

CENTRAL DELTA WATER AGENCY

235 East Weber Avenue • P.O. Box 1461 • Stockton, CA 95201
Phone (209) 465-5883 • Fax (209) 465-3956

DIRECTORS

*George Biagi, Jr.
Rudy Mussi
Edward Zuckerman*

COUNSEL

*Dante John Nomellini
Dante John Nomellini, Jr.*

October 30, 2015

BDCPComments@icfi.com

NOV 03 2015

Re: BDCP/California Water Fix
RDEIR/SDEIS
DJN Sr. Part Five

Our comments regarding the above are being submitted in multiple parts.

Enclosed herewith are Comments on the Revised Public Draft DBCP EIR/S – Additional Central and South Delta Water Agency Comments constituting Part Five.

Very truly yours



Dante John Nomellini, Sr.
Manager and Co-Counsel

The entire premise of the analysis of the impacts of the BDCP are predicated on the equal application of project operational assumptions in different water year types in which the project alternatives are compared to the No Action/No Project to identify and quantify the changes in impacts from the construction and operation of the BDCP. In previously submitted comments on the BDCP EIR/S we have identified deviations of the CVP/SWP operations that violate the assumptions used in the project impact modeling and assessments. Most recently and on-going is a waiver of the delta water quality operational requirements for the CVP/SWP by the State Water Board (see - CSPA Complaint, Violations of Bay-Delta Plan, D-1641, CWA, ESA, Public Trust, California Constitution. 21 July 2015, Page 3 of 16,p2) in 2013, the SWRCB Executive Director allowed USBR and DWR to operate to critical year criteria, without being subject to enforcement, instead of to the prevailing dry year criteria for the water year type conditions that were actually occurring. In 2014, the Executive Director issued a series of TUCP Orders substantially weakening and extending the modifications of water quality objectives and requirements on 31 January, 7 February, 14 February, 28 February, 18 March, 9 April, 11 April, 18 April, 2 May and 7 October. The SWRCB denied multiple objections and petitions for reconsideration of the TUCP Orders on 24 September 2014. So far in 2015, the Executive Director has issued a series of TUCP Orders modifying and weakening water quality objectives and requirements on 3 February, 5 March, 6 April and 3 July". (The State Water Resources Control Board has issued an Order Conditionally Approving a Petition for Temporary Urgency Changes in License and Permit Terms and Conditions Requiring Compliance with Delta Water Quality Objectives in Response to Drought Conditions, Signed by Thomas Howard, Executive Director, July 3, 2015, p. 4.) This consistent temporary suspensions of operating rules associated with water year type conditions that are actually occurring means that the baseline assumptions used for the BDCP comparison of project alternatives to determine their impacts are incorrect and do not reflect the actual operations of the CVP/SWP or current plans and policies in place by the regulating agencies. The BDCP may not claim that water quality standards would continue to be violated in the same manner and same frequency magnitude as under the no action conditions in some sort of off-setting water quality violation impact because NEPA and CEQA does not allow project analysis to include assumptions of violations of the law. The CVP/SWP must adhere to the current water quality standards under all water year types and conditions or the whole analysis of impacts of the BDCP is inaccurate, unrepresentative of actual conditions, and is not a valid comparison or analysis. The BDCP baseline assumptions must be revised to include how the CVP/SWP have actually been operated, not based on the assumption of compliance with water standards that are routinely and consistently ignored and set aside by DWR, Reclamation and the SWRCB.

As identified in previous BDCP EIR/S comment submittals, the source and locations of the supplemental water supplies required to implement the spring delta outflow requirements were not identified, evaluated, disclosed or impacts associated with these water purchases, releases and transfers avoided, minimized or mitigated in the BDCP EIR/S. These supplemental water supplies are integral to the assumptions of the BDCP operations, environmental impacts, water supply yields, water quality impacts and compliance with the OCAP BO RPA flow-related criteria. The BDCP does not know where these supplemental water supplies will come from, how they will be delivered, the environmental impacts of taking the water from one location to be released and utilized for another purpose, or who will pay for these water supplies. All of this must be defined, analyzed for impacts and disclosed in a revised and recirculated BDCP EIR/S prior to any agency consideration of approval or implementation of this project. The BDCP must not utilize public funds (e.g. Proposition 1) to purchase water for environmental compliance for SWP/CVP operations that benefit the water contractors at the expense of the tax payer. The Davis-Dolwig Act requires that all costs of the SWP that are integral to the delivery of water be borne by the SWP water contractors and ultimately by their rate payers who are the beneficiaries of the SWP. The spring delta outflow requirements are not a habitat enhancement to be borne by the California general fund or taxpayer, but is compliance with the requirements of

operating the SWP that are integral to water deliveries that must be borne by the water supply contractor beneficiaries of the SWP.

Revised Public Draft EIR/S Document Section Comments:

Figure ES-1 - Figure scale and level of detail is insufficient for local landowners to determine if their specific properties are under the project footprint or not. Both NEPA and CEQA require that information is provided in the public review process such that the public can determine the relevance of the project to them. There is nothing more relevant than determining if the project lands on your property or not so the project has materially failed to meet this disclosure requirement. The public draft must be re-issued with maps to a scale and accuracy sufficient to allow the public to review the project and determine its relevance to them as well as comment on its relevance to them.

Figure 3-19a - The screens encroach on the current cross-section of the river channel which will decrease the channel flow capacity and create a backwater affect that will redirect and increase localized flood risk. This is an unnecessary impact of the project when a setback levee design of the intakes would avoid these impacts. The project is only likely not doing the setback levees on the intake design to avoid these impacts because it is less expensive not to do it. The design shows the pipes from the screens going through the existing levee so since they have already destroyed the structural integrity of the existing levee, they might as well do the levee setback at the same time.

Figure 3-19a - The figure shows a power substation and electrical building. The electrical infrastructure is inconsistent with the Proposed Project description of the intakes not having pumps and no electrical lines being constructed. Which one of these are wrong? At the very least the project description and representation are inconsistent. With inconsistencies and misrepresentations like these and others in the maps of the project vs. the text describing the project, it is very difficult for the public to discern the true nature and impacts of the project.

Figure 3-19a - The figure implies that the intake structure goes through the existing levee instead of up and over the levee to preserve its structural integrity as the USACE recommends. The intake design should be redesigned to incorporate the USACE's design recommendations for an up and over intake.

Figure M3-4 -The locations of the habitat mitigation lands are not disclosed in the maps or document. The affected landowners must be afforded the opportunity to comment on the impacts of this mandatory component of the project scope. The project has already said there would be some three thousand acres of mitigation. Where is it and why is it not disclosed for public review like all other aspects of the project and project footprint must be?

Figure M3-4, sheet 1 - The intakes show a significant encroachment of the existing channel of the Sacramento River. See previously submitted comments on this topic regarding the impacts to backwater effects, flow capacity, flood risk, navigation impairments, public safety, recreation impacts, visual and noise impacts.

Figure M3-4, sheet 2 - Intake #3 is located on the bend of the river. The Fisheries Facilities Technical Team that the BDCP used to define the size, location, type and features of the intakes specifically recommended that intake locations only occur on straight stretches of the river where hydraulic complexity was minimized. The selected BDCP intake locations clearly has ignored the directives from the team of experts that they convened for the purpose of locating the intakes. The BDCP has ignored their own experts in the location of the intake and failed to avoid impacts that will occur due to this selected location. The thalweg of the river will naturally be on the outside of the bend where the intake is located. The emigrating juvenile salmonids and other special status species that are vulnerable to the intakes (entrainment and impingement) are disproportionately concentrated in the thalweg during active emigration, so the location of this intake will have disproportionately high impact on these species due to the location selected on the outside bend of the river.

Figure M3-4, sheet 2 - The intakes are too close together. In the 5 mile reach from the upstream edge of intake 2 to the downstream edge of intake 5, the fish will be exposed to the intakes for a greater distance and duration than they are not exposed to this stressor and source of take. The Fish Facility Technical Team directed that there should be at least one mile between the end of one intake and the beginning of the next in order to allow the fish to rest and recover their swimming ability to avoid the intakes. The BDCP proposed project intake locations violate their own experts recommendations on the minimum spacing between intakes which will result in elevated levels of take that could have been avoided with a more spatially separated intake location design. The BDCP must revise their intake locations to conform to the recommendation of their expert team and re-analyze the impacts of the revised project configuration for public comment.

Figure M3-4, sheet 2 - The tunnel muck disposal triangle is misaligned with the DWR property ownership boundary. It is at least 150 feet farther to the northeast than the property boundary. Since impacts to property by ownership are affected by this representation (i.e. is this disposal area on Sutter Home's property or not?) it is impossible for the public to determine the level to which the project affects them, i.e. is the project just a close neighbor or is my property going to be condemned? This spatial presentation of the project calls into question the accuracy of representation of the entire project footprint. As an example, if intake 5 is similarly misplaced, it makes the difference of wither the Hemly Victorian home on the northern tip of Randall Island will be destroyed by the project or not. With the location of the footprint of the project misrepresented, the impact assessment of the project must also be inaccurate as the actual vs. represented and evaluated footprints are different.

Figure M3-4, sheet 4? - The transmission line is outside of the statutory delta which is clearly outside of the defined scope that is to occur only within the statutory delta. Many potential project components for water conveyance and habitat restoration were rejected from the alternatives development screening criteria for being outside of the statutory delta. The project has included project components, the transmission lines off of Lambert Road, that are outside of the statutory delta so all alternative components that were dismissed from consideration for being outside of the statutory delta boundary must be given equal consideration and must not be omitted because they occur geographically outside of the delta boundaries. All project alternative components that were dismissed for being outside of the delta boundaries must now be included in project alternatives that are given full and equal level of analysis (per NEPA requirements) as the other previously analyzed alternatives. These re-included alternatives must be analyzed and recirculated for public comment.

Figure M3-4, sheet 5 - All of the tunnel muck disposal sites seem to be misaligned with property boundaries. Is it the project's intent to condemn private property while adjacent state land is unused? This is a serious problem as these maps are the only explicit representation of the location of the project.

Figure M3-4, sheet 5 -The tunnel muck disposal location representations appear to fill in the linear ponds. This will result in a loss of wetland, GGS and riparian brush rabbit habitat which is clearly avoidable if the disposal sites were relocated. The EIR/S is deficient and incomplete as these fills of navigable waters of the US were omitted from disclosure.

USACE 404 Notice Map Sheet 7 - There is a large permanent footprint feature on highway 12 where the tunnel crosses it and where the BDCP desires an undercrossing for access to the tunnel muck disposal area at the south end of Bouldin Island. This footprint is absent from the BDCP EIR/S figures released to date and which is absent from the impact analysis in the BDCP EIR/S. What is even more disturbing than this inconsistency and lack of analysis of project impacts is that this highway 12 construction is currently underway. The only reason for this overpass in this unpopulated area is to facilitate movement of tunnel muck to the BDCP disposal area that is directly to the south of this overpass. This premature construction is an irretrievable commitment of resources by the BDCP for a project that has

<p>not yet been approved. Additionally, this overpass is constructed over drainages that are navigable waters of the US (you can see this even at the 1:24,000 scale of these maps).</p>
<p>Figure M3-4, sheet 8 - There is a large portion of the tunnel muck disposal area on Bouldin Island that is not represented. This map is the only place where the project discloses the discrete footprint of the impacts and a significant area of the impacts has been omitted from the maps. The map must be revised to disclose the exact location of all of the areas of the project impact and the public be allowed to review and comment upon it.</p>
<p>Figure M3-4, sheet 8 - The map shows tunnel muck being disposed of in the tributary (Potato Slough?). This tunnel muck disposal in waters of the United States impact of the project was not disclosed or evaluated in the EIR/S.</p>
<p>Figure M3-4, sheet 11 - There is a permanent electrical line represented north of the Clifton Court Forebay, but it goes to a location where there appears to be only underground tunnels. What is the purpose of this line and what facilities are there for it to service that are not represented on the maps? If there is a facility here, it is a material omission of disclosure in the EIR/S document and must therefore be recirculated for public comment once the facility is added.</p>
<p>Figure M3-4, sheet 15 - Where is the power supply coming in from for the operable barrier? The barrier must not alter either channels flow capacity and must not redirect flood flows or the USACE must not issue permits for this structure. The omission of the location of the power lines to be constructed for this facility is a material failure of disclosure and must be recirculated for public comment when the power transmission line construction route is provided by the BDCP.</p>
<p>Figure M12-4, sheet 3 - The map shows a "barge unloading location" in Snodgrass Slough. This reach of Snodgrass Slough is sensitive habitat and is a "no wake zone". Normal boat traffic is limited to 5mph, but the flat shape of the bow of a barge will still cast a significant wake at 5mph. The BDCP must propose a mitigation for their barge wake impact by imposing a 1mph speed limit to minimize wake impacts. These impacts must be identified, evaluated, disclosed, avoided, minimized and mitigated in the EIR/S.</p>
<p>Figure M12-4, sheet 3 - Since the project has represented the barge facility as "unloading", the project may not utilize this location for any barge "loading" or there will be project impacts that were not identified, evaluated, quantified, avoided, minimized, mitigated or disclosed to the public or decision makers who will rely upon this document.</p>
<p>Figure M12-4, sheet 3 - The water depth in Snodgrass Slough is as shallow as 3 feet in the reaches at and near the proposed "barge unloading location". The draft of the loaded barge probably exceeds the water depth and the tugboat's draft certainly will. Even if the tugboat does not bottom out, the propellers will agitate the muddy shallow bottom of Snodgrass Slough. The agitation of the muddy bottom of the slough will impact the water quality by increasing turbidity and TOC and by mobilizing environmental toxins (e.g. DDT, Selenium, Mercury, Lead, etc.) that were effectively sequestered and bio-unavailable in the layers of undisturbed sediment at the bottom of the slough. Once disturbed by the barge and tugboats, these contaminants will remain active and impact fisheries and wildlife in the aquatic ecosystem and this sensitive estuary for decades. There is very little flow through this reach so the impaired and impacted water quality would be very persistent and remain undiluted for long periods of time (whole years until the rainy season occurs).</p>
<p>Figure M12-4, sheet 3 - The BDCP has not disclosed the size and draft of the barges and tugboats to be used in the project. The project failed to evaluate if the barges to be used on the project will fit through the pilings of the Twin Cities Road (Sacramento County Rd E13) bridge over Snodgrass Slough (California Bridge # CA 24C-53) or if the tugboats will fit under the bridge to disclose if there is any impact to that road infrastructure. The BDCP must revise their document to include this critical information and recirculate the document to the public so that these impacts can be disclosed.</p>

Figure M12-4, sheet 3 - The routes the barges and tugboats will take from wherever they are loading to where they are unloading has not been disclosed by the BDCP nor have the impacts of their transit routes been evaluated, quantified, and impacts minimized and mitigated. The barge transit routes must be disclosed and evaluated and the document recirculated for public review.

Figure M12-4, sheet 3 (and others) - The number and location of barge unloading locations give the impression that a large amount of barge activity will occur with the construction of this project, but the BDCP has given no project specific description of the barge and tugboat operations. Without the make and model of the tugboat, the transit route, the number and timing of trips, the air quality impact of the tugboats and barge operations may not be evaluated. Tugboats are notoriously bad M10 air quality polluters. The BDCP EIR/S is incomplete and materially deficient for not including this level of project analysis to evaluate air quality impacts.

USACE 404 Notice Map Sheet 12 - There is dredging of Clifton Court Forebay on the USACE maps that is omitted from the BDCP EIR/S maps of dredging activity and from their impacts discussion and disclosure.

USACE 404 Notice Map Sheet 13 - There is a permanent disturbance area on the south and southeastern edges below the new Clifton Court Forebay that are not disclosed on the BDCP figures and are not disclosed or discussed in the BDCP EIR/S. There are also transmission tower locations depicted in the USACE figures that are not disclosed in the BDCP EIR/S figures or impact analyses footprint.

Figure 7-27 - The groundwater drawdown from the construction of the project show a groundwater drawdown in the area of the Hood municipal water supply well field. The BDCP EIR/S has not identified, evaluated, quantified, avoided, minimized, mitigated or disclosed the impact to the quality, quantity or pumping costs to the municipal well field in the EIR/S. This omission of impacts to the municipal water supply must be addressed in a revised public draft of the document that allows the residents of Hood and other concerned parties to comment and provide feedback on these proposed project impacts.

Figure 7-27 - The figure shows the groundwater drawdown from construction dewatering to overlap with the Sacramento River. This means that the dewatering pumps will be withdrawing water directly from the hydraulically connected Sacramento River. The project does not have water rights for these directly hydraulically connected withdrawals from the Sacramento River. The impact to flows and water quality from this are not identified, evaluated, quantified, avoided, minimized, mitigated or disclosed in the BDCP RPDEIR/S. The document must be revised to address these impacts and mitigations and recirculated for public comment.

Figure 27-7 - If the water from the dewatering is discharged to the waters of the state, the project must obtain a permit for and comply with point source discharge water quality requirements from the Central Valley Regional Water Quality Control Board. In order to meet discharge water quality standards, this water would have to be treated. The intake and discharge water quality and quantity, treatment process, facilities and the impacts from those activities were not identified, quantified, avoided, minimized, mitigated or disclosed. The BDCP EIR/S must be revised and recirculated to disclose this information to inform the public and decision makers whom will rely upon this document.

Figure 27-7 - The legend of groundwater quality drawdown uses white in the map legend for both the -2 and 0 groundwater level drawdown categories and uses other colors to show increases in groundwater levels that apparently do not occur in the output of the model results presented. Using white for multiple groundwater depth drawdown impacts of the project obscures essential information for determining the impacts of the project. As an example, if groundwater is drawn down from 0-2 feet, or 2 feet to 4 feet, the impacts to native grasses and wildlife habitat and grazing and foraging values are significantly different in terms of the impacts to plant species and wildlife habitat and forage productivity that will occur. As an example, Cottonwood trees, an important riparian shade and large woody debris source of aquatic and riparian habitat quality, will germinate and successfully colonize where groundwater is at shallow depths of 0-2 feet, but not at depths of 2-4 feet. This impact is obscured by this representation of impacts to groundwater depth from the project and is not included in the impact analysis of terrestrial wildlife habitat quality, quantity and species distribution.

Figure 27-7 - The legend is incorrect by not being defined by inclusive ranges, i.e. -2 - 0 feet. By not identifying the range of values the map represents, the reader (and decision makers) are left to guess if the color values represent from the previous category, e.g. "-4", or from less than minus 4 or more than minus 2 or from By choosing a white color to represent drawdown of water tables from -2 to +2 as white, the BDCP is hiding the shallow water impacts to crops, native vegetation and wildlife that rely upon shallow groundwater. The groundwater drawdown impacts from the construction of the project must be revised and recirculated so that the public can be informed and comment on the impacts of shallow groundwater changes as a result of implementing the proposed project.

Appendix A, Figure 8 - Most of these data sets are constrained to a period of 2001 - 2006. There is a much longer period of record and more recent data available to utilize and analyze than the BDCP has presented here. The omission of these readily available and directly relevant data sets from the BDCP analysis and disclosure fails to meet the NEPA and CEQA required standards for the use of the best available science. The BDCP must utilize all of the available data, not just choose a convenient subset of the data that leads to potentially skewed results and conclusions that are favorable to the project.

The sensitivity analyses of the originally proposed conservation measures, e.g. CM4, with the new conveyance only alternatives (which do not include conservation measures) in the revised DEIR/S concludes that these actions cannot be combined with the alternatives without resulting in unacceptable significant and unmitigatable impacts. These conservation measures, e.g. CM4 and others, are actions that fulfill the OCAP BO RPAs mandates and are now proposed by the California Water Fix, to be included in a future project, California EcoRestore. But, if as proposed by the BDCP that the OCAP BO RPAs are implemented by another project after the BDCP, then those mandated OCAP BO RPAs will never be implemented as the implementation of those actions in combination with the proposed BDCP conveyance and operations has already been demonstrated to have unacceptable environmental consequences which is what the original public draft BDCP EIR/S concluded. By proposing a bifurcated project, BDCP conveyance and a separate and later CA EcoRestore habitat restoration, the BDCP has made it impossible to implement the OCAP BO RPAs that were an existing obligation of the CVP and SWP before the BDCP project was scoped and developed. The lack of implementation of the OCAP BO RPAs is not only in violation of the law, but the effectively blocked opportunity to implement these actions by the prior implementation of the BDCP (that does not include those actions). This BDCP blocking of implementation of the OCAP BO RPAs is not only illegal, but will result in perpetuating the conditions which led to the 2006 OCAP BO listed species jeopardy call. This BDCP strategy of conveyance first and environmental fixes later is designed to thwart the authority and responsibilities of the regulatory agencies that are entrusted with the protection of these listed species. The fisheries agencies must not allow the BDCP to implement a project that precludes implementation of the other necessary and legally compelled habitat restoration actions that are required in order to avoid jeopardy of these listed species. The fisheries agencies must insist that the

existing obligations of the CVP/SWP to implement the OCAP BO RPAs are given supremacy in implementation and plan over the construction of a new water conveyance. If the BDCP can do the restoration and conveyance concurrently as previously proposed, fine. If they cannot, as their current revised DEIR/S indicates with these failed sensitivity analysis results, then the OCAP BO RPAs must be implemented first and then any future replumbing of the delta and/or new conveyance can work around those OCAP BO RPA compliance conditions, not the other way around as the BDCP currently have prioritized it.

The BDCP alternatives still result in adverse modification of designated critical habitat of listed species. The new BDCP alternatives only increase this ESA violation in comparison to the previously considered alternatives which also violated this ESA requirement.

2.1.4. - A number of fisheries impact calls of "no determination" and "uncertain" were categorically changed to "no impact", but no supporting rationale or facts were presented as to the cause for the change of impact call for each case. The document indicates that additional effort was applied, but not what was learned from that effort that led to the change in the impact calls. This omission of information that led to the change in the impact calls is a material omission and does not inform the reader or decision makers who will rely upon this document on how these impact calls were made and what facts and rationale were used to support this impact call change.

2-7, line 9: "...exceedances of the Sacramento River at Emmaton EC objective for protection of agricultural beneficial uses (which is a maximum 14-day running average of mean daily EC...". The analysis uses DSM2 EC data which is output in 15 minute time steps. The BDCP use of a two week rolling average of daily mean EC values is clearly an attempt to mute the frequency and magnitude of exceedances of the standards that are readily available information from the model output. The analysis must include evaluation of the change in the frequency, duration and magnitude of EC compliance exceedances on a 15 minute time step as is available for analysis from the model. Any analysis short of utilizing the highest temporal resolution of data available from the models falls short of the required standard of the use of best available science and is a clear attempt of the BDCP project to obscure the true impacts of the proposed project and alternatives.

2-7, line 17: "The revised version of Alternative 4 would maintain, and not propose to change, the existing compliance point at Emmaton, while all other alternatives assessed in the Draft EIR/EIS (1A, 1B, 1C, 2A, 2B, 2C, 3, 5, 6A, 6B, 6C, 7, 8, and 9) still include the proposed change to Three mile Slough." The analysis with different assumptions for some alternatives leading to significant impacts is on all alternatives except for the new alternatives and alternative 4 is an obvious bias in favor of the proposed project alternative 4A. The analysis of all the other alternatives must be redone so that the compliance point alternatives are the same and the assumptions are not biased in favor of the proposed project. No rationale is provided by the EIR/S to support this biased application of project assumptions. Once the analysis has been redone with equally applied compliance point assumptions, the revised analysis must be re-released for public review and comment.

2-8, line 22 "... some of these exceedances were found to be modeling artifacts due to monthly-daily patterning effects..." The exceedance of this water quality standard could only be explained by this if only the project alternative was conditioned with a systematic problem with the monthly/daily pattern effect that did not also occur in the data conditioning in the baseline for comparison. Since the project alternative and the baseline are supposed to be treated the same in the analysis to have these types of problems cancel each other out, the analysis was either fundamentally flawed because the alternative and baseline were not conditioned using the same methodology or the explanation of the cause of the exceedances is false. Either way, the explanation for the exceedances of this water quality standard lead to a credibility problem with the analysis that must be more fully explained and justified.

2-8, line 24 "...the remaining exceedances could be resolved by assuming the continuation of historical dry year practices of installing barriers earlier in the year." This assumption is a significant change to the operating assumptions of the proposed project and alternatives. The author may not just assume these exceedances would just go away if the project were operated differently than it was defined, disclosed, and analyzed. If the BDCP wants to assume a different set of operations to avoid an impact, then they must propose the project that way and complete the analysis that includes that assumption all the way through the analytical process. These critical exceedances of a mandatory water quality compliance criteria must not just be written off with an after the analysis assumption that the impact would not be significant, so the analysis must be redone in order to prove their assumption of less than significant impact and disclose the actual impacts of this assumption. This is a material change in assumptions so a revised EIR/S must be recirculated for public comment.

2-8, line 27 "SWP and CVP operations have relatively little influence on salinity levels at these locations, and the elevated salinity in south Delta channels is affected substantially by local salt contributions discharged into the San Joaquin River downstream of Vernalis." If this were true then the analysis would not show significant impacts as compared to the No Action/No Project. The impact significance calls are in comparison to the baseline, so the argument of the author that the impacts are not due to the project are invalid and demonstrate a lack of understanding of the NEPA and CEQA analytical comparison process. Given that the explanation for the significant impact is invalid, the significant impact call must still stand and thus requires project mitigation. Since the revised impact call was incorrect and the appropriate mitigation to address that significant impact was not included in the RPDEIR/S, this error and omission must be corrected and the document recirculated for public review and disclosure.

2-8, line 30 "Modeling of all alternatives assumed no operation of the Suisun Marsh Salinity Control Gates, but the project description for all alternatives now assumes continued operation of the Salinity Control Gates,..." It is clear from this statement that there have been some fundamental changes in operational assumptions (this and the installation and operation of south delta in dry years in line 24 above to name just two) that have occurred since the modeling and analysis of all of the project alternatives. These changes, apparently only analyzed in truncated sensitivity type analyses, are significant and could significantly alter the nature, geographic scope, frequency and severity of environmental impacts. An analysis conducted with different assumptions than were used in the impact call justification cannot stand as a valid analysis and this incomplete and incorrect analysis must not be relied upon for decision making or justification for issuance of permits for the project. The analysis must be redone from beginning to end with these new assumptions and the revised analysis with these materially different assumptions and results must recirculated for public comment.

2-8, line 32 "A sensitivity analysis with the gates operational consistent with the No Action Alternative resulted in substantially lower EC levels in Suisun Marsh than indicated in the original modeling results, but EC levels were still somewhat higher there than EC levels under Existing Conditions and the No Action Alternative for several locations in the Marsh and for several months. Another modeling run with the gates operational and restoration areas removed resulted in EC levels nearly equivalent to those found in Existing Conditions and the No Action Alternative, indicating that design and siting of restoration areas has notable bearing on EC levels at different locations within Suisun Marsh. These analyses also indicate that increases in EC levels shown in the modeling conducted for the Draft EIR/EIS were related primarily to the hydrodynamic effects of CM4 under the alternatives assessed (1A, 1B, 1C, 2A, 2B, 2C, 3, 4, 5, 6A, 6B, 6C, 7, 8, and 9), not operational components of CM1. Based on the sensitivity analyses, optimizing the design and siting of restoration areas for these alternatives consistent with proposed environmental commitments, avoidance and minimization measures, and mitigation measures is expected to be able to reduce EC increases, relative to Existing Conditions and the No Action Alternative, to levels that would be less than significant." These analyses sound informative for

revising the proposed project and alternatives project descriptions and assumptions, but these "sensitivity analyses" do not constitute a complete or equal level of effort analysis as required in NEPA and CEQA, and they certainly are inadequate as justification for assuming that impacts would be less than significant if these changes were made to the project. Start over with your revised project assumptions and description and complete a full analysis and resubmit the revised document for public review and comment.

2-9, line 2 "The new alternatives 2D, 4A, and 5A, contain much lower acreage of tidal restoration, and thus are anticipated to not have significant impacts with respect to EC and chloride in Suisun Marsh." So by the wording of this statement, these analyses have not been completed so the document is deficient and incomplete. The document must be completed, so the unsupported supposition of the author that impacts would be reduced can be backed up with a complete set of assumptions and correctly completed analysis.

2-9, line 5 "The assessment of exceedances of the Bay Delta WQCP 150 mg/L chloride objective in the Draft EIR/EIS was also revised based on discovery of errors made in the original analysis." The explanation for the error following this statement does not hold up to logic based on how comparative analyses are done. These errors in assumptions and model execution would equally apply to the baseline No Action and No Project and therefore the error in commission of these same flawed assumptions and execution in the modeling of the Proposed Project and alternatives would be largely offsetting, e.g. net out as near zero difference. The EIR/S author misrepresents the explanation for the error as only being applied to the alternatives and therefore the excuse for this significant impact being less than significant is invalid. The number of errors being disclosed in this and other sections in the project descriptions, operating and modeling assumptions and commissions of error in executing the model runs should leave any reviewer and potential decision maker with significant doubts over the usefulness of these analytical results for quantifying mitigation requirements and their suitability to be relied upon for decision making. Given the number and magnitude of these modeling problems and the erroneous logic used in the writing-off of these significant impacts to less than significant, the entire BDCP modeling analysis must be revised from beginning to end and recirculated for public comment.

2-9, line 20 "This resulted in reporting of exceedances of the objective for calendar year 1991, when in fact the modeling results do not exist to determine if the objective was exceeded." Again, logic supplied by the author is flawed. The analysis omitted three months of analysis, so there was less opportunity for exceedances. If the missing months had been included, there would likely have been more exceedances, not less as the author claims.

2-12, line 20 "Nevertheless, estimates of residence time increases in these areas are small enough that they are not expected to substantially affect selenium bioaccumulation in the western Delta." The area where significant increases in residence time of water to concentrate additional Selenium would occur in the eastern delta, i.e. San Joaquin River Deep Water Ship channel near Stockton, Potato Slough, etc, where flow patterns of the No Action/No Project are most altered by the proposed project and alternatives. The analysis and disclosure in the EIR/S is deficient due to its discussion only of the Western delta and its omission of discussion and disclosure of the impacts to the central and eastern delta. In these areas, due to the change in flow patterns from the proposed project and alternatives, the impacts remain significant and unmitigated.

2-13, line 1 "Sensitivity analyses were conducted to evaluate what factors were causing or contributing to bromide increases in Barker Slough. Findings from these analyses were incorporated into the assessment, and mitigation measures were revised to better address the factors contributing to the increases." A sensitivity analysis is typically done on a selected subset of data in a truncated analysis. This selected subset leads to biased analyses that are vulnerable to generating skewed results which lead to erroneous conclusions. Decisions and justifications for permit issuance should never be based on these, biased and subjective conclusions based on less than best available science short-cut analyses. The BDCP must reanalyze the impacts of the proposed changes to the project description, operations and mitigations with the full available data of the analytical period of record. Any analysis that does not use the full available data set fails to meet the test of best available science and is therefore incomplete and deficient. The BDCP must conduct the full analysis and recirculate this materially new information in another round of public review and comment.

2-13, line 35 "...the potential types of effects on mercury resulting from implementation of the environmental commitments under the new alternatives would be generally similar to those described for alternatives assessed in the Draft EIR/EIS, the magnitude of effects on mercury and methyl mercury at locations in the Delta related to habitat restoration would be considerably lower." The author is making a fundamental mistake in the analytical process as they are comparing the magnitude and significance of the project affects to the other alternatives and not to the project baselines of the No Action/No Project. When comparing these new alternative to the No Action/No Project, the degradation of designated critical habitat for listed species and bioaccumulation of toxins to these listed fish species that would not occur under the No Action/No Project as still significant and must be mitigated.

2-14, line 3 "The proposed tidal restoration may cause or contribute to increased fish tissue concentrations at a local level, though the magnitude of the increase is not quantifiable." It is true that the proposed habitat restorations would increase the production of and tissue concentrations of mercury and that these affects are not quantifiable. However, just because an impact is not quantifiable, does not mean that these are not significant impacts and constitute a significant degradation of critical habitat for listed fish species. The author does not address this significant impact and blows off the topic because it was not quantifiable. The impact is significant and must be mitigated and the revised document recirculated for public comment.

2-14, line 17 - The impact summary misses the aspect of the impact that listed fisheries are harmed and critical habitat is adversely modified. These fish, with elevated mercury tissue accumulation are consumed by local fishermen who subsist on these fish and the fish also move and migrate to other waters in which the elevated mercury content is released upon the decomposition of their bodies. These impacts are not identified, addressed or mitigated in this document. The document must be revised to address these material omissions and deficiencies and the document recirculated for public comment.

2.2.8 - The Dissolved Oxygen (DO) analysis discussion focused only on a potential change in San Joaquin River flow affects on DO. The RPDEIR/S did not address the changes in DO that the alternatives would have on the central, south and east delta from increased residence time of waters in these areas from proposed project operations. As identified in previous comments, the BDCP analysis only addresses these impacts at the most superficial level and dismisses the impact without adequate consideration, use of best available science and the subjective conclusions of no significant impact are unsupported by science or even a set of rationale disclosed in the document. A professional opinion of a finding of no significant impact is meaningless unless there is some consistent and fully formed train of logic presented that supports a conclusion. The EIR/S must use best available science, including implementation of available modeling tools to fully assess this critical project impact. The project will adversely modify designated critical habitat of ESA listed species so this is one of the most important

impacts of the project to fully evaluate and disclose and is not a topic that should be given such a cursory and incomplete treatment as it currently receives in the draft EIR/S.

2.2.8 - The RPDEIR/S says the flows from the San Joaquin River (SJR) are reduced by the project and therefore there will be less of a DO problem. There are several problems with this statement. First, the statement is unsupported. Where are the modeling results that show a flow decrease? The document fails to disclose the source of the information, so this is a material omission of disclosure. Secondly, a flow decrease from the project is a counter-intuitive result as the project should result in an increase in flows from the SJR as there would be increased drainage return flows to the river from the increased CVP/SWP water deliveries and increased irrigations resulting from the project (otherwise why do the project?). Thirdly, a decrease in flows would result in an increase in the concentration of nutrients, e.g. Phosphorus and Nitrogen, in the SJR from discharges and accumulation which are major contributors of DO problems from algal bloom crashes that occur. Fourthly, a reduced flow means that there is a lower rate of turnover and freshening of water in the area so the nutrient concentrations and resulting DO problems would be even further exacerbated. The author's claim that reduced SJR flows with higher nutrient content and reduced rate of freshening will result in a reduction in the DO problem is contrary to logic and readily available science on how DO problems occur. The BDCP EIR/S discussion of DO impacts is not just incomplete, flawed, internally logically inconsistent, and wrong; their conclusion is the exact opposite of reality. In more earnest discussion of the project impacts on Dissolved Oxygen (DO), the location of the minimum DO might or might not move substantially due to the shape and location of the Stockton Deep Water Ship Channel and the introduction of SJR nutrient loads, but the magnitude of the DO problem would increase (lower DO readings), the duration of DO standard violations would increase and the geographic extent of the DO sag would expand to encompass even more designated critical habitat for listed fish species. The reduction in flows which concentrate the nutrient load, which will make the DO problem even more severe in magnitude and geographic extent is a significant impact of the proposed project as compared to the existing conditions and No Action/No Project. Under these significantly degraded water quality conditions, continued operation of the Stockton Port Aeration Facility would not mitigate the incremental impact that would be precipitated by the proposed project and therefore these impacts are unmitigated by the project. There is not excess capacity of this facility for the BDCP to utilize for mitigation and there is not unreacted oxygen from the facility that would be more fully utilized under the degraded water quality conditions from the Proposed Project. The assertion by the EIR/S document of the aeration pumps "performing adequately" under a range of flow conditions is an inaccurate portrayal of the facilities and the resulting DO conditions. DO water quality standard violations and significant adverse modification of critical designated habitat occur under the existing conditions and No Action/No Project. In the above discussion it is clear that the proposed project will significantly further degrade and impair DO water quality (increased nutrient load and reduced rate of water turnover), and therefore continuing to run the aeration pumps without any other action to address this DO water quality degradation will result in the significant incremental impacts of the project being unmitigated as compared to the baseline conditions. The BDCP must provide a complete analysis, utilize the best available science for the analysis, fully disclose those analyses and propose actions to avoid, minimize and mitigate these significant impacts. The EIR/S must then be recirculated based on these material omissions from this document.

2-16, line 28 - "For all action alternatives other than Alternatives 4A, 2D, and 5A, air quality impacts from implementation of habitat restoration and protection activities (CM2 through CM11) are also evaluated (at the programmatic level)." It is clear from this statement that the proposed project and some of the alternatives were analyzed and presented at a different level of detail. Some alternatives have more programmatic-level analyzed components than other alternatives. NEPA requires an equal

level of analysis for all project alternatives. This significant NEPA violation must be remedied in a recirculated public draft EIS. Agencies must not certify a document that violates NEPA or CEQA requirements and must not issue construction-related permits based on a programmatic level of analysis.

2-16, line 34 - "Where these design and engineering assumptions could result in substantive changes in other impact analyses, such revisions in other impact analyses have also been made since release of the Draft EIR/EIS." This statement leads the reader to conclude that the CM1 conveyance project description has been changed for all of the previous public draft alternatives and not just for the new alternatives presented in the RPDEIR/S. The change in design (height, location), construction footprint size and location, construction materials, amounts of materials, construction timing, construction duration, construction equipment used, construction and operating energy requirements, transmission line locations, construction and operations noise, construction and operations traffic, volumes and locations of tunnel muck transportation and disposal site, construction dewatering of groundwater, and water operations along with their resulting water quality impacts; all change with the new conveyance. If the changes in the nature of the impacts from the alterations in the conveyance facilities construction and operation are taken into consideration as compared to the original draft conveyance proposal, literally every singly impact topic covered in the EIR/S (except for perhaps Environmental Justice and Native American Trust Resources) will have altered impacts and different mitigation requirements. Even if the impacts are lessened in some categories, the mitigation levels required to compensate for the reduced impacts would be altered and the mitigations have impacts on other resources so those would also need to be updated and disclosed. The BDCP RPDEIR/S did not update the analysis and impact disclosures for all of these impact topics for all of the previous project alternatives so the RPDEIR/S is incomplete, has unequal levels of development and analysis between alternatives and is deficient. All of the alternatives must be updated for all of their changes in impacts and these must all be disclosed for public review and comment in a rerevised and recirculated draft EIR/S.

2-20, line 1 - "...impact analysis has been expanded to assess potential odors from excavated organic matter during removal of reusable tunnel material (RTM) and sediment. If present in the muck and sediment, anaerobic decay of organic material can generate gases, specifically hydrogen sulfide." The EIR/S have been revised to address Hydrogen Sulfide as an odor impact, but has failed to address this project emission as a threat to human health and impacts to wildlife. "Hydrogen sulfide is highly toxic and inflammable gas. Being heavier than the air, it tends to accumulate at the bottom of a poorly ventilated room or spaces. Although very pungent at first, it quickly deadens the sense of smell, so the potential victim may be unaware of its existence unless it's too late. Hydrogen sulfide is considered as a broad-spectrum poison, meaning it can poison several systems in a body, although nervous system is most affected." (http://www.answers.com/Q/Is_hydrogen_sulphide_dangerous) The EIR/S document has failed to identify, evaluate, quantify, disclose or mitigate the dangerous and potentially lethal conditions it could create under various conditions from their tunnel muck disposal. The Bouldin Island tunnel muck disposal site is approximately 1,230 acres (estimated from Google earth because the size of this site was not quantified or disclosed in the EIR/S document). A condition could occur where the tunnel muck is at its peak acreage and rises to a peak rate of off-gassing of Hydrogen Sulfide gas. This could occur at a time when there is no wind in the delta and the heavier than air gas accumulates inside the levee barrier. The levees in this area are at least 25' high so the tunnel muck disposal area could hold a volume of gas of approximately 134 Million cubic feet. Since this gas is potentially explosive, this volume of gas ignition could result in catastrophic losses of life, levee integrity and property. None of these risks and potential impacts of the project were identified, evaluated, mitigated or disclosed in the EIR/S.

Previous comment continued - This gas accumulation could create a lethal condition for the inhabitants and visitors (boaters, hunters, fishermen) to the area as well as to resident and migratory wildlife. Once a significant amount of gas has accumulated, perhaps over several days, the first slight breeze would begin to mobilize this potentially deadly gas cloud. If there is a slight breeze from the NNW toward the SSE, this could mobilize the concentrated deadly gas cloud off of the southern tip of Bouldin Island directly into Little Potato Slough which the levees would then hold in the heavier than air gas and prevent mixing. The breeze and the levees would direct the up to 130 Million cubic foot gas cloud down to Herman and Helen's Marina which is less than a mile away. There are overnight berths at Herman and Helen's and as the reference above indicates, people can become unaware of its existence until it is too late for them to survive. This scenario is a potential worst case, but it could easily happen and the BDCP has completely failed to identify this significant human health and safety risk. Other scenarios would include more easterly winds which would mobilize the poisonous gas cloud to Honker Cut Marina, Paradise Point Marina and then just a half mile farther east from there are the new large housing developments off of Eight Mile Road west of I-5 which are no more than a total of 3 miles away. A half mile an hour wind would be enough to push the heavier gas over the levees but not promote mixing and dilution. The BDCP has failed to take into account the conditions that could lead to peak off-gassing rates, conditions that could accumulate and concentrate vast volumes of hydrogen sulfide gas and the conditions in which the gas could become mobilized and yet not dispersed and their immediate and potentially deadly impact on local concentrations of human habitation. The BDCP must fully analyze and mitigate this risk to human and wildlife health and safety. The BDCP must take samples of the tunnel muck that would be deposited at this site and do off-gassing studies. The BDCP must calculate the maximum rates of off-gassing that could occur given the tunnel muck material that would be deposited, the rate of loading of the site given the construction schedule, the rate of off-gassing that could occur under worst case climate conditions. Once that basic and essential project-level work has been done, the BDCP must do site specific wind and dispersal modeling from the tunnel muck site to the sensitive receptor areas of human and wildlife habitation. These types of models do exist and the BDCP must utilize them to meet the test of utilizing the best available science to characterize and quantify this very real and significant project impact. The BDCP must also add avoidance, minimization and mitigation measures to address this significant impact. These could include, but should not be limited to: Hydrogen Sulfide monitoring stations placed throughout the dump site, limits to the rate at which tunnel muck material can be deposited at the site, installation of monitoring sensors and warning sirens at the sensitive receptor sites, and use of large fans at the disposal site to disperse the hydrogen sulfide gas to prevent it from accumulating.

2.3.6. - The analysis was done for 2 alternatives, but not for the other alternatives. NEPA requires an equal level of analysis for all project alternatives so the BDCP must also conduct this analysis for the other alternatives. Since this is a material omission in the revised PDEIR/S, this document must be recirculated for an additional round of public comment.

2-21, line 25 - "The features in this GIS dataset, which represents each conveyance facility component (e.g., intakes, intermediate Forebay, tunnels, spoils areas), were overlaid onto resource-specific GIS data layers to identify physical effects of conveyance facility construction. This GIS-based approach facilitated both a component-specific, or project-level, analysis of the individual features of the conveyance facilities, as well as a program-level analysis of construction of the conveyance facilities in aggregate." As identified in comments on Figure M3-4, sheet 5 and others, the GIS location for the tunnel muck disposal sites is misaligned with the parcel boundaries. The GIS based analysis described by the BDCP is therefore flawed and would produce erroneous quantification of impacts of the footprint of the project on all resources that were evaluated using this method. Quantifications of impacts would both be over as well as underrepresented in the disclosure of the EIR/S. Over estimation of impacts are fine, but under reporting of impacts is not and is not offsetting. The BDCP

must redo the described analysis, but this time with the correct location of the project footprint respective to the other resources and this material deficiency of the disclosure must be recirculated for public comment.

2-22, line 28 - "As described in Appendix 3B, Environmental Commitments, in Appendix A of this RPDEIR/SDEIS, DWR will perform a series of geotechnical investigations along both the selected water conveyance alignment and at locations proposed for facilities or material borrow areas. The work to be performed will constitute a subsurface investigation program to provide information required to support the design and construction of the water conveyance facilities." Although it is good that the BDCP now has a plan in place to collect information to develop a more detailed project design and description and that data collection plan is evaluated in this RPDEIR/S (see related comments), it is clear that even the BDCP understands that the previously submitted public draft was deficient in the amount, quality and representativeness of the subsurface geotechnical information used in the previous public draft EIR/S. A project-level project design and analysis of impacts cannot be developed and evaluated until this proposed geotechnical data becomes available. Many previous comments were submitted on the incomplete geotechnical data and the implications thereof regarding the design, construction and potential impacts of the conveyance and habitat restoration components of the project. Those comments and their implications regarding the incomplete project impact analysis and disclosure still stand valid. The BDCP still cannot to date determine a number of critical factors relating to this missing geotechnical data, including, but not limited to: liquefaction and settling risks from tunnel boring and other disturbance activities (e.g. breaching levees for intake construction), bulk density (and therefore weight and volume of tunnel disposal materials which in turn would determine the number of truck trips, disposal site deposition depths, etc.), off-gassing characteristics of the tunnel muck (volume, rate and proportion of hydrogen sulfide, CO₂, methane, and other volatiles), tunnel muck contaminants and required disposal (and related impacts) depending on toxic concentrations, water infiltration rate of the tunnel muck to quantify redirection of surface and flood flows, rate at which the soil conditioner would break down and allow plant and animal colonization, tunnel muck particulate size and wind erosion and resulting air pollution, presence and concentrations of contaminants and environmental toxins (Se, Pb, Hg, Arsenic, etc.). Until a representative sample that is a statistically defensibly valid sample density and distribution is completed, the BDCP environmental analysis does not meet the criteria for a project-level analysis, and therefore must not be approved or issued construction-related permits.

2-23, line 11 "The proposed subsurface exploration will focus not on environmental impact issues, but on geotechnical considerations..." Since the preceding comment and related comments in this comment submittal as well as previously submitted comments have identified that incomplete and unrepresentatively distributed subsurface samples were inadequate to identify, evaluate, quantify, avoid, minimize, mitigate or disclose the full range of environmental impacts from the excavation and disposal of tunnel muck materials, the preceding quote from the revised public draft BDCP EIR/S indicates that the project will not ever address these issues and will therefore their environmental analysis and disclosure will continue to be incomplete and deficient.

2-23, line 15 "The data obtained during the geotechnical exploration will be used to support the development of an appropriate geologic model, to characterize ground conditions, and to mitigate the geologic risks associated with construction of proposed facilities." With this statement, the BDCP acknowledges that there are unquantified and unmitigated impacts from the construction of the conveyance that have not yet been identified, quantified, disclosed or mitigated by the project as are required in CEQA. The BDCP must complete this sampling plan and fully disclose the geotechnical and other risks and impacts of the project regarding subsurface conditions and construction impacts and recirculate the EIR/S document for public review of this material and new information.

2-23, line 23 "Representative samples of subsurface materials will be collected from selected locations along the MPTO alignment and at proposed facility sites, and the collected samples will be tested to support design." The types of information that the BDCP is currently lacking to complete their design work, "compaction, density, handling characteristics, reusability suitability analysis, chemical composition, seismic risks", are all information that is also required to complete a project-level environmental assessment. The fact that "representative samples" are required is evidence that the existing sampling is not representative and is therefore incomplete. Additional sampling is needed on all of these project construction areas that the project currently does not have adequate information to support required design processes is ample evidence of the incompleteness and deficiency of the revised public draft EIR/S. As previously commented, there are long reaches (6 plus miles long) of the proposed 30 mile underground conveyance that have absolutely no subsurface material characterizations. The BDCP must complete this planned and necessary data collection to complete the environmental analysis and recirculate the revised document for public comment and disclosure.

2-23, line 33 "The field exploration program will be planned to evaluate soil characteristics and to collect samples for laboratory testing, which will include soil index properties, strength, compressibility, permeability, and specialty testing to support tunnel boring machine (TBM) selection and performance specification..." Throughout the document, the BDCP refers to "reusable tunnel disposal material" and yet without the sampling and testing as described in the preceding quote, the suitability of the tunnel muck material for reuse cannot yet be determined. Reuse of the material will have its own environmental consequences, e.g. additional trucking and equipment usage impacts on traffic and air quality, conditioning operations (turning over, sorting, reserve soils, revegetation, etc.) habitat impacts and redirected flood risks. The BDCP EIR/S has not identified, evaluated, quantified, avoided, minimized, mitigated or disclosed these reuse application impacts. The reason why the BDCP has not evaluated these reuse applications is that they lack the data to perform these project-level analysis. The proposed geotechnical data collection described by the BDCP here will provide that information to perform that analysis. The BDCP EIR/S therefore must be revised to utilize this newly collected data, and to address the previous document deficiencies and recirculated for public comment and disclosure.

2-2, line 35 "The proposed Phase 2a and 2b exploration on land will consist of approximately 1,500–1,550 exploration locations including drilling boreholes and performing CPTs as well as conducting approximately 60 shallow test pit excavations (typically 4 feet wide, 12 feet long, and 12 feet deep) in soils to evaluate bearing capacity, physical properties of the sediments, location of the groundwater table, and other typical geologic and geotechnical parameters." The conveyance surface construction locations and alignment are now located on mostly state owned or publicly accessible sampling sites and yet the project has determined that its information to understand the physical, chemical and geotechnical characteristics is deficient by 1,500 samples. The original sampling, on which the incomplete and cursory discussion of tunnel muck materials included in the previous and this public draft EIR/S was based on less than 200 samples. The environmental analysis does not require 750% less sampling density and representativeness than the next phase of engineering design. All of the types of data to be collected for the engineering assessment are also necessary to complete a comprehensive environmental assessment and disclosure of project effects. The BDCP has purposely previously under sampled the data for the environmental analysis and plans to avoid identifying and disclosing project impacts and now plans, concurrent with the completion of the environmental impacts assessment, to collect a huge amount of additional data but not to include it in the environmental impact assessment. This proposed data collection must be completed so that there is a complete and representative sampling and characterization of subsurface and surface soil conditions for use in a revised public draft EIR/S.

2-24, line 1 "The resulting information correlates to the nature and sequence of subsurface soil strata, groundwater conditions, and physical and mechanical properties of soils. Temporary pumping wells and piezometers may be installed at intake, Forebay, pump shaft, and tunnel shaft sites to investigate soil permeability and to allow sampling of dissolved gases in the groundwater." Yes, and without adequate representative sampling, as the current sampling is obviously deficient or this additional sampling would not be required, it is impossible to complete a comprehensive and project-level environmental impact assessment.

2-24, line 24 "Approximately 90–100 overwater geotechnical borings and CPTs are proposed to be drilled in the Delta waterways. These include approximately 30 overwater geotechnical borings and CPTs in the Sacramento River to obtain geotechnical data for the proposed intake structures. Approximately 25–29 overwater borings and CPTs are planned at the major water under crossings along the planned 30 MPTO tunnel alignment. An additional 30–35 overwater geotechnical borings and CPTs are 31 proposed for the barge unloading facilities and Clifton Court Forebay modifications." Since the overwater areas are waters of the US, the BDCP should have completed these samples as part of the EIR/S impacts assessment. The current data used for the EIR/S, especially the barge unloading sites, contains absolutely no information on surface or subsurface conditions. The current available data is not just unrepresentative of these areas, it is inapplicable and therefore, effectively, these impacts have not been evaluated at all in the EIR/S. The BDCP must complete a statistically defensible geographically distributed set of core samples which adequately characterize the condition and composition of the tunnel muck that would be excavated by the project. Once that sampling is done, a complete analysis of the chemical hazards must be conducted. Once the location, nature and magnitude of the tunnel muck disposal material poses to the project, a disposal and handling of contaminated muck plan must be developed and evaluated for its impacts, e.g. filling up Kettleman City with Class 1 disposal materials. The "reusability" claim of the BDCP tunnel muck must also be fully evaluated based on the physical characteristics of the tunnel muck. Since the BDCP has claimed this material is reusable, the BDCP must evaluate the impacts and provide avoidance, minimization and mitigation measures for the impacts that would be precipitated by actually reusing these materials.

2-25, line 20 "...assumptions were developed to incorporate the proposed geotechnical investigations into the analysis of relevant resource topics in this RDEIR/SDEIS." We agree that this information must be included in the EIR/S to address the current data deficiencies. However, any information incorporated from these new samples into the EIR/S represents material new information which requires recirculation of the EIR/S for public comment and disclosure. Further, the collection and analysis of this additional information is not equally applied to all project alternatives as NEPA requires. All project alternatives must be evaluated at this equal level of detail, so substantial additional data collection must occur for the other alternative conveyance alignments which was not described, evaluated or disclosed in this environmental document.

2-25, line 30 "...treating a proposed tunnel shaft location as an impact and then adding an additional impact for a geotechnical exploration proposed for the same location would lead to an overestimate of the overall impacts." This is an incorrect assumption. There are noise, air pollution, water runoff, soil erosion, habitat and water quality impacts that are not redundant as there are separate and additional impacts in type, magnitude and temporal distribution from the construction footprint of the conveyance that are separate, distinct from and in addition to those impacts precipitated from the geotechnical sampling. This erroneous BDCP EIR/S assumption and resulting substantive omissions from the impact analysis must be addressed in a revised and recirculated public draft.

2-27, line 27 "If the Lead Agencies ultimately select an alternative that proposes an alignment different from the modified pipeline/tunnel alignment, it is anticipated that a similar plan for geotechnical exploration would be designed and implemented, as described in Appendix 3B, Environmental Commitments, in 19 Appendix A of this RDEIR/SDEIS." Since the project currently has so little subsurface and geotechnical information on the project, it is very possible that the proposed geotechnical sampling could result in the selection of another conveyance route (e.g. liquefaction problems) over the current proposed project and trigger subsequent sampling as described in the quote. This would mean that an unequal level of effort was applied to the proposed project/proposed action as compared to the other project alternatives and which resulted in a material change in the selection of the project. This unequal level of effort is not compliant with NEPA requirements and therefore, as proposed in the quote, all other alternatives must also receive this same level of sampling and analysis.

3-4, line 15 "Associated facilities include an access road, fencing and security gates, an electrical building with transformers, switching equipment, a backup generator and fuel tank, storage buildings, communication devices, and an outlet tower." It is good that security lighting is not included in these facilities as the light pollution from these creates undisclosed visual impacts and wildlife habitat impacts that were not addressed in the EIR/S. If the facilities description were modified to include security lighting then this would be a material change in the project description and impacts and would therefore require recirculation for public comment and disclosure.

3-5, line 4 "Physical modifications made to Alternative 4 water conveyance facilities did not require revisions to the following chapters in the EIR/EIS: Chapter 1, Introduction; Chapter 2, Project Objectives and Purpose and Need; Chapter 4, Approach to Environmental Analyses; Chapter 5, Water Supply; Chapter 29, Climate Change; Chapter 30, Growth Inducement and Other Indirect Effects; Chapter 31, Other CEQA/NEPA Required Sections; and Chapter 32, Public Involvement,..." In our estimate then, the changes in alternative 4 precipitated changes in 90+% of the document. Given the complexity of the document and analysis and the importance of continuity and context of discussion and analysis in interpreting the document, nearly the entirety of the document must be reviewed and commented on in light of these alternative 4 changes. It stands to reason then, that the review and comment period for this revised public draft EIR/S should be at least as long as 90% of the period for the original public draft review period. The review period offered by the project is unjustifiably brief given the magnitude of changes in the project as evidenced by the scant number of chapters that did not require modification. The BDCP must provide an extended review and comment period to be proportional to the previous comment period, otherwise, this arbitrarily and unjustifiably truncated review and comment period will stifle public comment and participation and be in conflict with the core principles of NEPA and CEQA for public accessibility to and participation in the EIS and EIR process.

3.3.1 - The BDCP says that water supply (water rights) are not addressed in the impact assessment of alternative 4. This material omission is incorrect as there are water rights issues associated with alternative 4 (and 2A, 4A and 5A) that must be addressed in a revised EIR/S. The BDCP animation of delta flows (http://resources.ca.gov/docs/press_release/150722-Public_Comment_Period_on_Revised_Delta_Conveyance_Document.pdf) between the 52 and 59 second mark (correctly) shows that the origin of the water being pulled into the CVP and SWP south delta pumps is coming from the Cosumnes and San Joaquin Rivers. At 2 minutes and 52 seconds, the animation shows the south delta CVP/SWP pumps drawing from the San Joaquin River, Old River, and Victoria canal, none of which DWR or Reclamation have water rights on. DWR and Reclamation do not have water rights to divert water from the Cosumnes and San Joaquin Rivers either. CSPA and others have already made this complaint of SWP and CVP violation of water rights by DWR and Reclamation diversions from water they have no rights to, so by reference, those comments are incorporated here. The Proposed Project and other alternatives that continue south delta operations will continue to be in

violation of water rights by diverting water they do not have rights to so the State Water Resource Control Board must not issue any permits that would allow DWR and Reclamation to continue to illegally divert water from tributaries that they have no water rights on.

3.3.1 - The BDCP omission of discussion of water rights for the alternative 4 analysis was incorrect. The BDCP animation of delta flows (http://resources.ca.gov/docs/press_release/150722-Public_Comment_Period_on_Revised_Delta_Conveyance_Document.pdf) at 2:52 shows that the south delta pumps are operated so that the Sacramento River flows can continue out to the bay to manage west delta water quality. The animation correctly reflects the flows that occur under those low tributary flow and south delta pumping, but again, it explicitly demonstrates that the water being pumped by the CVP and SWP out of the south delta is water that DWR and Reclamation have no water rights to.

3.3.3 - The BDCP proposes "reusable tunnel material areas" that will be stacked several feet thick with this tunnel muck material. The BDCP does not disclose the volume of material to be excavated so it is indeterminant and undisclosed how high the tunnel muck will be raised in comparison to the surrounding terrain. The BDCP fails to meet the criteria for a project specific document that would warrant issuance of construction-related permits because it does not disclose tunnel muck volumetrics nor the height to which tunnel muck will be stacked.

3.3.3. - Some of the tunnel muck disposal areas are as large as several hundred acres, e.g. Bouldin Island tunnel muck disposal area. It is uncertain how large each of these areas are because the EIR/S document fails to list them and disclose their individual sizes. This material information must be disclosed and the document recirculated for public comment.

3.3.3 - The BDCP failed to disclose the water infiltration rate characteristics of the tunnel muck that would be disposed and the range of tunnel muck water infiltration rate conditions it would encounter in the northern, middle and southern portions of the tunnel excavation. This material omission of project specific information prohibits the water runoff and erosion analysis that must be conducted on each of these tunnel muck disposal areas.

3.3.3 - The water runoff and erosion impacts of the tunnel muck disposal areas are only discussed at a programmatic level in the EIR/S and it fails to individually analyze the impacts of each tunnel muck disposal area which will be characteristically different in the type and magnitude of their impacts and the resources affected by them.

3.3.3 - Here are two examples of analyses that should have been conducted at a project level of analysis that were not done in the EIR/S. To do this analysis, the height, land form shape, size, location, water infiltration rates and peak rainfall events must be known for the tunnel muck disposal sites. All of these are "knowable" for a fully formed project-level analysis.

Comment continued: For the first example, let's use the second from the north triangular shaped disposal site south of Lambert Rd. It is a DWR owned property with gravel roads on the south and west sides of it, a vineyard on the north and a pond (I-5 overpass excavation) on the east of it. The pond and upland areas around it have been identified as riparian brush rabbit and Giant Garter Snake (GGS) habitat, both special status species. The area is about 20 acres in size and we assume the tunnel muck would be piled at least several feet high. The higher elevation of the tunnel muck will result in drainage of any quantity of rainfall exceeding the infiltration rate of the soil in draining off to the adjacent properties. This drainage will result in flooding of the adjacent roads and erosion of the edges of the tunnel muck onto the adjacent properties and into waters of the state. The erosion will clog the drainage adjacent to the roads and will cover the native soils in the upland area adjacent to the pond which is the riparian brush rabbit and GGS habitat. The non-native tunnel muck soil that buried the relatively undisturbed native soil will lead to colonization of exotic and invasive weed species that will crowd out the native grasses which are important food and cover habitat components for the riparian brush rabbit. Drainage from the tunnel muck site into the vineyard could bury the vines in a layer of tunnel muck causing vine disease problems like cancer, flood vines causing disease problems like phythothora, disrupt vineyard operations from flooding (making it impassible for tractors and crews), or even cause wetlands to form or disappear depending on disruption or rerouting of drainage patterns. It should be noted before we move onto the next example, that the disposal area just to the north of the preceding example is adjacent to waterways that feed the Stone Lake National Wildlife Refuge. Tunnel muck what erodes into the tributaries adjacent to this tunnel muck disposal site will directly affect the turbidity and other water quality parameters of the main water supply for the refuge irrigation and aquatic wildlife.

Comment continued: The second project specific example of a tunnel material impact analysis that should have been conducted in the EIR/S, but was not, is the tunnel muck disposal area on the southern portion of Bouldin Island. This tunnel muck disposal area, which should have received project specific level analysis, but was not, covers the entire southeast quadrant of Bouldin Island. I cannot even guess from the figures or project descriptions how big this area is except that it covers well over a thousand acres. For this project-level example analysis, let's look at cumulative drainage and localized flooding potential from the elevated area from the tunnel muck disposal. For our analysis, let's assume a worst case scenario of the soil already being saturated by a previous storm, a near record rain event of 3.75" in a 24 hour period (<http://rainfall.weatherdb.com/1/49/Stockton-California>) and the tunnel muck having a water infiltration rate of near zero (it does have the consistency of "toothpaste" according to the EIR/S). Approximately 5.7 miles of the perimeter of this tunnel muck disposal area out of the total perimeter area of 9.6 miles is bordered by levees, so the drainage from this disposal area will all be focused on the 3.9 miles of unleveed border of the tunnel muck disposal area. The surface area of this tunnel muck disposal site is approximately 1,230 acres (as estimated by recreating the boundaries on Google Earth, as the specific amount of area of this site was not disclosed in the EIR/S). The drainage in the rainfall even scenario defined above results in over 14 Million cubic feet of water draining from the proposed tunnel muck disposal area onto the adjacent properties (which are already saturated and flooded by their own 3.75" rainfall event). The drainage from the tunnel muck area in this scenario is enough to flood the nearest one square mile of adjacent property an extra one half foot deep. This is certainly a significant impact to the land use and habitat values of the adjacent properties that the EIR/S failed to avoid, minimize, mitigate, evaluate or disclose.

3.3.3 - The water supply and drainage for the canals and pump system for this area of Bouldin Island are on the west side about one quarter way down the southern tip of the island that is proposed by the BDCP to be covered by the tunnel muck. Obviously the drainage for this area will no longer function once it is covered by tunnel muck and the BDCP has proposed no avoidance, minimization or mitigation for this impact.

3.3.3 - The USACE must not issue permits for the BDCP project until the EIR/S has at least included project specific analysis of drainage disruption and flooding impacts of each of the tunnel muck disposal sites with a site and project specific level of detail as partially illustrated with the examples above. Once this project-level analysis and impacts have been completed, the project must demonstrate how they have avoided, minimized and mitigated these impacts before any consideration of issuance of permits based on this BDCP EIR/S document.

3.3.3 - The local Reclamation Districts must approve the proposed mitigation plans by the BDCP before the USACE can issue permits on the project. Mitigations should include, but are not necessarily limited to: replacement of the drainage/water supply canals and pump and maintenance of those facilities by the project in perpetuity. Mitigation maintenance requirements extend beyond the end of the project period as the existing infrastructure has been permanently been destroyed by the project even long after the BDCP project lifespan is completed. Any mitigations that extend in perpetuity must be funded by a trust that is self sustaining as the continued existence of DWR and Reclamation and available funding cannot be guaranteed in any other way.

3-6, line 36 "...modeling assumptions were reviewed..." There would be no need for this statement unless there were changes in the groundwater modeling assumptions based on that review. If modeling assumptions were changed for groundwater modeling impacts assessments for one alternative, they must be changed for all of the alternatives, otherwise, the comparative nature of the impact analysis is corrupted and skewed (perhaps so that alternative 4 has less groundwater impacts than the other alternatives). If changes were made in the groundwater modeling assumptions for some of the alternatives, then the analysis must be redone for all of the alternatives and the BDCP EIR/S recirculated to disclose this material new information.

3-7, line 4 "...water quality effects associated with construction of water conveyance facilities—such as those related to discharges from work sites or changes to storm water drainage and runoff patterns—to occur in different locations as a result of the revised facility footprints." This is an incomplete and misleading statement. The impact of alternative 4 (and the other alternatives) to water quality has changed by the reduction in the footprint of the facilities, changes in construction methods, construction schedule and construction materials. All of these changes in construction are identified in other sections describing the impact assessment of alternative 4. As previously and subsequently commented, these refinements in footprint, construction schedule, equipment, methods and locations, must all be equally applied to the other project alternatives and they be re-evaluated and the results recirculated for public comment.

3.3.8 - "...updated assumptions for pile-driving activities for proposed water conveyance facilities,..." The same comment applies here that if any assumptions are altered to avoid or minimize impacts for alternative 4, that those same design and construction assumptions must be equally applied to all other project alternatives that contain those same project components (near or in-water construction in this case). These changed assumptions for in-water work must result in reduced impacts and it would be a biased analysis if these same assumptions and measures were not applied to the other alternatives with these same impacts that could be avoided or minimized in the other alternatives.

3-7, 3.3.9 - The reduced impact from the change in the intakes from being powered pump facilities to gravity fed facilities that only require temporary transmission lines and lower power transmission lines is a reasonable avoidance and minimization measure that must be applied to all project alternatives that include intakes. If the project description of the other alternatives that contain intakes are not similarly modified to avoid and minimize these impacts, it will be obvious that the BDCP and its lead agencies have purposely made the other alternatives worse in comparison to their Proposed Project due to their predecisional bias towards alternative 4A. The BDCP must modify all of the other alternatives with these same avoidance and minimization measures and then redo the analysis and

then recirculate this material new information.

3.3.10 - Alternative 4 has obviously had a substantial additional level of effort and investment in the development and refinement of the conveyance design and siting to avoid and minimize impacts. Since the other previous alternatives have not been reanalyzed, it is obvious that an unequal level of effort and level of detail between the alternatives have been applied, which is a violation of NEPA's requirement for equal treatment of alternatives. The BDCP must apply an equal level of effort to refining the other alternatives to similarly avoid and minimize impacts. These revised alternatives must then be fully analyzed, with the same level of detail and set of assumptions as were done for the new alternatives. This revised document must then be recirculated for public comment and disclosure.

3.3.11 - same comment as preceding comment.

3.3.11 - Dust from tunnel muck ("reusable tunnel material") will have a different microbial community than the natural surface soils due to different soil physical and chemical composition (especially considering the modifications to it from tunnel slurry conditioning compounds). New disposal sites for "Reusable Tunnel Materials" are adjacent to vineyards and the environmental analysis failed to analyze the impact of the altered soil microbial community from the tunnel muck disposal on the quality, marketability and value of the wine grapes. Published scientific literature on the importance of soil (and grape bunch derived from soil) microbial community influence on grape Terroir (<http://www.pnas.org/content/111/1/5>, <http://www.pnas.org/content/111/1/E139>) determined that wine grape quality are significantly influenced by their soil and grape bunch (derived from their soil) microbes. Introduction of the tunnel muck microbial community from dust mobilization onto the wine grapes will alter the quality and value of the grapes produced in these adjacent and down-wind vineyards. The project must evaluate and disclose this material omission from their analysis and propose measures to avoid, minimize and mitigate these impacts.

3-8, line 24 "...refined set of construction equipment and schedule assumptions developed for Alternative 4..." The BDCP is clearly identifying that additional effort has gone into alternative 4 and that a comparable level of effort and refinement has not been applied to the other project alternatives which is in direct violation of EIR requirements.

3.3.13 - same quote and comment as preceding comment.

3-9, line 7 "...revised design of water conveyance facilities (and associated architectural guidelines incorporated in a revised conceptual engineering report) to result in a substantial alteration..." So this quote makes it clear that the architectural guidelines were altered for modification of alternative 4 which resulted "in a substantial alteration", but those revised guidelines were not applied to the other alternatives. Those updated guidelines must be equally applied to all of the other alternatives and all of the analysis must be redone and recirculated for this material new information.

3.3.16 - same quote and comment as preceding comment. Of course these comments are intended to apply to all resource areas and impacts that would be altered from a refined project footprint, design, location, etc.

3.3.16 - The representations of the highway rerouting on the south side of intake number 5 are not specific enough to allow detailed analysis of compliance of turn radius requirements to accommodate 52' semi trailer trucks that regularly are required to transit to and from State Highway 160 to and from Randall Island road to service Greene and Hemly and Elliot Farming cold storage and packing houses. The BDCP must complete the plan to a project level of detail which then must be analyzed for highway turn radius compliance. This material omission of project information and required analysis for securing permits from the California Department of Transportation (Caltrans) and therefore the public draft EIR/S must be revised and recirculated.

<p>3.3.18 -The energy impacts analysis must also be revised to reflect the changes not only in construction footprint, but in construction location (different energy sources for modified construction locations), equipment, schedule, construction methods, etc. which according to other EIR/S document sections were modified for alternative 4. Further, all of these refinements to alternative 4 must be equally applied to the other alternatives and those alternatives re-analyzed and those results recirculated for public comment.</p>
<p>3.3.18 -The air quality impacts analysis must also be revised to reflect the changes not only in construction footprint, but in construction location (different air quality attainment basins and different counties for modified construction locations), equipment, schedule, construction methods, etc. which according to other EIR/S document sections were modified for alternative 4. Further, all of these refinements to alternative 4 must be equally applied to the other alternatives and those alternatives re-analyzed and those results recirculated for public comment.</p>
<p>3-10, line 29 "...updated assumptions for pile-driving activities for proposed water conveyance facilities,..." The same comment applies here that if any assumptions are altered to avoid or minimize impacts for alternative 4, that those same design and construction assumptions must be equally applied to all other project alternatives that contain those same components (in-water construction in this case). These changed assumptions for in-water work must result in reduced impacts and it would be a biased analysis if these same assumptions and measures were not applied to the other alternatives with these same impacts that could be avoided or minimized in the other alternatives.</p>
<p>3-11, line 1 "...update the assessment of the creation or exposure of hazardous materials or known hazards sites to people or the environment, as a result of constructing and operating the proposed water conveyance facilities." Under other resource impact areas, they said there were no differences in operations of the conveyance so only construction-related impacts were updated for alternative 4. This BDCP EIR/S quote identifies that the operating impacts of hazards were updated for alternative 4. If hazard-related impacts changed for the operations of the conveyance, then many other impact topic area impacts must have also changed for the alternative 4 operations. The BDCP must update the operational impacts for all impact topic areas and recirculate the document for this material omission.</p>
<p>3.3.22 - Same comment as 3.3.10.</p>
<p>3.3.23 - Same comment as 3.3.10.</p>
<p>3.3.24 - Same comment as 3.3.10.</p>
<p>3.3.25 - Same comment as 3.3.10.</p>

4-1, line 5 "...additional sub-alternatives that meet the goals of restoring the ecological functions of the Delta..." The November 20, 2013 BDCP DEIR/S project objectives for CEQA from DWR state in 2-2, line 30, "DWR's fundamental purpose in proposing the BDCP is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health,..." The RPDEIR/S claim that "restoring ecological functions" meets the project objectives, but that claim bears little resemblance to "restore and protect ecosystem health" nor does their claim reasonably satisfy that objective. Both statements include the word "restore" or "restoring", but the alternative 4 reference refers to restoring ecological function and the project objective refers to restoring ecosystem health. These are not nearly the same as we will see in a moment when we discuss function vs. health. The BDCP alt 4 contains the word "ecological" whereas the project objective uses the term "ecosystem". Webster's dictionary defines these words nearly synonymous in meaning, so the biggest difference in the proposed alternative 4 and the project objective comes down to the difference of "function" vs. "protect". Webster's dictionary defines "function" as "The act of executing or performing any duty, office, or calling; performance". Webster's defines "protect" as "To cover or shield from danger or injury; to defend; to guard; to preserve in safety". You can see that there is no reasonable comparison to the intent and implications to the word "function" vs. the word "protect". The BDCP claims that the north delta diversion will restore natural flow patterns in the delta, an ecological function. Even forgetting for a moment the huge difference between "function" and "protect", this claim by the BDCP is inaccurate and misrepresentative of the facts. The BDCP claims that by not drawing water from the north delta across the central and south delta to the south delta SWP and CVP pumps that a more natural flow regime and flow direction will be restored. Natural flow conditions in the delta will not be restored by the use of north delta intakes for 2 reasons. First, the BDCP proposes dual operations so they will still use the south delta pumps as much as 60% of the time. Right there you know that at least 60% of this BDCP claim is not true.

Comment continued: Second, in order for the natural flows to be restored to the delta and thus restoring that ecological function, the flow levels of the eastern and southern tributaries to the delta would also have to be restored in addition to the cessation of the unnatural flow contributions across the delta that occur due to the CVP and SWP. Cumulative annual flows of these other, non-Sacramento River, delta tributaries are in the range of 10% of what they were pre-western development, which is the baseline in which the ecological function of this flow pattern and the development and behavior of the fish species that respond to flow cues was based upon. In order to "restore" the delta flow pattern the BDCP would not only need to not draw water from the south delta, but it would also have to increase other, non-Sacramento River, east and south delta tributary (e.g. Mokelumne, Cosumnes, Calaveras, and San Joaquin Rivers) flows by as much as 90% (which the BDCP does not propose to do). So the BDCP claim that the change in flows of the CVP/SWP operations restoring this ecological function is also clearly false and unsupported by the readily available scientific published documents and flow records. Getting back to the difference of function vs. protect, even if the BDCP claim of restoring a flow function were to be correct (it is not), this would not result in the protection ("shield from injury") of the ecosystem as there are still a huge number of other non-flow-related factors that are injuring the ecosystem and the delta species, i.e. water quality contaminants. So in summary, "function" is not at all the same as "protect" and even if restoring flow function were accomplished by the project (it is not) it would still not equate to resulting in a protection of the ecosystem. Therefore, the new project alternatives do not reasonably meet the CEQA project objective as defined in the November 20, 2013 BDCP DEIR/S. As a result of not reasonably meeting the project objectives, DWR must drop these alternatives from consideration and choose a different Proposed Action. If the BDCP will not drop these alternatives due to their (incorrect) determination that these new alternatives still reasonably meet the project purpose and need, then any other alternative that was identified in the scoping process that met these criteria equally as

comprehensively (or not) must also be given full consideration and analysis in a re-revised public draft EIR/S.

4-1, line 5 "...additional sub-alternatives that meet the goals of restoring the ecological functions of the Delta..." The November 20, 2013 BDCP DEIR/S project objectives for CEQA from DWR state in 2-2, line 30, "DWR's fundamental purpose in proposing the BDCP is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ecosystem health, water supplies of the SWP and CVP south-of-Delta, and water quality..." Focusing on this statement, it says that DWR's fundamental purpose for the BDCP is to restore and protect... water quality. The BDCP's analysis of water quality concluded that there were significant and unavoidable impacts to water quality resulting from the proposed project. Since the restoration and protection of water quality is a fundamental purpose of the project, any project alternative that has significant and unavoidable impacts to a fundamental project objective should be disqualified from further consideration and not selected as the Proposed Project/Action of the project. Any alternative that has significant and unavoidable impacts to resources that were fundamental objectives to restore and protect should be disqualified from further consideration. If none of the project alternatives meet that criteria, then the project must be withdrawn and shut down or revised until a project alternative can be developed that does not violate this fundamental objective.

4-1, line 5 "...additional sub-alternatives that meet the goals of restoring the ecological functions of the Delta..." The November 20, 2013 BDCP DEIR/S project objective for CEQA from state in 2-3, line 14, "To improve the ecosystem of the Delta by: 1. Providing for the conservation and management of covered species through actions within the BDCP Planning Area that will contribute to the recovery of the species; and 2. Protecting, restoring, and enhancing certain aquatic, riparian, and associated terrestrial natural communities and ecosystems. 3. Reducing the adverse effects to certain listed species of diverting water by relocating the intakes of the SWP and CVP;" The new BDCP project alternatives do not address item one or two in any way so the new project alternatives fundamentally fail to meet the reasonable intent or objectives of the project. For item three, this was always a flawed objective as submitted in previous comments. This third sub-objective is predecisional in it selects the method of achieving an outcome rather than stating the objective that needed to be attained by the project. The correct statement of this objective would be to: avoid or mitigate the artificial flow pattern of the current south delta CVP/SWP operations that draw water north to south across the delta to allow a more natural east to west flow pattern in the delta. So out of these three fundamental objectives, the new proposed project alternative of the BDCP only partially addresses (see above comment) the third objective (incorrectly stated as an outcome rather as an objective as previously stated in this comment) of constructing north delta intakes.

4.1-1, line 7 "Specifically among the comments received on the Draft EIR/EIS was the suggestion that DWR should pursue permit terms shorter than 50 years due to the levels of uncertainty regarding both the long-term effectiveness of habitat restoration in recovering fish populations and the future effects of climate change on the Delta and the Sacramento River watershed." Although BDCP included the suggestion to drop the habitat restoration all together, it did not consider or incorporate in this revised draft this suggestion for a shorter HCP term. The BDCP must include this as an alternative as the alternative to drop the HCP all together is less reasonable as compared to a shorter HCP term in meeting the project objective and purpose and need identified in the 11/20/14 DEIR/S chapter 2 Purpose and Need. Both NEPA and CEQA require inclusion of alternatives that reasonably meet the purpose and need and project objectives (respectively) and this suggestion for a shorter duration HCP alternative more reasonably meets the purpose and need and objectives than the current Proposed Project/Action and other new alternatives.

4.1-1, line 11 "Other comments suggested that the proposed conveyance facilities should be untethered from the habitat restoration components of the BDCP, with the latter to be pursued separately. Consistent with this input, the Lead Agencies are analyzing an alternative implementation strategy considered within the new alternatives in this RDEIR/SDEIS (Alternatives 4A, 2D, and 5A)" The BDCP response was not consistent with this input as it did not propose an HCP with a reduced project duration. The agencies did however choose to adopt the other suggestion to split the project into two different projects so that the impacts of the whole project that met the project objective and purpose and need would not be recognized and would not have to be mitigated. Splitting the project into two separate projects is called piece meal and it is direct violation of NEPA and CEQA law - see related comments. The BDCP has assumed that the habitat restorations should be done later, after the conveyance. Since the vast majority of the habitat restoration actions are current legal obligations of the CVP/SWP, DWR and Reclamation must implement the current legal obligations before constructing the conveyance which conflicts with the ability to implement them if the conveyance is implemented first - see related comments.

4.1-1, line 41 "...implementing a dual conveyance system would align water operations to better reflect natural seasonal flow patterns..." In order for the flows to better reflect seasonal flow patterns in the delta, the flow levels of the eastern and southern tributaries to the delta would also have to be restored in addition to the cessation of the unnatural flow contributions across the delta that occur due to CVP/SWP south delta diversion operations. Cumulative annual flows of these other, non-Sacramento River, delta tributaries are in the range of 10% of what they were pre-western development, which is the baseline in which the ecological function of this flow pattern and the development and behavior of the fish species that respond to flow cues was based upon. In order to better reflect natural delta flow patterns the BDCP would not only need to not draw water from the south delta, but it would also have to increase other, non-Sacramento River, delta tributary flows by as much as 90% (which it does not propose to do). So the BDCP claim that the change in flows of the CVP/SWP operations better reflecting natural flow patterns is also clearly false and unsupported by the readily available scientific published documents and flow records.

4.1-1, line 16 "The alternative implementation strategy would achieve the project objectives and purpose and need by constructing conveyance facility improvements and associated ecosystem improvements." The dropping of the HCP from the new project alternatives is not an "alternative implementation strategy" it is an alternative permitting strategy. Changing permitting strategies is fine as long as the alternatives reasonably meet the project objectives and purpose and need. As previous comments have demonstrated, the new project alternatives do not reasonably meet these defined project requirements so they are not alternatives that may be considered or adopted. Further, back to the BDCP quote, the new project alternative do not have "associated ecosystem improvements" in any meaningful or substantial way in terms of magnitude of area or potential benefits to habitat or species as compared to the scope of proposed actions contributing to habitat and ecosystem restoration included in the previous project alternatives.

4.1-1, line 18 "These changes are necessary for the SWP and CVP to address more immediate water supply reliability needs while reducing the severity of existing ongoing environmental impacts. The strategy would achieve the latter objective and purpose in part by reducing reverse flows and direct fish species impacts associated with the existing south Delta intakes." The BDCP is saying here that the "co-equal goals of habitat restoration and water supply reliability" are not co-equal at all. They propose to build their proposed conveyance "in the short term" (operational 10 years from now in the best case schedule scenario) and to leave the vast majority of actual habitat restoration and species conservation to some later (10-20-30 years?), as yet to even be formed, other project. This other project to fulfill the other half of the project's co-equal objectives does not meet any of the criteria for a reasonably foreseeable project nor does it count in an alternatives screening process to give credit to an alternative for meeting a project requirement by having a different project fulfill that project requirement. The rationale for doing something to stop the on-going impacts of the current CVP/SWP as soon as possible is logical and deserves to be treated with the greatest possible diligence (like the OCAP BO RPAs legal requirements - see related comments). Since we are agreed that short-term action is necessary and prudent (and in the case of the OCAP BO RPAs is the law), the BDCP must include a project alternative with a near term implementation phase. A shorter implementation period and greater fisheries specifies benefits can be realized by a full retrofit of the south delta intakes with a criteria compliant fish screen - see related comments. These retrofits to existing SWP/CVP facilities that are within their current facilities footprints would take less than half as much time to do environmental impacts assessments on, permit, and construct than the proposed conveyance construction. Also please recall that the first BDCP draft EIR/S concluded that the conveyance, CM1, would not result in any benefits to or contributions to recovery of listed species. Criteria fish screens at south delta facility as retrofits were proposed in the BDCP scoping and were previously submitted in detail in the draft EIR/S comments. The operations and benefits/impacts of the conveyance have not changed from the draft BDCP EIR/S so this means that claim of the BDCP to construct the conveyance to stop on-going impacts of the CVP/SWP are false. The BDCP has incorporated other comments as the basis for new alternatives. What is their rationale for not giving equal consideration to other comments as the basis for new alternatives, especially ones that more fully meet the project needs? If expediency is the motivation BDCP cites, then they must put forward an alternative that incorporates the retrofit of existing facilities to avoid, minimize and mitigate the on-going CVP/SWP impacts.

4.1-1, line 21 "The alternative implementation strategy allows for other state and federal programs to address the long term conservation efforts for species recovery in programs separate from the proposed project." The BDCP is saying here that the "co-equal goals of habitat restoration and water supply reliability" are not co-equal at all. They propose to build their proposed conveyance (not in the long-term so it must be the short-term) and to leave the vast majority of actual habitat restoration and species conservation to some later (20-30-40 years?), as yet to even be formed; project. This other project to fulfill the other half of the project's co-equal objectives does not meet any of the criteria for a reasonably foreseeable project and breaking the project into two separate projects is piece meal and, as previously commented, is against NEPA and CEQA law.

4.1-1, line 25 "The California Department of Water Resources (DWR) would not seek 50-year permits under the federal and state endangered species laws for Alternatives 4A, 2D, or 5A. The originally proposed BDCP habitat restoration measures and related Conservation Measures (CMs) (i.e., CM2 through CM21) would not be included as parts of Alternatives 4A, 2D, and 5A..." If the previous comments have not made the point clear that the new alternatives do not reasonably meet the project objectives and purpose and need, here is another way to look at it. The current Proposed Project/Action includes 95% less conservation measures than the original project alternatives that were determined to meet the project purpose and need and objectives. It is not possible that the original alternatives were so grossly over-scoped or that such a diminished scope of the new proposed

alternatives could possibly reasonably meet the project purpose and need and objectives.

4.1-1, line 27 "The originally proposed BDCP habitat restoration measures and related Conservation Measures (CMs) (i.e., CM2 through CM21) would not be included as parts of Alternatives 4A, 2D, and 5A, except to the extent required to mitigate significant environmental effects..." This quote from the BDCP document makes it clear that the new alternatives have no component of habitat restoration or species conservation beyond the minimum amount required for compensatory mitigation of the additional impacts on the habitat and species that the project directly or indirectly precipitates. In other locations in this document, the BDCP claims that there is habitat restoration, which is entirely different than habitat mitigation which the above quote clearly indicates is the only type of habitat action included in the Proposed Project/Action or new alternatives. This is an inconsistent and misleading representation of the project that must be clarified in a revised public draft.

4.1-1, line 32 "Alternatives 4A, 2D, and 5A would not serve as habitat conservation plans/natural community conservation plans (HCPs/NCCPs) under ESA Section 10 and the NCCPA..." The 2009 Delta Reform Act requires the BDCP to include an NCCP as part of its mission and compliance in order to qualify for state funding. The current BDCP alternatives which do not include an NCCP are in direct violation of the 2009 Delta Reform Act and also as a result do not qualify for any state funding. The 2009 Delta Reform Act also requires the BDCP to comply with CEQA, which it is not - see related comments. The BDCP has violated CEQA by its inclusion of alternatives which do not reasonably meet the Project Objectives - see related comments. The new project alternatives do not meet half of the co-equal project objectives to restore and protect habitat- see related comments. The BDCP has further violated CEQA by rejecting alternatives that more fully and reasonably meet the project alternatives so they have not equally treated alternatives against screening criteria - see related comments. The BDCP has violated NEPA by applying a higher level of effort and detail (refinement of the conveyance alignment and addition of more design detail to avoid and minimize impacts) into the current proposed project than were applied to the previously considered project alternatives - see related comments. The BDCP has also violated NEPA and CEQA by not applying the best available science, e.g. Dissolved Oxygen impact modeling and assessment - see related comments. The BDCP has further violated NEPA and CEQA by splitting the project into two separate projects to reduce the impacts to less than significant as compared to their sum if they were a single project. This is called piece-mealing a project and it is in violation of NEPA and CEQA - see related comments.

4.1-1, line 35 "Alternatives 4A, 2D, and 5A would enable DWR to construct and operate new conveyance facilities that improve conditions for endangered and threatened aquatic species in the Delta..." The water operations for these new alternatives are represented in the EIR/S as being exactly the same as those for the previous alternative 4. The previous public draft EIR/S determined that CM1, the conveyance, did not contribute to the conservation or recovery of the species, so this claim here in the revised draft EIR/S is false and is purposely misleading to the agency decision makers who would rely upon this document. These misleading claims in the EIR/S must be revised and corrected for factual accuracy and reissued for public comment after these material changes.

4.1-2, line 14, "If Alternative 4A, 2D, or 5A is approved at the end of the CEQA/NEPA process, restoration of habitat in the Delta, beyond these alternatives' mitigation requirements, will instead occur through California EcoRestore, and these activities will be further developed and evaluated independent of the water conveyance facilities." This is exactly what will not happen if the California Water Fix plan is approved. The BDCP project knows this and is purposely misrepresenting the potential of doing both of these projects separately. If the California Water Fix is approved and meets the criteria of a reasonably foreseeable project prior to the development of the California Eco-Restore, the first public draft of the BDCP EIR/S has proven that the impacts of implementing both the conveyance and the restoration actions end up with impacts that are worse than the No Action/No Project of the BDCP alternatives that included both conveyance and restoration. If the conveyance exists first, the California EcoRestore project (as we already know from the first public draft BDCP EIR/S analysis) will not be able to come up with a proposed project that has impacts less than the No Action/Project and therefore will never be approved or implemented. The BDCP must stop this misrepresentation and the illegal (non-NEPA and CEQA compliant) proposal to piecemeal this project into two parts. The BDCP must either find a project alternative which reasonably meets the project purpose and need as it was originally defined and scoped and which is viable from an impacts/benefits perspective or, failing that, must abandon this unviable project. If after abandoning this failed project a project is still desired, then the process can start from scratch with new public noticing, new purpose and need, new public scoping, new consultant contracting, new project alternatives, new analysis and new environmental impact disclosure documents.

4.1-2, line 17 "Although DWR and Reclamation have identified these alternatives with a new implementation strategy, they are nevertheless consistent with the Coordinated Operation Agreement (COA) governing the coordinated operation of the federal Central Valley Project (CVP) and State Water Project (SWP)." The statement in the EIR/S does not disclose how the proposed project is consistent with the COA, it just makes the unsupported claim that it is. The document must provide a detailed discussion and disclosure on, point by point of the agreement, how the alternatives are or are not consistent or compliant. This is required by the analysis of a project's compliance with existing agreements, rules and regulations in an EIR/S disclosure document. The issue of the project compliance with the COA is not with regards to the permitting pathway selected to address ESA and CESA issues, but is to do with changing the timing, quality and quantity of water deliveries to member agencies, allocation of water deliveries between the water contractors as well as existing and future cost allocations to those agencies. The COA has long been out of date and out of compliance with the terms of the existing COA, but the proposed project and alternatives further violate the agreement terms and further date it's obsolescence. The BDCP, in any of its forms, clearly triggers the requirement for the COA to be redone and the impacts of that must be evaluated in this environmental document - see prior related comments. If the BDCP fails to address the requirement to revise and update the COA due to the proposed project and alternatives, these impacts of the COA update will go undisclosed and unmitigated.

4.1-2, line 20, "These new alternatives would, like Alternative 4, address compliance with federal and state endangered species laws with respect to the operation of the existing SWP Delta intake and conveyance facilities, as well as for the construction and operation of conveyance facilities for the movement of water entering the Delta from the Sacramento Valley watershed to the existing SWP and CVP pumping plants in the southern Delta." This is an incorrect assertion of the EIR/S. Alternative 4 included an HCP habitat restoration and contributions to species conservation and recovery and therefore it addressed on-going impacts of the existence of and operations of the CVP/SWP facilities in the delta and upstream and downstream of the delta. Alternatives 4A, 2D and 5A do not include the HCP component in these alternatives and they do not contribute to species recovery or conservation. The mitigations included for these new alternatives only address the new impacts that would occur with the implementation of the tunnels and do not address the on-going upstream and downstream impacts of the existence of and operations of the CVP/SWP. Therefore, the project with the alternatives without the HCP component would continue to be out of compliance with ESA and CESA and provide no justification for issuance of incidental take permits that would cover these on-going CVP/SWP impacts. The responsible fisheries and wildlife agencies must not issue permits to the BDCP or California Water Fix on these new alternatives as they provide absolutely no compensation for these on-going upstream and downstream impacts that the other alternatives that included the HCP integrated into their alternative components.

4.1-3, line 6 ""CEQA compels an interactive process of assessment of environmental impacts and responsive project modification which must be genuine. It must be open to the public, premised upon a full and meaningful disclosure of the scope, purposes, and effect of a consistently described project, with flexibility to respond to unforeseen insights that emerge from the process." These are correct quotes of CEQA and case precedent, but the assertion of the EIR/S overlooks the part that the purposes of the alternatives must be consistent. The new alternatives are not consistent with the project purpose or the previously considered alternatives. The new alternatives do not reasonably meet the project Purpose and Need and Objectives as they do not co-equally address habitat restoration and species conservation as they do address conveyance. In fact, in the new alternatives, the conveyance component is to the express exclusion of the habitat restoration and species conservation (above the minimum required mitigation of significant project impacts to reduce impacts to less than significant). NEPA says alternatives must reasonably meet the project Purpose and Needs (and CEQA of the Project Objectives). The new alternatives do not reasonably meet the project Purpose and Needs and Objectives - see related comments. The project must start over with a new purpose and need if it wants to revise the project to the point where it does not reasonably meet the project purpose and needs and objectives - see related comments. If the BDCP determines that the new alternatives do somehow reasonably meet the Purpose and Need and Objectives, in order to consistently treat potential alternatives in the alternative development process as NEPA and CEQA both require, other alternatives which equally as well meet most of the Purpose and Need and Objectives of the project, must also be fully developed and fully considered as alternatives in the EIR/S analysis and disclosure - see related comments here and previously submitted comments.

4.1-3, line 19 "When preparing a Final EIS, a federal lead agency must respond to comments on a Draft EIS in one of several ways, "including by modifying alternatives including the proposed action and by developing and evaluating alternatives not previously given serious consideration by the agency."" There are many suggested project alternatives that the BDCP did not give serious consideration to (see related comments here and previously submitted) and those alternatives must be included in the next revised EIR/S. If the BDCP includes alternatives in the final EIR/S that were not included in the public draft EIR/S, this constitutes material new information and must be publicly disclosed with opportunity for comment in a revised public draft EIR/S.

4.1-3, line 33 "...federal courts have long recognized that "agencies must have some flexibility to modify alternatives..." The key words here are "some flexibility" which definitely does not imply the latitude for a project to literally drop half of the co-equal goals in the Purpose and Need and Objectives of the project. This reference to case precedent definitely does not adequately address the scope of the modification of the alternatives done by the BDCP. The original draft EIR/S was technically a failed project as the proposed project and alternatives all resulted in worse impacts than the No Action/No Project alternative and the key permitting agencies indicated that the project could not be permitted in its current form. The BDCP had struggled for years to come up with better alternatives that had less impacts and yet in the full analysis had failed to define a project that was better than the current project running into the future with no changes. That is why the BDCP is now currently going to such great lengths to redefine the project, in contradiction to the original Purpose and Need and Project Objectives, and why it is engaging now in such an extensive (but failed) attempt to justify its alteration of the project in its newly formulated alternatives. The BDCP was and is a failed project and the current justifications of the BDCP to radically redefine the scope the project are not supported by NEPA or CEQA regulations or case precedent. As a failed project, the BDCP must not go forward and if any efforts to go forward with a new and different set of project Purpose and Need and Project Objectives, it would have to do so as a new project from the beginning of the process from public noticing on.

4.1-4, line 17 "Under Alternative 4A, water conveyance facilities would be constructed and maintained identically to those proposed and analyzed under Alternative 4" This is not a correct statement by the EIR/S. The location, size, construction materials, construction methods, power infrastructure and many other aspects of the new alternatives are different from those analyzed in the alternative 4 of the original public draft EIR/S. The EIR/S must be revised to provide material disclosure of the unique aspects of the impacts of the new proposed project and alternatives as they are materially different than those previously analyzed and disclosed.

Table 4.1-1 - There are several problems with the disclosure here that are misleading to the reader and the agency staff who would rely upon this document for decision making. First, alternative 4 was never proposed as a section 7 ESA consultation for Reclamation. Throughout the BDCP public draft EIR/S, the Reclamation ESA consultation was represented as a section 10 consultation. Second, the conveyance is not the same. The location, method of conveyance (pumped vs. gravity), construction methods, footprint and many other features of the conveyance have changed between the originally proposed alternative 4 vs. the new alternative 4A. This table misleads the reader by indicating they are the same, but they are not. Third, it indicates that the operations, except those disclosed, are the same between alternative 4 and 4A. This is also not true and is purposely misleading to the reader and decision makers. Operations between these alternatives are substantially different in that the constraints of water operations from water quality violations that occurred from the increased volume of tidal prism from the implementation of aquatic habitat restorations interactions with water system operations. Water quality conflicts on water operations from aquatic habitat restorations have been substantially reduced by the exclusion of those habitat restorations from alternative 4A. Fourth, the project has corrupted the comparability of the alternatives by having a different No Action definition for some alternatives than other alternatives. Early long-term has very few changes from climate change while the late long-term has much more pronounced impacts from assumed climate change. This revised definition of the No Action will result in the new alternatives having few climate change driven or influenced impacts while the previous alternatives must deal with much more severe climate change assumptions. The only way the BDCP could justify the shorter no action definition would be if the lifespan of the project is constrained to be shut down at the date of this early long term and even then it would need to redo the analysis of the previous alternatives to be consistent with this same end of project period. Fifth, the compliance locations for operations modeling are different between Alt 4 and 4A. Alt 4 used a modified compliance point at Three Mile Slough and 4A used the current compliance

point at Emmaton. The BDCP must correct these misleading portrayals of the project and complete the required disclosures of operations and analyses that differ between alternative 4 and 4A.

4.1-5 4.1.2.2 - As stated in the preceding comment, third point, the operations of alternatives 4 and 4A are not at all the same as water quality driven water operation constraints from aquatic habitat restorations have been substantially reduced in the alternative 4A which includes very few acres of aquatic habitat restoration in comparison to alternative 4.

4.1.2.2, line 13 "All other criteria included in the USFWS (2008) and NMFS (2009) BiOps and D-1641 will continue to be complied with, subject to adjustments made pursuant to the adaptive management process as already described in the 2008 and 2009 BiOps, as part of the continued operations of the CVP and SWP." This is a substantial misrepresentation of the SWP/CVP compliance with the OCAP BOs. Following is a list of the Reasonable and Prudent Actions (RPAs) required by the OCAP BOs for DWR and Reclamation to implement in the CVP/SWP to avoid continued jeopardy of the listed species. You will see from the list that DWR and Reclamation have missed compliance with almost every single requirement of the BOs. DWR and Reclamation are blatantly in violation of the terms of the OCAP BO RPAs so the BDCP representation that the CVP/SWP are in compliance is a gross misrepresentation by the EIR/S.

Comment continued: DWR and Reclamation are non-compliant with current OCAP BO RPAs. The OCAP BO RPAs are a part of the No Action definition for the BDCP comparative analysis (see related comments) as they are current obligations of the CVP/SWP. The BDCP has failed to accurately represent the vast majority of the OCAP BO RPAs in terms of their environmental affects and their impacts on water operations, storage, fish habitat quality, quantity and distribution, on water rights, water supplies, water quality and many other environmental resources. The BDCP falsely claims that no details were available to represent these OCAP BO RPAs, but in fact most of the actions do have available information and the BDCP has failed to meet the NEPA and CEQA test to utilize the best available information. The following comments identify most of the OCAP BO RPA deliverables that are current obligations of Reclamation and DWR to fulfill. The comments identify the deadlines for the actions and in some cases describe the nature of the information that should be available to the BDCP to incorporate into their EIR/S. If none of this information is available to the BDCP, then it means that Reclamation and DWR have not fulfilled their legal requirement to comply with the OCAP BO RPAs and they are in violation of the ESA.

Comment continued: The OCAP BO RPAs required Reclamation to provide information that must be included in the BDCP EIR/S and it includes:

- Annual report on spawning gravel augmentation efforts in compliance of NMFS 2009 OCAP BO Action I.1.3. This report was due by December 31 each year. Reclamation shall provide a report to NMFS on implementation and effectiveness of the gravel augmentation program.
- Documentation of completion of replacement of the Spring Creek Temperature Control Curtain in Whiskeytown Lake in compliance with the 2009 NMFS OCAP BO Action I.1.4. This was due to be completed by Reclamation by June 2011.
- Clear Creek salmonid habitat suitability studies per the 2009 NMFS OCAP BO Action I.1.6.
- Reclamations proposed operational flow recommendations to NMFS for Clear Creek per the 2009 NMFS OCAP BO Action I.1.6. This was to be completed by Reclamation within 6 months of the flow studies.
- Long-term performance report in compliance with the 2009 NMFS OCAP BO Action I.2.1. This is due from Reclamation every 5 years with the latest due in June 2014.
- Monthly reports to NMFS in compliance with the 2009 NMFS OCAP BO Action I.2.3.B. Reclamation shall submit a projected forecast, including monthly average release schedules and temperature compliance point. To be completed within 7 business days of receiving the DWR runoff projections for that month.
- Contingency plans submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.2.3.C. By March 1, (each year) justification that all actions within Reclamation's authorities and discretion are being taken to preserve cold water at Shasta Reservoir for the protection of winter-run. The contingency plan shall, at a minimum, include the following assessments and actions:
 - a) Relaxation of Wilkins Slough navigation criteria to at most 4,000 cfs.
 - b) An assessment of any additional technological or operational measures that may be feasible and may increase the ability to manage the cold water pool.
 1. c) Notification to State Water Resources Control Board that meeting the biological needs of winter-run and the needs of resident species in the Delta, delivery of water to nondiscretionary Sacramento Settlement Contractors, and Delta outflow requirements per D-1641, may be in conflict in the coming season and requesting the Board's assistance in determining appropriate contingency measures, and exercising their authorities to put these measures in place.
- Annual Temperature Management Plan in compliance with the 2009 NMFS OCAP BO Action I.2.4. Due from Reclamation May 15th each year.
- Prioritized list of projects from Appendix 2-B and an implementation schedule submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.3.5. Due by Reclamation by 12/15/09.
- Annual report to NMFS on implementation and effectiveness of projects in compliance with the 2009 NMFS OCAP BO Action I.3.5. Reclamation was to implement, monitor and report on these projects for 5 years.

Comment continued: • Plans submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.6.1. Due from Reclamation by December 31, 2011. This plan should have included an evaluation of options to: (1) restore juvenile rearing areas that provide seasonal inundation at appropriate intervals, such as areas identified in Appendix 2-C or by using the Sacramento River Ecological Flow Tool (ESSA/The Nature Conservancy 2009) or other habitat modeling tools; (2) increase inundation of publicly and privately owned suitable acreage within the Yolo Bypass; (3) modify operations of the Sacramento Weir or physically modify Fremont Weir to increase rearing habitat; and (4) achieve the restoration objective through other operational or engineering solutions. An initial performance measure shall be 17,000-20,000 acres (excluding tidally-influenced areas), with appropriate frequency and duration. This plan also shall include: (1) specific biological objectives, restoration actions, and locations; (2) specific operational criteria; (3) a timeline with key milestones, including restoration of significant acreage by December 31, 2013; (4) performance goals and associated monitoring, including habitat attributes, juvenile and adult metrics, and inundation depth and duration criteria; (5) specific actions to minimize stranding or migration barriers for juvenile salmon; and (6) identification of regulatory and legal constraints that may delay implementation, and a strategy to address those constraints. This is a critical missed Reclamation compliance deadline as if they had complied with the legal requirements of the OCAP BO RPAs, all of the design and operational features for the Yolo Bypass

RPAs would have been sufficiently developed to allow for full project-level analysis in the BDCP EIR/S.

Comment continued: • Annual progress reports submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.6.1. This is a Reclamation requirement of the BO RPAs. • Liberty Island/Lower Cache Slough implementation reports and interim monitoring reports submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.6.2. Reclamation shall monitor this action for the subsequent five years, at a minimum, to evaluate the use of the area by juvenile salmonids and to measure changes in growth rates. Interim monitoring reports shall be submitted to NMFS annually, by September 30 each year, and a final monitoring report shall be submitted on September 30, 2015, or in the fifth year following implementation of enhancement actions.

Comment continued: • Plans, status and annual reports submitted to NMFS on the Lower Putah Creek enhancements in compliance with the 2009 NMFS OCAP BO Action I.6.3. By December 31, 2015, Reclamation and/or DWR shall develop and implement. As described in Appendix 2-C, including stream realignment and floodplain restoration for fish passage improvement and multispecies habitat development on existing public lands. By September 1 of each year, Reclamation and/or DWR shall submit to NMFS a progress report towards the successful implementation of this action. Since this BO RPAs required implementation of this action by 12/31/15, these plans must have either been available for inclusion in the BDCP EIR/S or Reclamation has failed to comply with the OCAP BO RPA implementation schedule and failed to meet the test of even a good faith effort to develop and implement these actions.

Comment continued: • Annual reports submitted to NMFS on the Lisbon Weir improvements in compliance with the 2009 NMFS OCAP BO Action I.6.4. By December 31, 2015, Reclamation and/or DWR shall assure that improvements to the Lisbon Weir are made that are likely to achieve the fish and wildlife benefits described in Appendix 2-C. Improvements will include modification or replacement of Lisbon Weir, if necessary to achieve the desired benefits for fish. By September 1 of each year, Reclamation and/or DWR shall submit to NMFS a report on progress toward the successful implementation of this action. Since this BO RPAs required implementation of this action by 12/31/15, these plans must have either been available for inclusion in the BDCP EIR/S analysis or Reclamation and DWR have failed to comply with the OCAP BO RPA implementation schedule and failed to meet the test of even a good faith effort to develop and implement these actions. • OCAP BO note regarding rationale for I.6.2 – I.6.4, “These improvements are necessary to off-set ongoing adverse effects of project operations, primary due to flood control operations.” Since these have not been implemented, they do not offset the on-going impacts of flood control operations and therefore these species remain in jeopardy from the SWP and CVP operations.

Comment continued: • Plan submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action I.7. By December 31, 2011, as part of the plan described in Action I.6.1, Reclamation and/or DWR shall submit a plan to NMFS to provide for high quality, reliable migratory passage for Sacramento Basin adult and juvenile anadromous fishes through the Yolo Bypass. Since this BO RPAs required implementation of this action by 12/31/11, these plans must have either been available for inclusion in the BDCP EIR/S analysis or Reclamation has failed to comply with the OCAP BO RPA implementation schedule and failed to meet the test of even a good faith effort to develop and implement these actions.

Comment continued: • Written reports to NMFS on the status of its efforts to complete the 2009 NMFS OCAP BO action I.7, in cooperation with the Corps. By June 30, 2010, including milestones and timelines to complete passage improvements. If Reclamation had complied with this BO RPA, there would have been sufficient detail regarding this action to analyze in the BDCP EIR/S. • Note regarding rationale for NMFS BO I.7, “This action offsets unavoidable project effects on adult migration and minimizes the direct losses from flood management activities associated with operations.” Since these

actions have not been implemented, they do not offset the on-going impacts on these species and they continue to be in jeopardy from the SWP and CVP operations.

Comment continued: • Operations Forecast and Temperature Management Plan submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action II.2. Due by Reclamation by May 15th each year.

Comment continued: • Proposed plans submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action II.3. This is a report on the evaluation of physical and structural modifications that may improve temperature management capability which was due from Reclamation by June 30th 2010. Since this BO RPAs required implementation of this action by 6/30/10, these plans must have either been available for inclusion in the BDCP EIR/S analysis or Reclamation has failed to comply with the OCAP BO RPA implementation schedule.

Comment continued: • Copy of notice of completion of implementation submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action II.3. This was due from Reclamation by 12/15/10. • Completed HGMP in compliance with the 2009 NMFS OCAP BO Action II.6.1. Due from Reclamation by 3/31/12. • Draft plan HGMP in compliance with the 2009 NMFS OCAP BO Action II.6.3. Due from Reclamation by June 2013.

Comment continued: • Note regarding Eastside CVP operations, NMFS BO pdf pg 621, "The fundamental operational criteria are sufficiently ill-defined in the CVP/SWP operations BA as to provide limited guidance to the Action Agency on how to operate. This suite of actions provides sufficiently specific operational criteria so that operations will avoid jeopardizing steelhead and will not adversely modify their critical habitat. Operational actions to remove adverse modification of critical habitat include a new flow schedule to minimize effects of flood control operations on functionality of geomorphic flows and access of juvenile steelhead to important rearing areas." If Reclamation has not implemented to these actions, then from this BO language, it is clear these ESA species would remain in jeopardy. It is clear from the BOs that just implementing changes to water operations were insufficient to avoid continued jeopardy of the species by CVP/SWP.

Comment continued: • Annual summaries submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action III.1.1.

Comment continued: • Plans, schedules and monitoring and final reports on gravel augmentation in compliance with the 2009 NMFS OCAP BO Action III.2.1. Reclamation shall submit a plan, including monitoring, and schedule to NMFS for gravel augmentation by June 2010. Reclamation shall begin gravel augmentations no later than summer 2011. Implementation completed by 2014. Reclamation shall submit to NMFS a report on implementation and effectiveness of action by 2015. Spawning gravel replenishment sites shall be monitored for geomorphic processes, material movement, and salmonid spawning use for a minimum of three years following each addition of sediment at any given site. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis.

Comment continued: • Operations plans and implementation reports in compliance with the 2009 NMFS OCAP BO Action III.2.2. Reclamation shall submit a proposed plan of operations to achieve this flow regime by June 2011. This plan shall include the minimum flow schedule identified in Action III.1.2, or shall provide justification for any proposed modification of the minimum flow schedule. Reclamation will implement strategy starting in 2012. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis.

Comment continued: • List of projects, implementation and monitoring reports submitted to NMFS compliance with the 2009 NMFS OCAP BO Action III.2.3. Reclamation was due to submit plan to NMFS by June 2010. Reclamation shall begin implementation of NMFS-approved projects by June 2011. Reclamation shall submit a report of project implementation and effectiveness by June 2016. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis.

Comment continued: • Proposed engineering solutions submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action IV.1.3. Due by March 30, 2012. Reclamation or DWR shall provide a final report on recommended approaches by March 30, 2015. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis.

Comment continued: • Weekly reports from Reclamation and DWR to the interagency Data Assessment Team (DAT) regarding the results of monitoring and incidental take of winter-run, spring-run, CV steelhead, and Southern DPS of green sturgeon associated with operations of project facilities per the 2009 NMFS OCAP BO. This information would have informed Reclamation regarding relationships of operations and ESA species response to operations influenced behavioral responses. This information is for adaptive management of operations which Reclamation claims it does not have available to include in the BDCP EIR/S.

Comment continued: • Reclamation and DWR annual written report to NMFS following the salvage season of approximately October to May. This report shall provide the data gathered and summarize the results of winter-run, spring-run, CV steelhead, and Southern DPS of green sturgeon monitoring and incidental take associated with the operation of the Delta pumping plants (including the Rock Slough Pumping) per the 2009 NMFS OCAP BO. This information would have informed Reclamation regarding relationships of operations and ESA species response to operations influenced behavioral responses. This information is for adaptive management of operations which Reclamation claims it does not have available to include in the BDCP EIR/S.

Comment continued: • Reports to NMFS of facility salvage efficiency of 75 percent in compliance with the 2009 NMFS OCAP BO Action IV.4. Reclamation and DWR shall implement the following actions to reduce losses associated with the salvage process, including: (1) conduct studies to evaluate current operations and salvage criteria to reduce take associated with salvage, (2) develop new procedures and modifications to improve the current operations, and (3) implement changes to the physical infrastructure of the facilities where information indicates such changes need to be made. Reclamation shall continue to fund and implement the CVPIA Tracy Fish Facility Program. In addition, Reclamation and DWR shall fund quality control and quality assurance programs, genetic analysis, louver cleaning loss studies, release site studies and predation studies. Funding shall also include new studies to estimate green sturgeon screening efficiency at both facilities and survival through the trucking and handling process. By January 31 of each year, Reclamation and DWR shall submit to NMFS an annual progress report summarizing progress of the studies, recommendations made and/or implemented, and whole facility salvage efficiency. This is probably the most important missed obligation by Reclamation as the plans to meet these salvage efficiencies would have become an important component of a project alternative that would have had lower environmental impacts than the proposed project. In order to meet these goals, it is likely that full criteria fish screens would have been designed for implementation and should have been included in the BDCP EIR/S - see related comments. Reclamation cannot both claim it is compliant with the OCAP BOs and that information is not available in sufficient detail to allow analysis in the BDCP EIR/S. Reclamation must provide NMFS with the designs and operations for the CVP/SWP to become compliant with this RPA and these actions must be included in the BDCP EIR/S No Action/No Project baseline definitions and included in the detailed analysis of an alternative in a revised and recirculated BDCP EIR/S.

Comment continued: • Fish salvage facility improvement plans submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action IV.4.1. Due from Reclamation by December 31, 2012, to improve the whole facility efficiency for the salvage of Chinook salmon, CV steelhead, and Southern DPS of green sturgeon so that overall survival is greater than 75 percent for each species. In order to meet these goals, it is likely that full criteria fish screens would have been designed for implementation and should have been included in the BDCP EIR/S. Reclamation cannot both claim it is compliant with the OCAP BOs and that information is not available in sufficient detail to allow analysis in the BDCP EIR/S. Reclamation must provide NMFS with the designs and operations for the CVP/SWP to become compliant with this RPA and these actions must be included in the BDCP EIR/S No Action/No Project baseline definitions and included in the detailed analysis of an alternative in a revised and recirculated BDCP EIR/S.

Comment continued: • Studies submitted to NMFS for methods for removal of predators in the primary channel in compliance with the 2009 NMFS OCAP BO Action IV.4.1.1)a. Due from Reclamation by December 31, 2011 + 90 days. (using physical and non-physical removal methods (e.g., electricity, sound, light, CO2), leading to the primary louver screens with the goal of reducing predation loss to ten percent or less. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S alternatives development, impact analysis and adaptive management plan.

Comment continued: • Implementation completion report to NMFS on measures to reduce pre-screen predation in the primary channel to less than ten percent of exposed salmonids in compliance with the 2009 NMFS OCAP BO Action IV.4.1.1)a. Due by Reclamation by 12/31/12. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis, alternatives development and adaptive management plan.

Comment continued: • Studies submitted to NMFS for the re-design of the secondary channel to enhance the efficiency of screening, fish survival, and reduction of predation within the secondary channel structure in compliance with the 2009 NMFS OCAP BO Action IV.4.1.1)b. Due by Reclamation by 3/31/11. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion as an alternative component or variant thereof (see Clifton Court criteria compliant fish screen alternative comments and description) in the BDCP EIR/S impact analysis.

Comment continued: • Communications to NMFS documenting the initiation of the study findings in compliance with the 2009 NMFS OCAP BO Action IV.4.1.1)b. Due by Reclamation by 1/31/12. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis.

Comment continued: • Copies of plans submitted to NMFS for one or more potential solutions to the loss of Chinook salmon and green sturgeon associated with the cleaning and maintenance of the primary louver and secondary louver systems at the TFCF in compliance with the 2009 NMFS OCAP BO Action IV.4.1.1)c. Due by Reclamation no later than June 2, 2010. In the event that a solution acceptable to NMFS is not in place by June 2, 2011, pumping at the Tracy Pumping Plant shall cease during louver cleaning and maintenance operations to avoid loss of fish during these actions.. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis and as an alternative component or as an adaptive management strategy.

Comment continued: • Documentation of operational procedures implemented to optimize the simultaneous salvage of juvenile salmonids and Delta smelt at the facility in compliance with the 2009 NMFS OCAP BO Action IV.4.1.2. Due by Reclamation by 12/31/11. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S as an alternative component and utilized in the impact analysis.

Comment continued: • Documentation of removal of predators in the secondary channel in compliance with the 2009 NMFS OCAP BO Action IV.4.1.3. This is due from Reclamation weekly since the issuance of the OCAP BO. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S impact analysis and adaptive management evaluation.

Comment continued: • Documentation of equipment installed to monitor for the presence of predators in secondary channel during operations in compliance with the 2009 NMFS OCAP BO Action IV.4.1.3. Due from Reclamation by June 2, 2010. This could include an infrared or low light charged coupled device camera or acoustic beam camera mounted within the secondary channel. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S adaptive management analysis.

Comment continued: • Documentation of installation of flow meters in the primary and secondary channels to continuously monitor and record the flow rates in the channel in compliance with the 2009 NMFS OCAP BO Action IV.4.1.6. Due from Reclamation by 1/2/10. If Reclamation had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S for the development of operational criteria to avoid and minimize fisheries impacts, impact analysis and for adaptive management evaluation.

Comment continued: • Documentation of the Skinner Fish Protection Facility to achieving the minimum 75 percent salvage efficiency for CV salmon, steelhead, and Southern DPS of green sturgeon after fish enter the primary channels in front of the louvers in compliance with the 2009 NMFS OCAP BO Action IV.4.2.1). Due from DWR by December 31, 2012. If DWR had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S as a project alternative component (see fish screen alternative related comments), in the impact analysis and potentially to inform the adaptive management measures.

Comment continued: • Report to NMFS on compliance with the 2009 NMFS OCAP BO Action IV.4.2.2)a). DWR is to immediately commence studies to develop predator control methods for Clifton Court Forebay that will reduce salmon and steelhead pre-screen loss in Clifton Court Forebay to no more than 40 percent. Studies complete on or before March 31, 2011. 40% improved predator control shall be achieved by March 31, 2014. Failure to meet this timeline shall result in the cessation of incidental take exemption at SWP facilities unless NMFS agrees to an extended timeline. This OCAP BO RPA compliance information must also be in the BDCP EIR/S. If DWR had complied with the OCAP BO RPAs, this information would have been available for inclusion in the BDCP EIR/S project alternative components, adaptive management evaluation and impact analysis.

Comment continued: • Revised draft and final updated plans submitted to NMFS in compliance with the 2009 NMFS OCAP BO Action V, NF3. Reclamation is to submit a revised draft report by January 15 of each year. Reclamation and partner agencies shall release a final updated Fish Passage Pilot Plan by March 14 of each year. With 7 years of revised and updated fish passage plans submitted to NMFS, Reclamation should have a great deal of information available on fish passage at their facilities and be able to conduct an impact analysis of implementing those actions and plans in the BDCP EIR/S. This and all of the fish passage BO RPA compliance is critical to the BDCP as when the fish are passed above the CVP/SWP terminal dams, the fish will have access to substantial amounts of additional habitat and improved water temperatures that are no longer solely dictated by CVP/SWP reservoir operations and reservoir cold water pool availability. Much of the adverse affect of the CVP and SWP on listed salmonids is from their exceedance of water temperature objectives downstream of their dams/reservoirs. If the fish passage was completed as required in the OCAP BOs, the CVP/SWP impacts on the listed fish species would be significantly reduced. The BDCP must include fish passage in the No Action baseline and then reanalyze the project and alternative impacts. This comment applies to all fish passage related comments.

Comment continued: • Documentation of the implementation of the Pilot Reintroduction Program in compliance with the 2009 NMFS OCAP BO Action V, NF4. These are due from Reclamation in January starting 2012 and continuing through 2015. Reclamation should have three years of reintroduction studies to utilize as a basis for analyzing the impacts of upstream fish passage that must be included in the BDCP EIR/S as part of the No Action/No Project baseline.

Comment continued: • Documentation of the completion of fish collection facilities in compliance with the 2009 NMFS OCAP BO Action V, NF4.1. Sacramento River Fish Facility – Collection facility shall be operational no later than March 2012. American River Fish Facility – Collection facility shall be operational no later than March 2012. Reclamation should have several years of operational data on the impacts of implementing these actions and this information must be included in the revised and recirculated BDCP EIR/S. Reclamation should also have completed an EIS on this project prior to its permitting and construction so those materials should also be available to use in the BDCP EIR/S and as part of the No Action/No Project baseline definition.

Comment continued: • Documentation of the completion of construction of adult fish release sites above dams and juvenile fish release sites below dams in compliance with the 2009 NMFS OCAP BO Action V, NF4.2. To be completed by Reclamation by March 2012. Reclamation should have several years of operational data on the impacts of implementing these actions and this information must be included in a revised and recirculated BDCP EIR/S. Reclamation should also have completed an EIS on this project prior to its permitting and construction so those materials should also be available to use in the BDCP EIR/S as part of the No Action/No Project definition and baseline for comparison to the BDCP alternatives.

Comment continued: • Documentation of the implementation of upstream fish passage for adults via “trap and transport” facilities in compliance with the 2009 NMFS OCAP BO Action V, NF4.3. To be completed by Reclamation by March 2012. Reclamation should have several years of operational data on the impacts of implementing these actions and this information must be included in the revised and recirculated BDCP EIR/S. Reclamation should also have completed an EIS on this project prior to its permitting and construction so those materials should also be available to use in the BDCP EIR/S description of and assumptions related to the No Action/No Project.

Comment continued: • Documentation of the implementation of interim downstream fish passage through reservoirs and dams in compliance with the 2009 NMFS OCAP BO Action V, NF4.4. Due from Reclamation starting 2012. Reclamation should have several years of operational data on the impacts of implementing these actions and this information must be included in the revised and recirculated BDCP EIR/S. Reclamation should also have completed an EIS on this project prior to its permitting and construction so those materials should also be available to use in the BDCP EIR/S. If Reclamation was in compliance with the OCAP BO RPA implementation schedule as mandated, the description and operational characteristics of all of these fish passage related RPAs would be part of the existing conditions/affected environment description and embedded in the No Action/No Project.

Comment continued: • Plans, designs, documentation of construction completion and evaluations of a prototype head-of-reservoir juvenile collection facility above Shasta Dam in compliance with the 2009 NMFS OCAP BO Action V, NF4.5. Due from Reclamation beginning in January, 2010. Construction shall be complete by September 2013. Reclamation should have several years of operational data on the impacts of implementing these actions and this information must be included in the revised and recirculated BDCP EIR/S. Reclamation should also have completed an EIS on this project prior to its permitting and construction so those materials should also be included in the BDCP EIR/S.

Comment continued: • Annual reports on, the elements of the pilot program, including adult reintroduction locations, techniques, survival, distribution, spawning, and production; and juvenile rearing, migration, recollection, and survival in compliance with the 2009 NMFS OCAP BO Action V, NF4.6. Due from Reclamation from 2012 to 2015. A final summary report of the 5-year pilot effort shall be completed by Reclamation by December 31, 2015. Reclamation should have several years of reports on these actions and this information must be included in the revised and recirculated BDCP EIR/S.

Comment continued: • Plans for fish passage on the Stanislaus River above Goodwin, Tulloch and New Melones Dams in compliance with the 2009 NMFS OCAP BO Action V, NF4.7. Due from Reclamation by March 31, 2011. This plan shall identify reconnaissance level assessments that are needed to support a technical evaluation of the potential benefits to CV steelhead that could be achieved with passage above the dams, a general assessment of logistical and engineering information needed, and a schedule for completing those assessments by December 31, 2016. Reclamation should have the 3/31/11 report to include in the BDCP EIR/S.

Comment continued: • Letter to the USACE specifically in compliance with the 2009 NMFS OCAP BO RPA I.7. This letter from Reclamation is to request modification of Fremont Weir and other facilities to accommodate fish passage and was to include a request for an agreement for Reclamation to provide technical assistance and funding. This letter was due to be submitted to USACE by 9/30/09 and should have included detailed design and operational specifications that should have been included in the BDCP EIR/S. The BDCP claims it can only analyze this alternative component at a programmatic level (it was not even as detailed and fully formed as a programmatic description as the flow-related operational rules were not defined) because project-level information was not available. This information should be available if Reclamation was compliant with the ESA as required in the OCAP BO RPAs.

Comment continued: • Plans submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA I.7 reduction of migratory delays and loss for salmon, steelhead and sturgeon. These were due from Reclamation and DWR by 6/30/11 and this information must be included in the BDCP EIR/S. Given that the plans were required more than 4 years ago, the project-level description of these actions must be available and must be included in a revised and recirculated BDCP EIR/S that analyzes these actions at a project-level.

Comment continued: • Reports to NMFS on specific actions implemented specifically in compliance with the 2009 NMFS OCAP BO RPA I.7 reduction of migratory delays and loss for salmon, steelhead and sturgeon. These were due to be implemented by Reclamation and DWR by 12/31/11 so there should be 4 years of information on the affects of these implemented actions as well as the project-level EIR/S for implementing them available for inclusion in the BDCP EIR/S.

Comment continued: • Plans and designs submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA IV.4.1. This was due to be completed by Reclamation and delivered to NMFS no later than 3/31/11. This plan from Reclamation for the secondary channel to enhance the efficiency of screening, fish survival and reduction of predation is the basis for another alternative component in the EIR/S that should have been included in the BDCP document.

Comment continued: • Hatchery Genetics Management Plan (HGMP) submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA II.6.1. Was due from Reclamation no later than 6/11. This information and its environmental affects should have been included in the BDCP EIR/S in the No Action/No Project and augmentations of it could have been included as alternative components or under adaptive management. These and all other OCAP BO RPA report and plan omission from the BDCP description of existing conditions/affected environment and the No Action/No Project must be corrected in a revised and recirculated BDCP EIR/S.

Comment continued: • Reports of fish predation studies submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA IV.4.1. Reclamation was due to implement this by 12/31/11. This information would have informed the EIS regarding the impacts, feasibility and adaptive management successes and failures. This information must be included in a revised and recirculated BDCP EIR/S.

Comment continued: • Planning and implementation documents submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA NF 4.1. Reclamation was due to have completed this by the beginning of 2012. Reclamation to design, construct, install and operate adult fish collection, handling and transport facilities to pass fish above project facilities and reservoirs. This information and the impacts of implementing it should have been included in the BDCP EIR/S as part of the existing condition/affected environment and No Action/No Project. The reason that the inclusion of these OCAP BO compliance-related materials (especially fish passage-related ones) in the BDCP EIR/S is so important is that the impacts of water temperatures downstream of Shasta and Folsom (for the CVP and Oroville for the SWP) represent some of the most significant adverse effects on listed salmonid species. According to the OCAP BO RPA implementation schedule, these fish passage actions to get these salmonid populations above these terminal dams would have occurred prior to the baseline date of the BDCP. Fish populations above these dams would mean that the water temperature management of the tributaries below the dams could be altered to be more water supply efficient instead of being driven by water temperature compliance. Fish passage above the dams would completely alter the baseline water operations related to downstream temperature management and therefore would fundamentally change the impact analysis of the BDCP alternatives in their EIR/S. Fish passage would also substantially alter the impacts of the CVP/SWP on sturgeon spawning and rearing life stages with their access to historical spawning and rearing habitat. Fish passage would also alter the impact analysis of the reservoirs which the passed fish would traverse.

Comment continued: • Planning and implementation documents submitted to NMFS on the implementation specifically in response to 2009 NMFS OCAP BO RPA IV.4.1 for the secondary channel to enhance the efficiency of screening, fish survival and reduction of predation. Reclamation was required to implement this no later than 1/31/12 so all of the information required to include this in the BDCP EIR/S should be available and Reclamation should have several years of operations and monitoring data to add to the analysis.

Comment continued: Planning and implementation documents submitted to NMFS specifically in response to the 2009 NMFS OCAP BO RPA NF 4.2 and 4.3 for Reclamation to design, construct, install and operate adult fish release facilities upstream of their facilities and juvenile salmonid release facilities downstream of project facilities and reservoirs. Reclamation was required to complete implementation of these by 3/12 so all of the information required to include this in the BDCP EIR/S should be available and Reclamation should have several years of operations and monitoring data to add to the analysis.

Comment continued: • Reports submitted to NMFS specifically on the performance of fish passage operations as required in the 2009 NMFS OCAP BO RPA NF 4.2, 4.3, 4.4 and 4.5. Reclamation was required to complete implementation of these by 3/12 so at least 2 years of operational reports should be available to include in the BDCP EIR/S.

Comment continued: • Plans and documents submitted to NMFS specifically in response to 2009 NMFS OCAP BO RPA IV.4.1 that Reclamation is to improve the whole facility fish survival efficiency at the Tracy Fish Collection Facility to 75% for Chinook, steelhead and green sturgeon. Reclamation was due to submit this by 12/31/12 so this information should have been included in the BDCP EIR/S as part of the No Action and in other various forms as component to project alternatives. This information would have also informed the adaptive management measures.

Comment continued: • Monitoring reports submitted to NMFS specifically documenting the achievement of 75% fish survival rates at the Reclamation Tracy Fish Collection Facility in response to 2009 NMFS OCAP BO RPA IV.4.1. Reclamation should have several years of monitoring reports to include in the BDCP EIR/S and 75% survival rates should have been assumed in the impacts assessment for the No Action/No Project.

Comment continued: • Reports submitted to NMFS on the reduction of fish predation rates to less than 10% in the primary channel in response to 2009 NMFS OCAP BO RPA IV.4.1. Reclamation and DWR were required to implement this no later than 12/31/12 so this information should have been in the BDCP EIR/S and 10% predation loss rates in the primary channel should have been assumed in the impacts assessment for the No Action/No Project. All of these Reclamation and DWR mandatory improvements to predation rates and fish salvage rates must be included in the No Action/No Project and, if DWR and Reclamation were compliant with the OCAP BO-RPA implementation schedule, the existing conditions/affected environment description. The BDCP EIR/S must be revised with all of these past implementation deadlines as part of the No Action/No Project definition and integrated into the alternatives comparisons to these baselines. The revised EIR/S must be recirculated for this material new information for public comment and disclosure.

Comment continued: • Predation reduction method reports submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA IV.4.3. DWR and Reclamation were required to complete this no later than 6/15/11 so this information should have been in the BDCP EIR/S. This information should have been included in alternatives as a component and as a basis to judge adaptive management success for such programs in the EIR/S.

Comment continued: • Copy of reports submitted to NMFS documenting the improvements of fish salvage monitoring and release survival rates for the south delta pumps specifically in compliance with the 2009 NMFS OCAP BO RPA IV.4.3. Reclamation and DWR were required to complete this by 10/1/09 and annually thereafter. This information should have been in the BDCP EIR/S.

Comment continued: • Planning and implementation documents submitted to NMFS specifically in compliance with the 2009 NMFS OCAP BO RPA NF 4.4. Reclamation was required to be initiate this action by the beginning of 2012 (prior to 1/1/12) which was to provide downstream fish passage for project facilities and reservoirs. Since this should have already been completed, the information to evaluate the impacts of this action should have been included in the BDCP EIR/S. NEPA requires that the best available information is utilized in the analysis of a project's impacts. The BDCP EIR/S has declared that it has not evaluated any of these OCAP BO RPAs other than delta operations because there is insufficient information to analyze. Since so many of these actions were due to have been completed and so many supporting design preparation and post-construction/action implementation results monitoring that it is not possible that (categorically according to the BDCP EIR/S) these materials are not at all available.

Comment continued: • Correspondence and joint work products with the CVP/SWP Fish Passage Steering Committee in response to the coordination requirements from the 2009 NMFS OCAP BO RPA NF 4.5. These materials should be available from both Reclamation and DWR to inform the BDCP EIR/S analysis.

Comment continued: • Planning and implementation documents in response to the 2009 NMFS OCAP BO RPA NF 4.5 for Reclamation to design, build and evaluate juvenile fish capture facilities upstream of their facilities. This was required for Reclamation to complete by 9/13 and should have been included in the BDCP EIR/S.

Comment continued: • Reports submitted to NMFS specifically regarding DWR's Skinner Fish Collection Facility reductions in fish predation rates in response to 2009 NMFS OCAP BO RPA IV.4.2. Compliance was required to be achieved no later than 3/31/14 and should have been included in the BDCP EIR/S.

Comment continued: • Hatchery Management Plans submitted to NMFS specifically in response to 2009 NMFS OCAP BO RPA II.6.3. This was to be implemented by Reclamation no later than 6/14, so this information should be in the BDCP EIR/S.

Comment continued: • DWR reports, plans and correspondence to FWS specifically in response to FWS OCAP BO RPA "Component 4: Habitat Restoration, to implement a program to create or restore a minimum of 8,000 acres of intertidal and associated sub tidal habitat in the Delta and Suisun Marsh. The restoration efforts shall begin within 12 months of signature of this biological opinion and be completed by DWR (the applicant) within 10 years. The restoration sites and plans shall be reviewed and approved by the Service and be appropriate to improve habitat conditions for delta smelt. Management plans shall be developed for each restoration site with an endowment or other secure financial assurance and easement in place held by a third-party or DFG and approved by the Service. The endowment or other secure financial assurance shall be sufficient to fund the monitoring effort and operation and maintenance of the restoration site. An overall monitoring program shall be developed to focus on the effectiveness of the restoration actions and provided to the Service for review within six months of signature of this biological opinion. The applicant shall finalize the establishment of the funding for the restoration plan within 120 days of final approval of the restoration program by the Service." Since there are only 4 years left for this action to be completely implemented and contracting and construction will take at least that long, the plans and supporting detailed environmental documents and permitting must already be completed. This information should have been included in the BDCP EIR/S as part of the No Action and variants of this action should have been included in some of the project alternatives. This omission makes the BDCP EIR/S materially incomplete and deficient. This deficiency must be remedied and a revised EIR/S recirculated for public comment. This information that DWR is required to have completed by this date if it is not in violation of the ESA would allow the analysis of this BDCP action at a project-level of detail that would not require a subsequent environmental document prior to construction as the BDCP has proposed.

Comment continued: • DWR reports or correspondence to FWS specifically in response to FWS OCAP BO RPA "Component 5: Monitoring and Reporting, Information on salvage at Banks and Jones is both an essential trigger for some of these actions and an important performance measure of their effectiveness. In addition, information on OMR flows and concurrent measures of delta smelt distribution and salvage are essential to ensure that actions are implemented effectively. Such information shall be included in an annual report for the Water Year (October 1 to September 30) to the Service, provided no later than October 15 of each year, starting in 2010." This information should have been included in the BDCP EIR/S as it would provide a basis to characterize the No Action/No Project as well as informed potential options in the development of alternatives and adaptive management measures.

Comment continued: • Reclamation reports to FWS specifically in response to FWS OCAP BO RPA two for annual evaluations of fish screens at the North Bay Aqueduct (NBA) diversion during January through June. Reclamation was due to submit the proposed evaluation study to USFWS within 3 months of the issuance of the biological opinion so this information and subsequent plan details should have been in the BDCP EIR/S.

Comment continued: • Reclamation reports to FWS specifically in response to FWS OCAP BO RPA three for frequency of delta smelt monitoring from December through July, when water is being diverted. The creation of the delta smelt habitat study group, initial habitat conceptual model review, formulation of performance measures, implementation of performance evaluation, and peer review of the performance measures and evaluation that are described in steps (1) through (3) of Attachment B shall be completed before September 2009. This information and subsequent plan details should have been evaluated in the BDCP EIR/S. The methodologies developed by this group would likely represent the best available science with regards to analysis of delta smelt movements and biological response to changes in hydrologic conditions and CVP/SWP operations. The current BDCP EIR/S is deficient for not including this information and for not utilizing the best available information and science from this study group.

Comment continued: • Notifications and reports to FWS for BO RPA Action 6. Documentation should include the location, plans, designs, evaluations, environmental documents, permit applications, and status updates and reports to FWS. "A program to create or restore a minimum of 8,000 acres of intertidal and associated sub tidal habitat in the Delta and Suisun Marsh shall be implemented. The restoration efforts shall begin within 12 months of signature of this biological opinion and be completed within a 10 year period." Since there are only 4 years left for this action to be completely implemented and contracting and construction will take at least that long, the project-level description and land modification and water operations plans and supporting detailed environmental documents and permitting must already be completed. The BDCP claims it can only analyze this alternative component at a programmatic level (it was not even as detailed and fully formed as a programmatic description as the flow-related operational rules were not defined) because project-level information was not available. This information should be available if the CVP and SWP were compliant with the ESA as required in the OCAP BO RPAs. This information should have been included in the BDCP EIR/S. This omission makes the BDCP EIR/S materially incomplete and deficient. This deficiency must be remedied and a revised EIS recirculated for public comment.

Comment continued: • Reclamation or DWR reports to FWS regarding any information about take or suspected take of federally-listed species not authorized in the 2008 FWS OCAP BO. Notification must include the date, time, and location of the incident or of the finding of a dead or injured delta smelt. Prospect Island fish rescue by BOR, Jones emergency levee repair and fish rescue are potential examples of notifications that should have been given. Dissolved Oxygen crashes that result in adverse modification of critical habitat caused by or contributed to by CVP/SWP operations must also be included with this other information in a revised and recirculated BDCP EIR/S.

Comment continued: The NMFS BO requires addition of salt to water within the tanker trucks to haul salvaged fish to reduce stress of transport (NMFS OCAP BO pg 657, #5). The DWR 401 Certification from the water board does not cover this discharge and this impacts of adding salts to water discharged into the delta must be addressed in the BDCP EIR/S.

Comment continued: In conclusion to this series of comments related to information that should be available to the BDCP EIR/S from DWR and Reclamation's compliance with the OCAP BOs, Reclamation and DWR have missed the vast majority of the OCAP BO RPA implementation deadlines and are grossly out of compliance with the OCAP BO RPA implementations required for the CVP/SWP to not continue to jeopardize ESA listed fish species. DWR and Reclamation's breach of the OCAP BO terms is a serious offense and as a result the CVP/SWP continues to jeopardize the listed species and has resulted in a significantly compromised and deficient BDCP EIR/S document. If Reclamation and DWR had complied with the OCAP BO RPA schedule of implementation, the No Action analysis would be complete and all of the proposed habitat restorations in the BDCP that are from the OCAP BO RPAs would be conducted at a project-level of detail. Instead, due to DWR and Reclamation's non-compliance with the ESA requirements to implement the OCAP BO RPAs, the BDCP is claiming that it is not possible to include these actions in the No Action definition and assumptions as they are not sufficiently developed to support analysis. The regulatory agencies utilizing this BDCP EIR/S document to support decision making should not accept this incomplete characterization of the No Action alternative as it corrupts all of the analysis that rely on this baseline for comparison. As required by both NEPA and CEQA, Reclamation and DWR must make full use of all available data to include in the No Action modeling and impact baseline. Since all of these actions are delinquent anyway and the agencies (DWR, Reclamation, FWS and NMFS) inaction is resulting in continued jeopardy of ESA listed species from CVP/SWP operations, DWR and Reclamation must apply all of their human, technical and financial resources into becoming compliant with the OCAP BOs - to the exclusion of utilizing conflicting resources for the BDCP which would add further delays to compliance. Once the work to become compliant with the OCAP BOs is completed the CVP/SWP would have the benefit of avoiding jeopardy for the ESA listed species during the period of development of the BDCP planning and implementation process. Another likely benefit of completing the OCAP BO RPAs prior to the BDCP EIR/S advancing is that in the process of completing these compliance plans it is likely that new and more beneficial project alternatives would be identified and developed. An example of this would be the OCAP BO RPA required improvements to the south delta intake channels and fish screens. As the detailed designs and plans required by the OCAP BO RPAs are developed, it is likely that a more significant and comprehensive approach would be developed that not only exceeded the requirements of the OCAP BO fish salvage improvement goals, but became an important component of a new and more viable BDCP project alternative - see comments on south delta criteria fish screen alternative.

Comment continued: It has been well documented over time that DWR and Reclamation are not compliant with the OCAP BOs. The Consolidated Salmonid Cases, 688 F. Supp. 2d 1013 (E.D. Cal. 2010) 3/5/10 Requires Bureau to comply with NEPA for NMFS OCAP BO RPAs (Order issued 3/18/10). The court held that the Bureau failed to comply with NEPA in implementing the RPAs from the 2009 NMFS BO. On 3/28/11 Reclamation gave notice that they are not implementing RPAs that year - in violation of the OCAP BOs and the Consolidated Salmonid Case ruling as well as in violation of the ESA.

Comment continued: The court ordered NMFS to transmit a draft salmon BiOp by 10/1/14, and a final BiOp by 2/1/16; and the Bureau to issue a final EIS by 2/1/16, and a record of decision by 4/29/16. Since Reclamation is just finishing the public draft comment period for the Remand EIS, it is clear from the final revision and mandatory federal agency review periods for final EISs that Reclamation will miss the deadline for the final EIS too which again violates court orders to implement the OCAP BOs and again results in the BDCP EIR/S being deficient in not including the information that should be available to it.

Comment continued: It is clear from the on-going failures of DWR and Reclamation to comply with the OCAP BiOps and the lack of sanctions on them by FWS and NMFS, that NMFS and FWS are failing to enforce their own OCAP BiOps. FWS and NMFS must immediately redress their lack of enforcement of the OCAP BiOps with DWR and Reclamation. FWS and NMFS should start this process by requiring that the OCAP BiOp RPAs are implemented prior to, not after, the construction of any new DWR or Reclamation facilities as the BDCP has proposed. Further, if DWR and Reclamation officers, representatives and staff continue to fail to apply even good faith efforts to implement the OCAP BO RPAs as expeditiously as possible, FWS and NMFS should begin pursuing civil and criminal penalties.

The Draft Environmental Impact Statement (EIS) for the Coordinated Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP) (ES.3, line 17) acknowledges that many of the provisions of the RPAs identified in the biological opinions require further study and monitoring and further environmental documentation necessary before any future facilities can be constructed or modified. The BDCP EIR/S is inconsistent with the OCAP EIS in that the proposed project and new alternatives no longer include implementation of the OCAP BO RPAs prior to or concurrently with the construction of the proposed new conveyance facilities and modification of existing facilities related to water conveyance. The BDCP EIR/S proposed project must be made consistent with the CLTO EIS as these are concurrent documents with the same lead agencies and the OCAP BO is part of the baseline condition of the BDCP EIR/S. Therefore the assumption of RPA implementation prior to CVP/SWP modification and construction must take supremacy over the BDCP proposed project assumption of modifying existing and constructing new facilities prior to implementation of the OCAP BO RPAs.

The BDCP must, in order to prove that the implementation of the BDCP proposed project action would not preclude the implementation of the BO RPAs, do a comparison of the proposed project as the baseline and the addition of the OCAP BO RPAs as a project alternative. The impacts that occur must be less than the No Action/No Project of the BDCP or the BDCP, by its implementation, would increase the impacts of implementing the OCAP BO RPAs and may make them infeasible to implement if the BDCP proposed project were to be implemented first as the BDCP is proposing.

4.1-6, line 28 "To avoid a reduction in overall abundance for this species, the proposed project includes spring outflow criteria, which are intended to be provided through the acquisition of water from willing sellers. If sufficient water cannot be acquired for this purpose, the spring outflow criteria will be accomplished through operations of the SWP and CVP to the extent an obligation is imposed on either the SWP or CVP under federal or applicable state law. Best available science, including that developed through a collaborative science program, will be used to analyze and make recommendations on the role of such flow in supporting Longfin Smelt abundance to DFW, who will determine if it is necessary to meet CESA permitting criteria." This is entirely too speculative as to how these requirements would affect operations and the resulting environmental conditions that would occur if this project were to be approved. It is clear that the project does not know what volume of operations are required to adequately protect this species, does not know where the water would come from to comply with the requirements or even if the CESA requirements can be met. CA F&W must not issue CESA permits for long-fin smelt on such an undefined potential operation that the project cannot even prove they can deliver on or if in fact it would result in the protection of the species. The BDCP must propose a specific set of operations to protect this species that are incorporated into the operations modeling and impact assessment to determine the environmental impacts of implementing this action and determine the magnitude, duration, frequency and geographic extent of potential operational violations of these proposed species protection actions.

Table 4.1-2 - The differences between operations under alternative 4 vs.4A are indecipherable as they are presented in the table. The BDCP must provide a more comprehensible disclosure of the differences between these two operations. The BDCP has claimed that the operations are basically the same, but it does not look like it based on these tables. The tables are not directly or simply comparable (different locations, time periods and flow ranges) and serves to confuse and obscure instead of informing and disclosing as it should. This table could be simplified with a calendar in the case of temporal changes and a third column that identifies the difference of one alt vs. the other. What is clear from the table is that there are substantial differences in operations between Alt4 and Al44A and that modeling conducted for one of these operations is not representative of the other alternative and these impacts assessments cannot be used interchangeably due to their significant differences in resulting resource impacts.

4.1-11, line 3 "Under the observed hydrologic conditions over the 82-year period (1922–2003), the number of years of each water-year type is included below." The BDCP should use a more complete available hydrologic period to include more recent years up to 2014. This would add over 13% more years to the period of record and most importantly it would augment the critical dry year type to be a more representative sampling. Also important in adding more recent years to the analytical period is that climate change is accelerating and these most recent years are our best indicator of future climate change-driven challenges the project would face. The analysis must be redone utilizing the full available set of hydrologic period for its analysis to meet the test of using the best available science as required by NEPA and CEQA.

4.1-11, line 20 - "...north Delta diversion bypass flow criteria include regulation of flows to 1) maintain fish screen sweeping velocities;..." The BDCP has still failed to disclose detailed descriptions and operational modeling and impacts analysis of daily intertidal operations of the north delta diversions on reduced, slack and reverse flow velocities at the proposed north delta diversions. The BDCP must complete these analyses and disclosures and recirculate the revised document for public comment for these material omissions.

4.1-11, line 25 "To ensure that these objectives are met, diversions must be restricted at certain times of the year (mostly from December through June)..." 4.1-11, line 17, "Alternative 4A operations include a preference for south Delta pumping in July through September..." Between these two statements, the north delta diversions would only be fully operated in October and November of each year. To have such huge impacts to the delta ecosystem, residents and businesses for the north delta intakes to fully operate only 2 months of the year as their primary source of diversion this project makes no sense at all from an environmental, social or economic perspective. The tunnel have been estimated to cost between \$8 billion and \$64 billion and all they are getting is two months of north delta operations during a time of year when water operational volumes are at their lowest. Again, given these factors this project makes no sense and should not be approved or permitted.

4.1-15, line 1 "The RDEIR/SDEIS describes and analyzes Environmental Commitments 3, 4, 6-12, 15, and 16 at a level of detail consistent with that applied to these activities under other alternatives in the Draft EIR/EIS. (See CEQA Guidelines, § 15126.4[a][1][D] [EIRs must discuss significant effects of 3 mitigation measures,...]"We do not dispute the CEQA reference or the case cited, but the level of detail describing the nature of the mitigations in the EIR/S is insufficient to identify or characterize, let alone quantify, the impacts that would occur from their implementation. As an example, without aquatic habitat mitigation locations plans that include the locations and sizes of levee breach locations you cannot determine if the site will be sediment accreting or depleting. Whether the site accumulates and starves sediment or is a net contributor to sediment is a significant factor in determining the mitigation's impacts to water quality (related to other factors such as the rate of methylation of mercury) and fisheries habitat quality (e.g. predation rates of T&E species which rely upon turbidity as cover). It is not that these mitigations are addressed at a lower level of detail, but that their very nature and even generalized impacts and magnitudes of impacts cannot be assessed given the lack of specificity in their design and disclosure in the EIR/S. In this lack of detail and reliable determination of the general types and magnitudes of impacts from mitigation measures, the EIR/S is materially deficient and must be revised to provide this detail and recirculated for public comment.

4.1-15, line 11 "Where appropriate and necessary, implementation of individual projects associated with an environmental commitment would be subject to additional environmental review." It is a violation of the requirements of NEPA and CEQA to piecemeal a project into separate parts to reduce the incremental environmental impacts into discrete parts that have less than significant impacts in order to avoid significant impacts that would occur if the project were to be evaluated in its totality. All of the elements that are to be included in the project have been identified and the lack of sufficient effort on the part of the BDCP to more fully define these other project components should not be allowed to be utilized as an excuse to perform some subsequent environmental analysis and some undisclosed future date. Aquatic habitat restorations with a tidal component affect the tidal prism volumes and resulting changes in water quality in turn affect CVP/SWP operations. If the habitat restorations are not analyzed until after the conveyance is approved, the agencies will be approving a project conveyance that they do not know what the impacts will be when the other habitat restoration alternative components are implemented. The BDCP project must not be approved, nor permits issued upon this document until the project description is complete to a project-level of detail for all components of the project. Once the project description has been completed and evaluated at a project level of detail, the EIR/S must be recirculated for disclosure of these material omissions.

4.1-16, line 19 "...the maximum ratio applied to tidal wetland mitigation is 3:1, and therefore would not exceed 177 acres for this alternative." There are many similar projects that have had mitigation ratios of 5:1 or even 7:1 so this BDCP EIR/S statement is overly optimistic and the agencies that have indicated lower mitigation ratios at this stage of lack of definition of the actual proposed mitigation design are predecisional. Since this document only covers 59 acres of mitigation habitat for this impact, if additional acres are required, then this EIR/S document must be revised and recirculated for public comment. If the restoration is over 59 acres, the responsible agencies must not issue permits based on this unrevised document as the impacts for acres above this amount are not addressed or disclosed in this document.

4.1-16, line 22 "...channel margin habitat and would be implemented in the same way as described in Conservation Measure 6 in the Draft BDCP but over less linear distance. For the purposes of Alternative 4A, this action would entail enhancement of approximately 24 4.6 levee miles..." The BDCP must disclose the specific location and detailed design of this proposed action as there are specific impacts and consequences of the location, design and channel cross section changes of channel margin habitat. As an example, channel margin habitat restoration can increase or decrease channel flow capacity, create fish stranding habitat, create fish predation opportunities, change water quality, and potentially redirect flood risk among other impacts which are location and design specific. The BDCP must provide this level of project detail so these impacts can be determined, mitigated and disclosed. The revised EIR/S must be recirculated to address these material deficiencies.

4.1-16, line 27 - same comment as the preceding comment.

4.1-17, line 37, "EC15 would remove predator refuge habitat and reduce predator abundance in the construction areas. At a minimum, EC15 will target the removal of an amount of predator refuge commensurate with the amount that may be created by construction of water conveyance facilities." Predator refuge is not just a quantity, but also of a quality that the EIR/S fails to take into account. It is clear from the EIR/S statement that they have no idea how much mitigation will need to be done or where it will occur. Until the BDCP has a specific plan, in location and actual features and modifications to be made to complete this mitigation, the fisheries agencies should not accept these unspecific and unsupported assurances by the BDCP, nor should they issue ITPs based on these lack of plans for mitigation of these significant impacts.

4.1-22, line 16, "During construction it is assumed that a temporary work area would surround each permanent intake site and would include a fuel station and concrete batch plant." All of these project components must be described and evaluated at a project-level of detail in order to warrant consideration of issuance of construction-related permits. Obviously from this description, the BDCP does not know where or how big these project elements would be and therefore, the responsible agencies must not issue construction-related permits based on this EIR/S document. At the current level of description and analysis, the regulatory agencies could not determine if the proposed fuel station were in the middle of a wetland. If this document is revised to address this material omission, it must be recirculated for public comment and disclosure. This comment applies to all project alternatives that must be analyzed and defined at an equal level of detail as required by NEPA.

4.1.3.2 - All of the comments made on alternative 4A (in their entirety, not just this subsection), also apply to alternatives 2A, 2D and 5A.

4.5.1 - line 9, "...there is no requirement that activities take place within a "Plan Area" under the regulatory approach that would be pursued under these alternatives, it is assumed that activities associated with these alternatives would occur within this same geographical area" Since there is, as the EIR/S states, no need for a planning area (a term that only ever applied to the HCP process, not the EIR/S process), any alternatives that were dismissed from further consideration during the scoping and alternatives development phase of the project because they occurred partially or in whole outside of the predecisional and arbitrarily defined "Plan Area" (there were many, see previously submitted related comments) must now be reconsidered for full analysis as an alternative or alternative component in a revised BDCP EIR/S. There is no support for the EIR/S "assumption" that these activities would occur only in the "plan area" and there is now absolutely no supporting rationale for the exclusion of consideration of these other geographic area alternative solutions that reasonably meet the purpose and need and project objectives.

4.1-40 - line GGS5 "Create connections from the Coldani Marsh/White Slough subpopulation to other areas in the giant garter snakes historical range in the Stone Lakes vicinity by protecting 255 acres..." These two subpopulations are over 15 miles apart, so the idea that an overarching principal for the location of 255 acres to connect these populations is a fallacy at best and misleading as to what the project might accomplish to regulatory decision makers. At 255 acres, a corridor only 1000' wide would cover only a little over 2 miles in length so it is impossible for the project to make any meaningful or functional contribution to connecting these habitats as the EIR/S would lead the reader to believe. The BDCP must remove these misrepresentations of what the project would accomplish or contribute to and recirculate a revised draft for public comment after these material misrepresentations have been corrected.

4.1-41 - RBR - The tunnel muck disposal sites on Glanville tract and adjacent to the DWR owned ponds (and other project footprint locations) are prime riparian brush rabbit habitat. The project will need to mitigate many more acres than the stated 19 acres just to make up 1:1 the number of acres of prime habitat taken from these species.

4.1.6 - The BDCP new alternatives have muddled and conflated the baseline conditions of the project. The OCAP BO RPAs are part of the No Action/No Project definition of the BDCP as these were legal compliance requirements of the project prior to the BDCP baseline date. The previous public draft alternatives were represented as having these actions both in the No Action/No Project as well as in the Proposed Project and alternatives. The revised public draft EIR/S alternatives have dropped inclusion of the mandated OCAP BO RPAs from the description of the new alternatives. It is unclear if the No Action/No Project still have the BO RPAs in them or not. If the OCAP BO RPAs are still in the baseline, but not in the alternatives then the entire revised public draft BDCP analysis is fundamentally flawed as the comparison would start out with baseline impacts from habitat restoration that do not occur under the alternatives. Using this flawed baseline and analytical approach, the impacts of the BDCP proposed project and alternatives would effectively be subtracted from the impacts which would not occur in the alternative without the OCAP BO RPA as compared to the baseline which did include the OCAP BO RPAs. If the BDCP has revised the No Action/No Project to not include the OCAP BO RPAs then the analysis would correctly show the impact of the proposed project, but the No Action/No Project baseline definitions would be legally incorrect and not reflect the conditions that the project is legally compelled to implement. Either way, the project analysis of a proposed project and alternatives that do not include the OCAP BO RPAs as part of the project description is flawed and leads to a corrupted environmental analysis that is not suitable to support decision making or the consideration of issuance of permits based upon it.

4.1.6 - The Draft Environmental Impact Statement (EIS) for the Coordinated Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP) (ES.3, line 17) acknowledges that many of the provisions of the RPAs identified in the biological opinions require further study and monitoring and further environmental documentation necessary before any future facilities can be constructed or modified. The BDCP EIR/S is inconsistent with the OCAP EIS in that the proposed project and new alternatives no longer include implementation of the OCAP BO RPAs prior to or concurrently with the construction of the proposed new conveyance facilities and modification of existing facilities related to water conveyance. The BDCP EIR/S proposed project must be made consistent with the OCAP BO EIS as these are concurrent documents with the same lead agencies and the OCAP BO is part of the baseline condition of the BDCP EIR/S. Therefore the assumption of RPA implementation prior to CVP/SWP modification and construction must take supremacy over the BDCP proposed project assumption of modifying existing and constructing new facilities prior to implementation of the OCAP BO RPAs.

4.1.6 - The BDCP baselines are corrupted by the exclusion of the OCAP BO RPAs from the new project alternatives and inclusion of the RPAs in the baseline.

4.1.6 - The BDCP NEPA No Action Baseline was at the end of the project lifespan, 2060. The revised PDEIR/S says it is no longer seeking a 50 year HCP permit, so what is the end date of the project lifespan now? Contrary to the EIR/S claim in 4.1 42, line 18 that the project lifespan is "indefinite", there is a design life of any project (even concrete wears out and reinforcing fails after a design lifespan). The design life of the project must be used as the No Action alternative end date for the EIS analysis. The revised BDCP EIS uses a NEPA future No Action date that is different for the new alternatives than for the previous alternatives. This is unacceptably confusing to the reader and to the decision makers relying upon this document for an accurate and consistent comparison. Where is the documentation of the engineering/operational lifespan of the proposed BDCP facilities? At what future forecast date of sea-level rise would the facilities no longer be functional or viable? The BDCP RPDEIR/S must revise the new alternatives future no action definition to be consistent with the previous analysis (or conduct the analysis based on the project end of serviceable lifespan period) and circulate that revised document for public comment.

4.1.6, line18, "...the analysis qualitatively examines impacts at the Late Long-Term timeframe for Alternatives 4A, 2D, and 5A, but 19 does not make a CEQA or NEPA conclusion based off the No Action Alternative LLT baseline." The BDCP EIR/S commits several procedural violations of NEPA here. First, the No Action must be at the end of the project or at least consistent with the other alternatives so that the comparisons are consistent. In order to understand the project impacts that occur under climate change conditions in 50 years (as the other alternatives were analyzed) these new alternatives must be analyzed with a No Action condition that incorporates significant climate change assumptions. Second, the analysis of the LLT is only qualitative for the new alternatives and is not quantitative for most of the water operations-related impact analyses as the other project alternative analyses were. NEPA requires the use of best available science and a qualitative analysis is an inferior analysis to those quantitative analyses that were successfully utilized on the LLT for the other project alternatives. Third, the EIS must make CEQA impact calls, again, so it is comparable to the other project alternatives which already utilize this baseline and which have utilized the best available science quantitative analytical tools.

4.1-43, line 28 "For the purposes of impact analysis under Alternative 4A, applicable analyses evaluate a range of impacts, bounded by the early long-term modeling results generated for Alternative 4, Scenarios H3 and Scenario H4." So the BDCP EIR/S did not even bother to model their Proposed Project/Action operations and instead chose to rely upon some sort of undocumented and subjective interpolation of other modeled scenarios that do not reflect the actual operations of the new proposed project. Alternative 4 includes habitat restoration and water operations (new points of water diversion and water rights use for the Yolo Bypass), which do not occur in alternative 4A. Scenarios H3 and H4 are also not the same operations as alternative 4A as they include habitat restoration actions (and water operations) which affect water quality operational constraints that do not occur in Alternative 4A. Interpolating quantitative modeling results instead of modeling the alternative to reflect the operational assumptions that are unique to it certainly does not meet the test of best available science. Doing the modeling for the exact operations and assumptions included in Alternative 4A is the only way to be reasonably certain of the impacts of Alternative 4A. Additionally, using interpolated modeling results rather than actual modeled results is not applying an equal level of effort or analysis to all of the alternatives as NEPA requires. The analysis of alternative 4A (and the other new alternatives) must be modeled utilizing the exact water operations and assumptions as they propose and a full analysis equal to that given the other alternatives must be developed and released by the BDCP in a revised public draft for comment and disclosure. The regulatory authorities must not rely upon interpolated model results from other operational scenarios to base their decisions upon, must not approve this deficient document that fails to meet NEPA and CEQA requirements, and must not issue permits based on this document.

4.2-9, line 40 "Cross-Delta Transfer capacity would restrict the actually realized increase in transfer volumes to less than the amounts stated by an unknown degree, but the increase in the frequency of Cross-Delta transfers would likely occur as predicted..." Here the BDCP EIR/S is confirming our concern expressed in previous comments that water transfer capacity, magnitude and frequency would increase with the implementation of the north delta diversions because the operational constraints of the south delta diversions would be eased. This increase in water transfers with the implementation of the Proposed Project (or other north delta diversion alternatives) would result in an increase of water taken out of the delta as compared to the No Action/Project condition. The BDCP often has claimed that the project would result in "no new water" being diverted from the system, but here from this BDCP EIR/S statement it is a declared objective of the project to increase these transfers that could not happen without the project. These impacts of increased water transfer capacity trigger growth inducing, water quality and water right impacts that are not evaluated, quantified, mitigated or disclosed in this EIR/S document. The BDCP EIR/S must be revised to include analysis of the impacts of these water transfers that would only be enabled with the implementation of the project and this revised document must be recirculated for public comment and disclosure.

4.2-10, line 3 "...the decreases in project deliveries (and consequential increase in transfer demand) are caused by (1) an increase in demands associated with water rights, the build out of planned facilities, and greater use of existing CVP and SWP contracts which cumulatively result in about 443 TAF per year additional consumptive use per year north of Delta at the future level of development; (2) climate change and sea level rise;..." The ELT No Action period in which the new project alternatives were evaluated (incorrectly using interpolated modeling results rather than actual modeled results) incorporates little to no climate or sea-level change. The LLT No Action analysis of the Proposed Project/Action and other new alternatives were only evaluated qualitatively so they had no quantitative analysis of the impacts of climate change and sea-level rise so this quantitative statement of reduced deliveries attributed to climate change and sea-level rise is not only unsupported by scientific analysis, it is misleading to the reader and decision makers who rely upon the accuracy of the statements in this EIR/S document. The EIR/S must be revised to include a ELT No Action alternative that is specifically modeled for the new alternatives and a quantitative analysis of the LLT No Action so water supply impacts like the one claimed in the EIR/S here can actually be quantified and disclosed. The revised EIR/S must be recirculated for public comment with this material new information.

4.2-10, line 22 "Under No Action Alternative (ELT) average annual total CVP deliveries would be similar with a slight increase of 9 TAF (0%) and average annual total south of the Delta CVP deliveries would decrease by about 150 TAF (7%) as compared to deliveries under Existing Conditions. Average annual CVP north of Delta agricultural deliveries would be reduced by 47 TAF (20%) and exhibit reductions in about 75% of years under the No Action Alternative at Year 2025 (ELT) as compared to Existing Conditions, as shown in Figure 4.3.1-22. Average annual CVP south of Delta agricultural deliveries would be reduced by 120 TAF (12%) and exhibit reductions in about 85% of the years, as shown in Figure 4.3.1-23. Average annual CVP north of Delta M&I deliveries would increase by 181 TAF (86%) due to the increase in urban demand. Deliveries would increase in all years, as shown in Figure 4.3.1-24. Average annual CVP south of Delta M&I deliveries would be reduced by 6 TAF (5%) in about 75% of the years..." These stated quantitative analytical results are all misleading and presented as actual modeling results when the BDCP EIR/S has admitted that the ELT modeling analysis is based on other alternative model results interpolation that include different operational and habitat restoration components than the Proposed Project/Action and other new alternatives. As stated in previous comments, the BDCP must utilize best available science and model these actual alternatives and not rely upon interpolated results from alternatives that are not the same. Further, by selecting 2025 as the analytical period for the construction and implementation of the Proposed Project/Action, if the project is not completed and fully operational by 2025, this EIR/S analysis is invalidated and a new

EIR/S would have to be completed or this analysis updated to reflect the different implementation period and the change in conditions and impacts that the project would precipitate.

4.2-10 line 35 "...Shasta Lake storage would decline to dead pool more frequently due to the shift in runoff patterns from climate change..." There is no climate change assumption included in the ELT in 2025 as compared to the existing condition so this statement in the EIR/S is incorrect and misleading.

4.2.5 - There are changes to surface water flows and beneficial uses of water in the No Action that are not identified as changing from the existing conditions. The changes that are missing are actions required by the SWP/CVP to comply with the OCAP BO RPAs to avoid jeopardy of T&E species. Some of these include, but are not limited to: fish passage at the CVP/SWP dams, Yolo Bypass diversions and floodplain restoration, and inundation on intertidal and sub tidal habitat. All of these actions result in differences in locations and types of beneficial uses of water and consumption of water that does not occur under the Existing Condition, but does under the ELT No Action/No Project. By not including these changes in surface water in this list and the EIR/S analysis, DWR and Reclamation are either deficient in their disclosures in including these actions to be implemented prior to 2025 or they are saying that they will continue to be non-compliant with the OCAP BO RPAs until after 2025. Either scenario is unacceptable as DWR and Reclamation are already in violation of the ESA with their lack of compliance with the OCAP BO RPAs - see related comments.

4.2-28, line 40 "The increase in exceedances at Jersey Point would be from 0% under Existing Conditions to 3% under No Action Alternative (ELT), which represents a very small increase for this objective." This is incorrectly stated and if the EIR/S is saying that there is 0% violation of this water quality objective under existing conditions and a violation 3% of the time under the No Action/Project, this is a very big change and impact indeed. The comparison must be relative to the Existing Condition, not an absolute change. If there was 0% exceedance at the existing condition and the 3% under the no action then that is an infinite relative increase as compared to the existing condition, not a 3% increase. Even in an absolute sense, this is a significant impact. The salinity standard is based on a two week rolling daily average. A violation 3% of the time would mean that the No Action/Project violated a standard 11 days of the year when under existing conditions it did not violate it at all. Any and all comparisons that have made this procedural error in how analytical comparisons are done must be corrected in a revised and recirculated EIR/S document. As an example, 4.2-29 line 24 "increase from 1% to 3%". This is not a 2% increase in a comparison, correctly stated it is a 200% increase over the frequency of exceedance of the standard in the No Action/Project as compared to the Existing Condition.

4.2-30, line 25 "Because EC is not bioaccumulative, the increases in long-term average EC levels would not directly cause bioaccumulative problems..." This is an incorrect and misleading statement. First, not all chemical components that contribute to EC are sodium salts. There are positively charged ions that contribute to EC and include sodium, calcium, potassium, and magnesium. Negatively charged ions that contribute to EC include chloride, sulfate, carbonate, and bicarbonate, nitrates, and phosphates. Several of these other non-sodium salts do bioaccumulate in humans and wildlife, e.g. Nitrates (that is why there are nitrate standards in drinking water quality). Sodium salts are bioaccumulative in plants and will cause yield loss in commercial crops and mortality and changes in native and wild plant types that will occur based on their salt tolerance. These plant community changes from salt accumulation in turn cause changes in wildlife habitat quality and quantity and species distribution for foraging habitat. These inaccuracies in the BDCP EIR/S must be disclosed in a revised and recirculated public draft.

4.2-32, line 15 "...monthly average waterborne concentrations of total and methyl mercury, over the period of record, are very similar to each other among Alternatives. This incorrect statement seems to forget that the first draft document alternatives all included Yolo Bypass inundation flows which mobilize Mercury and that the No Action/Project assumes this action is implemented in the ELT by another project for the analysis of the new alternatives.

4.2-35, line 26 "...in the long-term average DOC concentrations at the 11 assessment locations for the modeled 16-year period." Eleven assessment locations are not nearly enough to characterize the diversity of conditions in the delta and to characterize areas that would be affected by flow changes and aquatic habitat restorations from the project. Since the data is coming out of DSM2 to support this analysis, the comparison must be done at each output node in which DSM2 data is available. There is no justification to not utilize the full data set available and instead rely upon 11 locations that cannot possibly capture the dynamic complexity of the delta. In order to meet the test of utilizing the best available science, the EIR/S must utilize the full DSM2 data set available at all of its output nodes. 16 years is too short a period to have the entire range of hydrologic conditions occur under which the project could be approved and permitted. A 16 year analytical period means if the project is approved based on this analysis that there are hydrologic conditions under which the project would be allowed to operate under that the project was never analyzed for and impacts and mitigation measures were never identified or implemented. Additionally, there is no justifiable reason to use an arbitrary truncated analytical period that could clearly bias the analytical results. The proportions of water year types in a truncated period are skewed and biased in their proportional representation as compared to the frequency of occurrence in the entire available hydrologic period of record. This difference in proportion of water year type representation biases the quantification of impacts, the impact calls and the mitigations for the project. The EIR/S must utilize the best available science and incorporate the entire hydrologic period of record available for this analysis. Additionally, the analysis (in order to meet the test of best available science) must utilize the full temporal resolution of data available and not rely upon a arbitrarily aggregated and averaged data set that hides the true variation of conditions that occur. In example, on average you can comply with a water quality standard, but have a brief period in which the standards are exceeded by hundreds of percent in which catastrophic impacts would occur in the real world but the averaged data set analysis would tell you that nothing adverse would occur and no violations would occur. Data averaging, especially when it is not required by specific temporally averaged periods as defined by a water quality standard, can be grossly abused to hide significant impacts. The BDCP analysis has purposely aggregated data to periods and moving averages that are not required by water quality standards and is utilizing this tactic to hide project impacts. Unless the EIR/S analysis is not allowed to aggregate these data sets, decision makers who rely upon this document will never know if they are approving or permitting impacts that were never disclosed. The regulatory agencies utilizing this document must not approve this EIR/S unless it fully discloses all of the available data in a form of analysis (no data aggregation and averaging) that provides assurances that impacts are not occurring that have just been averaged over by an arbitrary data treatment by the BDCP. Once the revised best science analysis has be done, the document must be recirculated to disclose for public comment the more detailed material that was omitted from this current draft EIR/S. This comment applies to all analyses conducted with this unjustifiably truncated analytical period, limited locations of analysis that do not reflect the full range of locations that data is available and/or analysis which utilized aggregated and averaged data to base their assessments when higher temporal resolution data was available.