water management needs: “The protection of <u>San Joaquin</u> River Fall Run Chinook Salmon migration through the Delta.” This document does nothing to describe the specific migration times and needs of San Joaquin River Fall Run Chinook Salmon at the fry, smolt, and adult life stages. This fatal flaw leads to a complete lack of understanding when San Joaquin River Fall Run Chinook Salmon are present, when the HORB</p>

		needs to be closed, and when exports need to be reduced.
6.1-14	Factors that Affect Abundance of Fish Species	
6.1-16	Rearing habitat	No mention is made in the document of the suspected, but as yet, undetermined importance the Delta may have in the rearing habitat for San Joaquin River Fall Run Chinook Salmon that migrate to the Delta as Fry. As part of D-1641 this was to be studied by CDFG and reported to the SWRCB. There have been several Fry analyses done on the San Joaquin River. (see 2004 Weir Report.)
6.1-17	Migration Habitat Conditions	<p>This section is a woefully inadequate description of how hydraulics/hydrology caused by the pumps may impact the movement of San Joaquin River Fall Run Chinook Salmon Smolts migrating down the San Joaquin River. For example, p. J-10 states, “If the combined CVP and SWP pumping is greater than the San Joaquin River inflow, there is a good chance that all of the San Joaquin River fish will be entrained in either the CVP or SWP pumping.”</p> <p>We agree that “juvenile Chinook salmon entering the Delta from the San Joaquin River appear to have higher survival if they remain in the San Joaquin River channel instead of moving into Old River and the south Delta.” That is the premise of this Project’s first Objective/Purpose. However, San Joaquin River Fall Run Chinook Salmon outmigrants suffer a substantially disproportionate impact from Delta export pumping than Sacramento River Salmon outmigrants. (see SWRCB Environmental Report for the 1995 WQCP (May 1995), p. V-83.) Page 6.1-82 of the 1995 WQCP EIR-EIS states, “More than 90% of the fall-run Chinook salmon historically entrained by SWP and CVP pumping are believed to have originated from the San Joaquin River basin. * * * Calculated loss of fall-run Chinook salmon at the SWP, however, is several times greater than the calculated loss for the CVP” due to predation in CCSF prior to salvage.</p> <p>San Joaquin River Fall Run Chinook Salmon must pass Old River, Turner and Columbia Cuts, and Middle River. The modeling results by this document showed dramatically increased head and velocity at the Head of Old River. If the gate is not operated, closed, more San Joaquin River Fall Run Chinook Salmon will enter Old River and die. The modeling also shows that even if the HORB is closed more San Joaquin River water and presumably more fish end up in the Central Delta.</p> <p>This section is a woefully inadequate description of how</p>

		hydraulics/hydrology caused by the project may impact movement of San Joaquin River Fall Run Chinook Salmon Smolts migrating down the San Joaquin River.
	Entrainment	The project purpose is to protect migrating San Joaquin River Fall Run Chinook Salmon. Entrainment Records that DWR and USBR have should be shown and screened for San Joaquin River Fall Run Chinook Salmon.
	Predation	This should be included in the potential impacts to San Joaquin River Fall Run Chinook Salmon. It is identified in the project purpose that San Joaquin River Fall Run Chinook Salmon may face a higher predation when they are diverted from the mainstem of the San Joaquin River into the South Delta. Please describe the models or conceptual models to try to quantify these losses. In the EIR-EIR are such losses counted or seen as a project impact?
	Species Responsiveness Medium	We do not believe a 10% change in survival of a threatened species is a <u>moderate response</u> . How was this criteria determined? Have NOAA, CDFG and USFWS agreed to these criteria? How was this threshold established?
6.1-20	Environmental Consequences	
6.1-30	Rearing Habitat Quantity	No analysis was done for the San Joaquin River or South Delta for San Joaquin River Fall Run Chinook Salmon.
6.1-35	Migration Habitat Conditions	The certainty of the assessment is also low for the following reasons: 1) The majority of San Joaquin River Fall Run Chinook Salmon Adults do not return until mid-October to December 1; 2) There has been no showing that fecundity is lower for San Joaquin River Fall Run Chinook; 3) Water temperature in the San Joaquin River does not reach suitable temperature for Salmon Adults until October; 4) It is unknown that even if DO was 6 mg/L that salmon would move up through the system. We await the pilot aeration project this year to see if this occurs.
6.1-47	Alternative 1 (No Action)	The conceptual models show more entrainment of San Joaquin River Fall Run Chinook March 1-April 15, yet the HORB gate is not closed and exports are not reduced. Please explain why there is no mitigation, or why the entrainment losses are less than significant.
6.1-57	Impact Fish-6	We agree that the increased flexibility to operate the gates is considered a beneficial impact, but if they are not operated, closed, when San Joaquin River Fall Run Chinook Salmon are present, it doesn't matter how they are constructed because they provide no benefit to the San Joaquin River Fall Run

		<p>Chinook Salmon. They will continue down Old River and be susceptible to increased predation and entrainment.</p> <p>The absolute minimum operation for the HORB is to have the gates operated March 1-June 1 when San Joaquin River Fall Run Chinook Salmon Smolts are present based on real time monitoring. If this is not the operation at a minimum, then the export pumps have not mitigated for their impacts. The HOR gates should also be operated during January and February when large numbers of San Joaquin River Fall Run Chinook Salmon Fry are present at the Head of Old River.</p>
6.1-58	Impact Fish-7	<p>We do not know what is meant by “most of the peak outmigration period.” If the HORB is closed during April 15-May 15, then a majority of San Joaquin River Fall Run Chinook Salmon Smolts may be protected depending upon the water year. Closing the gate from May 15-June 1 provides little or no benefit, especially in low flow years, because 1) Less than 5% of Salmon Smolts migrate after May 15 and 2) Water temperatures in the mainstem San Joaquin River are lethal according to CDFG guidelines. The HORB must be operated as early as March 1, in BN, D & C years to protect San Joaquin River Fall Run Chinook Salmon as they move through the system, so that impacts from increased pumping, predation and entrainment can be reduced.</p> <p>We do not need to get into an escapement or population model discussion. We agree with your evidence. More fish are killed at the pumps and lost to predation in CCF. We agree the temporary barrier has reduced entrainment.</p> <p>The difference in estimated survival with or without the HORB <u>is</u> statistically significant. Please see VAMP 2005 technical report.</p> <p>We agree that the HORB gate closure alone may not resolve the problem. As mentioned above, modeling by Flow Science indicates water would turn South at Turner Cut, Columbia Cut, and Middle River to the pumps depending upon pumping levels. If, as stated in the correlates, fish follow flow, then 100% of San Joaquin River Fall Run Chinook Salmon also arrive at the pumps.</p>
6.1-83	MM-1	<p>We note our comments from above regarding EWA. EWA is an accounting methodology. Mitigation is “If fish are entrained we will reduce exports”, or exports will not exceed historical levels if fish are entrained above a certain baseline. Unfortunately, this document does not describe the baseline</p>

		<p>and/or the change in entrainment caused by the pumping.</p> <p>We disagree it will be less than significant. The impact analysis does not look at the time period of March 1-April 15. Also, it does not look at the impact to fry and/or rearing in the Delta.</p> <p>We also disagree with your “substantial uncertainty” analysis</p> <ul style="list-style-type: none"> • Put plainly, increased exports kill more San Joaquin River Fall Run Chinook Salmon. Your analysis shows it. • By your own admission, predation would be reduced if fish were not drawn into the Southern Delta, but stayed in the mainstem of the San Joaquin River. While this is not a direct impact, such as entrainment at the pumps, it is an indirect impact at the pump that has to be mitigated. • Not listed are the 1,800 pumps and siphons in the Delta. Your analysis states these physical features cause increased entrainment. • That is why export pumping has to be reduced on a real time basis. <p>Your statement regarding understanding these uncertainties is <u>not</u> a mitigation measure. Counting dead fish does not mitigate for their loss. Dead fish are dead. How does the project propose to mitigate, i.e., not kill fish? Studies are not the answer and are not mitigation under CEQA. Likewise, an adaptive management plan is not mitigation. The adaptation could kill more fish and export more water. How does that <u>mitigate</u> for the projects impacts?</p>
	MM-2	<p>If you are going to provide protection for Winter Run and Spring Run Salmon prior to April 15, then you also need to provide protection for San Joaquin River Fall Run Chinook Salmon. Whether it is a listed species or not, this project causes considerable impacts to San Joaquin River Fall Run Chinook Salmon that need to be mitigated.</p> <p>Even then, this mitigation measure is inadequate for the same reason as those listed above.</p>
	Interim Operations	<p>This is no longer true. The USFWS and CDFG are looking at not installing a temporary barrier at HORB in 2006, 2007, 2008 and 2009 because of Delta smelt concerns. Thus, this analysis needs to be redone.</p>
6.1-106	Stage 2	<p>It would be helpful to incorporate the Tables with the text.</p>

		Once again this document lumps together San Joaquin River Fall Run Chinook Salmon and Sacramento Fall Run. The change may be entirely due to San Joaquin River Fall Run Chinook Salmon. There is no analysis breaking out the impact between the two basins.
	Adaptive Management	<p>Is adaptive management part of the “project” as defined by CEQA or is it a “mitigation measure” as defined by CEQA? Monitoring is not mitigation.</p> <p>We object that the “project” can be changed simply by notifying the Resource Agencies. If the “project” changes, then a supplemental CEQA/NEPA document is required. This is why it is important that DWR properly categorize its adaptive management as either part of the project or “mitigation.” If it is mitigation, we object because it is too vague and ambiguous to provide any basis for understanding how increased fish losses will be mitigated.</p>
6.1-117	Flood Control Gates For Fish	
6.1-118		<p>Actually, in wet years, San Joaquin River Fall Run Chinook Salmon migration curve gets bumped 1-3 weeks later. More Salmon Smolts move out later rather than earlier. Conversely, in BN, D and C years more salmon smolts move out 1-3 weeks earlier. However, in wet years, more San Joaquin River Fall Run Chinook Salmon Fry are flushed out of the tributaries earlier into the mainstem San Joaquin River and the Delta.</p> <p>The permanent barrier can be operated for longer periods, but the EIS-EIR does not propose it to be closed at any time between March 1-April 15 either as a project component, or mitigation for increased pumping. Since it isn’t proposed to operate as such “can” is not “shall” and, therefore, there is no mitigation proposed for the time period March 1-April 15.</p> <p>Partial closure of bottom-hinged HOR gate may not provide any significant protection for outmigrating San Joaquin River Fall Run Chinook Salmon Fry and Smolts if they travel in the upper water column, because the upper water column will be diverted down Old River when the gates are only partially closed.</p>
	Figure 6.1-9	Our worst fears are confirmed by the total monthly change graph. The 2 nd greatest increase in pumping will occur in March. A peak time when San Joaquin River Fall Run Chinook Juvenile Salmon are moving through the system. We would appreciate a breakdown of this monthly increase by water year type, with minimums and maximums and not

		averages.
	Figure 6.1-13	<p>These graphs are misleading in that they depict the change from Alternative 1. The losses should be given in real numbers. Also the graphs' scales are too small and difficult to read.</p> <p>We note entrainment losses as high as 60,000 fish. This does not include indirect losses due to fish predation and the 1,800 pumps and siphons in the Delta.</p> <p>We also note fish entrainment losses as high as 30,000 fish in the 1987-1992 drought. In 1990 and 1991, only about 700 and 600 spawners, respectively, returned to all three San Joaquin River tributaries. Given your screening criteria, 30,000 fish is considered a medium impact!</p>
	Figure 6.1-28	Same comments as above.
Appendix -K		No charts, graphs or figures to support any impacts on San Joaquin River Fall Run Chinook Salmon. All data is from the Sacramento River.
Appendix -J-23		Can you provide the data for the percentage breakdown for the San Joaquin River Fall Run Chinook Salmon. Also, was this data broken down by water year type?
	Figure J-2	Please note Fish Density from March 15-April 15 in this particular water year.