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On behalf of Central Delta Water Agency, South Delta Water Agency, Lafayette Ranch, Heritage Lands, Mark Bachetti Farms and Rudy Mussi Investments L.P.

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

Hearing in the Matter of California Department of Water Resources and United States Department of the Interior, Bureau of Reclamation Request for a Change in Point of Diversion for California Water Fix	**TESTIMONY OF DANTE JOHN NOMELLINI, SR. IN SUPPORT OF THE SOUTH DELTA WATER AGENCY PARTIES' CASE-IN-CHIEF FOR PART 1B OF THE CALIFORNIA WATERFIX CHANGE PETITION**

I, Dante John Nomellini, Sr., declare:

1. I am the Manager and Co-counsel for the Central Delta Water Agency, I have since 1976 resided on Middle Roberts Island (RD 524) where my wife and I through our revocable trust own a home and the adjoining approximately 36 acres which is riparian to and abuts the San Joaquin River. The salinity of the water in the San Joaquin River abutting our home and in our domestic well has substantially degraded over the 40 years to the point where our primary source of drinking water is now bottled.

2. My Statement of Qualifications (SWRCB-150) is true and correct.

3. The exhibits referred to herein which are copies of documents or excerpts from such documents are true and correct copies. Highlighting, underlying and any notations are obvious and are my additions.

4. Testimony

~~**THE CURRENT PROCEEDINGS ARE PREMATURE AND REFLECT THE PREDETERMINATION OF STATE AND FEDERAL ACTION TO CONSTRUCT AND OPERATE AN ISOLATED CONVEYANCE FACILITY ACROSS THE DELTA WITH THREE NEW INTAKES ON THE SACRAMENTO RIVER.**~~

~~**The Decision to Proceed with an Isolated Conveyance, i.e., Peripheral Canal/Tunnels, WaterFix Has Been Made in Advance of the Analysis and Preparation of the Draft EIR/EIS and RDEIR/SDEIS and has Destroyed the Impartiality for a Good Faith Effort at Full Disclosure and Analysis of Impacts, Alternatives and Mitigation.**~~

~~NEPA requires full disclosure of the potential effects of major actions proposed by federal agencies and accompanying alternatives, impacts and possible mitigation. NEPA also requires that environmental concerns and impacts be considered during planning and decision making so that steps may be more easily taken to correct or mitigate the impacts of an action. Compliance with NEPA should result in more informed decisions and the opportunity to avoid or mitigate for potential environmental effects before an action is implemented. The NEPA process is intended to identify and evaluate alternatives in an impartial manner. (See Reclamation's NEPA Handbook dated February 2012.)~~

~~CEQA requires adequacy, completeness and a good faith effort at full disclosure. The EIR is to inform the decision makers and the public of the environmental impact of proposed actions. (See CEQA Guidelines sections 15002 and 15003.) The purposes include identifying ways to avoid or significantly reduce environmental damage and preventing significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures.~~

~~#~~

The environmental review for BDCP and now the California Water Fix has been orchestrated to justify the new Sacramento River Intakes and the Isolated Conveyance Facility. Such actions reflect bad faith and have resulted in inadequate disclosure and analysis of impacts, alternatives and mitigation.

1) Participation in the BDCP Steering Committee was conditioned on agreement to The Bay Delta Conservation Plan Points of Agreement for Continuing into the Planning Process dated November 16, 2007, which includes agreement to new points of diversion on the Sacramento River and an isolated conveyance facility.

The agreement provides:

"2.3 Conveyance Facilities

> The Steering Committee agrees that the most promising approach for achieving the BDCP conservation and water supply goals involves a conveyance system with new points of diversion, the ultimate acceptability of which will turn on important design, operational and institutional arrangements that the Steering Committee will develop and evaluate through the planning process. The main new physical feature of this conveyance system includes the construction and operation of a new point (or points) of diversion in the north Delta on the Sacramento River and an isolated conveyance facility around the Delta. Modifications to existing south Delta facilities to reduce entrainment and otherwise improve the State Water Project's (SWP) and Central Valley Project's (CVP) ability to convey water through the Delta while contributing to near and long-term conservation and water supply goals will also be evaluated. This approach may provide enhanced operational flexibility and greater opportunities for habitat improvements and fishery protection. During the BDCP process, the Steering Committee will evaluate the ability of a full range of design and operational scenarios to achieve BDCP conservation and planning objectives over the near and long term, from full reliance on the new facilities to use of the new facilities in conjunction with existing facilities." (Exhibit SDWA-154) (Emphasis added.)

Excluded from such planning process agreement is design and operation of the SWP and CVP without an isolated conveyance facility and/or new intake facilities on the Sacramento River.

Exhibit SDWA-153 is a copy of the January 27, 2009, letter from Karen Scarborough, Undersecretary of the State of California Resources Agency and Chair of the BDCP Steering Committee to Dante John Nomellini, Manager and Co-Counsel of the Central Delta Water

Agency requiring consent to the new intakes on the Sacramento River and an isolated conveyance facility. The letter provides:

> "As you are also aware, consent to the 'Points of Agreement' and other prior decisions of the Steering Committee is requisite for a seat on the Steering Committee."

Exhibit SDWA-154 is a copy of The Bay Delta Conservation Plan: Points of Agreement for Continuing Into the Planning Process (November 16, 2007).

Exhibit SDWA-155 is a copy of the August 26, 2008, letter from Dean Ruiz, attorney for the Central Delta Water Agency, to Karen Scarborough requesting membership on the BDCP Steering Committee.

Exhibit SDWA-156 is a copy of the November 13, 2008, letter from Dante John Nomellini, Manager and Co-Counsel of the Central Delta Water Agency, to Karen Scarborough, et al. stating willingness to execute the October 6, 2006, Planning Agreement but disagreeing with the provision in the November 16, 2007 "Points of Agreement."

2) The Department of Water Resources as lead agency for CEQA and the United States Department of Interior's Bureau of Reclamation as a co-lead agency under NEPA are both signatories to the March 2009 Memorandum of Agreement Regarding Collaboration On the Planning, Preliminary Design and Environmental Compliance for the Delta Habitat Conservation and Conveyance Program in Connection With the Development of the Bay Delta Conservation Plan. The Memorandum includes the above referenced November 16, 2007, Points of Agreement to construct and operate an isolated conveyance facility as Exhibit 2 thereto. Said Memorandum is Exhibit SDWA-157. DWR and the USBR are both signatories to the December 15, 2011, First Amendment To The Memorandum of Agreement Regarding Collaboration On the Planning, Preliminary Design and Environmental Compliance For The Delta Habitat Conservation and Conveyance Program In Connection With the Development of the Bay Delta Conservation Plan. Said First Amendment confirms the ongoing commitment to the BDCP and DHCCP including the March 2009 MOA which is Exhibit SDWA-157 and further references in paragraph J. the November 2007 "Points of Agreement." The First Amendment dated December 15, 2011, is Exhibit SDWA-158.

3) The Draft EIS/EIR is written in a manner advocating the Conservation Strategy of the BDCP plan which is to construct and operate an isolated conveyance as a standalone conveyance or as part of dual conveyance and is evidence that the decision is predetermined. The lack of objective and impartial presentation and analysis is apparent. The Executive Summary for the Bay Delta Conservation Plan SWRCB-5 at page 10 sets forth the Conservation Strategy for "Water Flow and Conveyance" as follows:

> "Water Flow and Conveyance
>
> Water flow and conveyance conservation measures provide for the development and operation of new water conveyance infrastructure and

the establishment of operational parameters associated with existing and new facilities. New north Delta intake facilities along the Sacramento River will divert water through state of the art positive barrier fish screens into an isolated tunnel/pipeline to the south Delta. In conjunction with the existing south Delta facilities (referred to as dual operations), this improved operational flexibility will improve conditions for covered fish species and restore water supply reliability. Water diversion rates and bypass flows in the Sacramento River at the north Delta diversions will be informed by seasonal movement patterns of covered fish species. The conservation measures summarized in the following sections are discussed in detail in Chapter 3, Conservation Strategy." (Emphasis added.)

The Executive Summary for the BDCP Draft EIR/EIS (November 2013) Exhibit SWRCB-4 at page ES-1, paragraph 3 provides:

". . . The BDCP is a comprehensive conservation strategy for the Sacramento-San Joaquin Delta (Delta) to advance the planning goal of restoring ecological functions of the Delta and improving water supply reliability in the state of California. The conservation strategy is designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework. The BDCP reflects the outcome of a multiyear collaboration between DWR, Reclamation, state and federal fish and wildlife agencies, state and federal water contractors, nongovernmental organizations, agricultural interests, and the general public. The BDCP sets out a comprehensive conservation strategy for the Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework through the following.

• New and/or modified state water conveyance facilities and operation of the SWP and the CVP in the Delta." (Emphasis added.)

At page ES-2, it is provided:

"The conservation strategy is based on the best available science and was built upon the following broad conservation goals." (Emphasis added.)

These statements issued in advance of the completion of the EIR/EIS process reflect the predetermination and intended lack of objectivity in the preparation of the environmental documents and analysis.

4) The pretense that the isolated conveyance facility was a Conservation Measure (CM1) has been removed however the lack of good faith effort at full disclosure remains. Two forty foot (40ft) diameter tunnels 35 miles long which have the capacity depending on intakes to convey 15,000 cfs or more of water from the Sacramento River to the export pumps with no outlets for maintaining Delta water quality certainly do not constitute a measure to protect and enhance the unique cultural, recreational and agricultural values of the Delta as an evolving

place. During much of the time the capacity of the tunnels to direct water will exceed the flow available in the Sacramento River at the intake location. As clearly demonstrated the SWP and CVP have not developed sufficient supply to meet the desires of contractors or even the preconditions to their permits to operate. There is no basis to assume that regulatory restraints will not continue to be avoided through emergency actions and there is no basis to assume that water supply will be developed in sufficient quantities to meet regulatory requirements, senior obligations and contractual desires. Disregarding operation the impacts of construction and the physical facilities themselves will severely damage the Delta in violation of the statutory mandate to protect and enhance.

5) Top Public official actions have gone far beyond simple preference of a particular project and have resulted in the lack of impartiality of the public agencies under their direction which is necessary to a good faith full disclosure in the environmental documents.

Jerry Brown, Governor of the State of California has been emphatic in his advocacy of the BDCP tunnels. See Exhibit SDWA-159 which is a May 28, 2014 Article wherein he is quoted as saying "I just want to get sh*t done,". "Sh*t" appears to be the BDCP tunnels which are the alternative to his previously emphatically supported peripheral canal, but with no outlets to maintain Delta water quality. Those within the Governor's Department of Water Resources and Department of Fish and Wildlife (agencies responsible for good faith full disclosure in the BDCP EIR/EIS) would be fools to misread the direction from the top. They have not misread the direction.

Secretary of Interior Ken Salazar, the head of the U.S. Bureau of Reclamation and U.S. Fish & Wildlife Service has also signaled his emphatic support for the BDCP Tunnels in remarks to the Commonwealth Club, San Francisco, CA, September 19, 2011, Exhibit SDWA-160. After referencing debate raging in Washington, D.C. relating to water supplies we depend on in the west. He explains:

> "It's a battle between pragmatism and ideology. Collaboration versus cynicism."
>
> "In California's Bay Delta, a plan to modernize and secure the State's aging and inadequate water system is always the target of pot shots. Yet the bottom line is the health of the Delta is inextricably linked to the security of safe and reliable water supplies."

Mr. Salazar goes on to provide:

> "That solution is the Bay Delta Conservation Plan. The Bay Delta Conservation Plan is the most important - and most complex - long-term water and habitat management plan ever undertaken.

> The BDCP provides a comprehensive approach that includes new habitat for endangered fish species, coordinated measures to attack toxics that are fouling delta waters, and improvements to the state's water infrastructure.
>
> Rather than simply pumping water from north to south through the Delta – which places immense strain on the system and is unreliable – a new conveyance system would reduce direct conflicts between water supply and fisheries, as the Delta Vision Blue Ribbon Task Force and many independent scientists have recommended.
>
> This type of a comprehensive approach is long overdue. We simply must find a way to put California on a path to restore the delta and protect in-Delta interests – while also securing a more reliable water supply for its future. These are the 'co-equal goals' required by the landmark law that the California legislature passed in 2009.
>
> That's why, for the past two and a half years, my Department has committed a vast amount of energy to advancing the BDCP."

The reference to "a new conveyance system" rather than "simply pumping water from north to south through the Delta" is to the BDCP common strategy for Water and Conveyance which is the "isolated tunnel/pipeline to the south Delta". Mr. Salazar's characterization of criticism as "pot shots" does not encourage those within his departments to make a good faith disclosure of adverse impacts of the project which he apparently favors.

It would appear that those public officials who will control the decisions have moved well beyond support to a predetermination to move forward with the isolated conveyance in advance of completion of the EIR/EIS process.

6) Further evidence of the predetermination of proceeding with the isolated Tunnel/pipeline conveyance prior to completion of the EIR/EIS is the Department of Water Resources establishment of an organization within the Department called the Delta Conveyance Facility Design and Construction Enterprise to support the design and construction of Conservation Measure 1. See Exhibit SDWA-161. In a presentation to the Metropolitan Water District of Southern California, Special Committee on the Bay Delta Mark Cowin, Director of the Department of Water Resources was quoted as saying:

> "'So that's what I wanted to say about the DCE,' he said. 'The memo that I put out to all staff as Randall indicated, really is just our first steps as an organization to prepare ourselves for implementation of this project so we're taking our existing resources and starting to move them into an organization that can engage both with the DCE and ultimately with the implementation

~~office for BDCP as well.'" (Exhibit SDWA-162) (Emphasis added.)~~

~~The candid admission by Jerry Meral, then Deputy Secretary of Resources who was quoted to say:~~

~~"BDCP is not about, and never has been about saving the delta. The delta cannot be saved."~~

~~is further evidence that there has been a predetermination as to the construction of the isolated conveyance facility. See Exhibit SDWA-163.~~

~~The isolated conveyance is the only measure for which the BDCP EIR/EIS provides project level review. The lack of inclusion of Delta levee improvements as part of the project to facilitate export operation when the Sacramento River intakes cannot be safely operated lends more weight to the evidence that going forward with the isolated conveyance has been predetermined. The State administration determination is contrary to State law which requires that the unique cultural, recreational, natural resource and agricultural values of the Delta be protected and enhanced and that water shall not be diverted from the Delta for use elsewhere unless adequate supplies for the Delta are first provided.~~

~~In April of 2015, before completion of environmental review, the Design and Construction Enterprise (DCE) developed a CM1 Property Acquisition Management Plan focused only on Alternative 4 which includes the Sacramento River intakes and the isolated tunnels along the chosen route for Alternative 4A. This planning effort focus on only one alternative and one route is yet another commitment of resources to the single preferred alternative thus inhibiting objective review of other alternatives. See Exhibit SDWA-164.~~

~~On August 25, 2015 the DWR and USBR submitted to the SWRCB a petition for change in their specific water permits to allow the three new intakes on the Sacramento River for Alternative 4A. This commitment of resources and reflection of intent to move forward with Alternative 4A and only 4A is yet another confirmation of the predetermination for new intakes on the Sacramento River and the isolated conveyance tunnels. See Exhibit SWRCB-1.~~

~~On August 27, 2015 California Natural Resources Secretary John Laird gave an update to a committee of the San Diego Water Authority explaining the split of the tunnel project into two projects. He explained "By doing two 30-mile tunnels and by doing habitat restoration, it lowers the amount of approval that needs to be done, and you can move ahead with the habitat…". "I should just say that the Governor is very committed to doing this," he said, "He wants to get it done. One of the interesting things in working for him is that he is fearless. He says what he really thinks; it doesn't matter how unpopular it is, if he thinks it's in the long-term interest, he is determined to spend whatever capital it takes to get it done, and this is on that list for him." The predetermination as to the tunnels is again confirmed. See Exhibit SDWA-165.~~

On September 21, 2015 the USACE gave notice that the DWR applied for a permit to place fill material in approximately 775.02 acres of waters of the United States to construct and operate a new water conveyance facility consisting of three intakes along the Sacramento River and duel tunnels conveying up to 9,000 cubic feet per second of water to the existing Clifton Court Forebay. See Exhibit SDWA-166. This application is specific to the 4A tunnels and three Sacramento intakes adding to the evidence of predetermination.

The actions of Federal Officials and Agencies reflect an intentional violation and circumvention of 40 CFR section 1506.1(a) which precludes actions which would "Limit the choice of reasonable alternatives" until an agency issues a record of decision as provided in section 1505.2. Such actions clearly run contrary to a good faith effort to rigorously explore and objectively evaluate all reasonable alternatives as required by 40 CFR section 1502.14.

The actions of State Officials and departments clearly show that the project with three intakes on the Sacramento Rivers and two tunnels connecting to Clifton Court has already been determined to be the selected project regardless of the fact that environmental review has not been completed.

NEPA POLICY AND PROCEDURAL REQUIREMENTS TO ASSURE OBJECTIVITY IN THE PREPARATION OF THE EIS HAVE BEEN AND ARE BEING CIRCUMVENTED.

The BDCP Draft EIR/EIS Purpose Statement is a confusing mix of State Water Project (SWP), federal Central Valley Project (CVP), State Water Contractor and federal Water Contractor purposes and needs.

The SWP and State Water Contractors obviously want to construct the isolated conveyance facility and operate the SWP to maximize the export of water from the Delta.

The CVP (U.S. Bureau of Reclamation) although clearly in favor of construction of the isolated conveyance has not forthrightly sought authority to join in construction, but obviously plans to convey CVP water through such facility and seeks to protect the "ability of the SWP and CVP to deliver up to full contract amounts, . . ."

The SWP contractors and CVP contractors who are to receive the water exported from the Delta obviously are isolated conveyance and full delivery proponents.

The roles of regulating agencies and applicants, lead agencies and cooperating agencies has been mixed in a manner which circumvents the procedural mechanisms to assure NEPA required objectivity.

The SWP and SWP contractors seeking take permits from the U.S. Fish & Wildlife Services (USFWS) and National Marine Fisheries Service should be viewed as applicants and the Services as co-lead agencies. In such case, the EIS should have been prepared directly by the Services or by a contractor selected by them or where appropriate under 40 CFR section

1501.6(b), a cooperating agency which has a similar interest. 40 CFR section 1506.5(c) in part provides:

> "It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest." (Emphasis added.)

Allowing DWR, the USBR and their respective contractors to run the show is not appropriate.

Although 40 CFR section 1506.2 directs cooperation to the fullest extent possible to reduce duplication between NEPA and state and local requirements, it does not suggest that compliance with requirements to avoid conflict of interest and assure objectivity can be avoided. Joint selection of common consultants in compliance with NEPA requirements and subsequent sole direction of the common consultants by USFWS and NMFS as to NEPA compliance would avoid duplication and could have helped avoid the conflict of interest deterioration of objectivity. Such has not been the case. The USBR is not a regulatory or permitting agency for BDCP in the same sense as the USFWS and NMFS. It has its own responsibilities for compliance with federal ESA. It's consultations with USFWS and NMFS require that it comply with NEPA, but its role in protecting endangered species is conflicted with its role in serving its water contractors and in coordinating the CVP operations with those of the SWP. The USBR is not an adequate representative for the interests and NEPA responsibilities of the USFWS and NMFS and should not be a co-lead and particularly the sole lead.. Exhibit SDWA-167 is a copy of the First Amendment to the Memorandum of Agreement Regarding Collaboration on the Planning, Preliminary Design and Environmental Compliance for the Delta Habitat Conservation and Conveyance Program in Connection with the Development of the Bay Delta Conservation Plan dated August 31, 2011. This copy contains signatures by the DWR and USBR. Whether the State and Federal Contractors signed is not known. This First Amendment can be contrasted to another First Amendment (which may be the Second Amendment) dated December 15, 2011 and is Exhibit SDWA-158. The USFWS and NMFS are not parties to either First Amendment. Both First Amendments provide essentially the same language as to contracting, directing and communicating with the consultants regarding the BDCP related environmental documents.

II.E. of Exhibit SDWA-158 provides:

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> "E. DWR is taking the lead role in preparing and, after consultation with the Parties, shall direct the consultants regarding the content of the BDCP, including those elements of the BDCP intended to be incorporated in the EIS/EIR. DWR has also contracted with the consultants preparing the EIS/EIR and shall continue to administer the contract. DWR shall solicit, in a timely manner, from the Department of Fish and Game ('DFG'), the Public Water Agencies, and the NEPA Co-lead Agencies,

comments on the draft work products in support of the completion of tasks, pursuant to the schedules in Exhibit 1 and 1A. As set forth in Paragraph B above, Reclamation shall be responsible for coordinating with the NEPA Co-lead Agencies and coordinating with DWR on the NEPA Co-lead Agencies' comments that DWR shall submit to the Consultants in accordance with the schedules in Exhibit 1 and 1A. In the event agency comments are not received consistent with the schedules in Exhibit 1 and 1A, DWR may proceed with preparation of the BDCP and DWR, and Reclamation may proceed with the preparation of the EIS/EIR. DWR shall direct the Program Manager on preparation of the BDCP and EIS/EIR as necessary to maintain the schedule or consider necessary revisions as described in subsection II.C. The DWR Director shall concurrently advise the Parties of the direction provided to the Program Manager. Nothing in this section or elsewhere in this First Amended MOA modifies the Federal responsibilities for the content of the draft and final EIS and preparation of the ROD." (Emphasis added.)

II.F. of Exhibit SDWA-158 and Exhibit SDWA-167 in pertinent part provides:

"F. DWR has retained a consultant with extensive project management experience to be the BDCP and DHCCP Program Manager. The Program Manager shall report to and be directed by the Director of DWR. The Director of DWR shall implement the responsibilities of DWR as set forth in Subsection II.E. above. The Director of DWR may fulfill this responsibility through the Program Manager, who is delegated to carry out the day-to-day management activities of the BDCP and to closely coordinate with Reclamation regarding preparation of the EIS/EIR. . . ." (Emphasis added.)

II.Q. of Exhibit SDWA-158 (12-15-11) provides:

"Q. The Parties may retain consulting services as necessary to complete the BDCP and DHCCP Planning Phase, including the BDCP and EIS/EIR. No consultants will be retained for BDCP work unless they are approved by DWR. Before retaining consultants for EIS/EIR work DWR shall, in accordance with NEPA, its implementing regulations and the Lead Agency Agreement, consult with the NEPA Co-Lead Agencies. Consistent with Section II.F, above, the Director of DWR shall manage the retained consultants to carry out the BDCP and EIS/EIR." (Emphasis added.)

II.Q. of Exhibit SDWA-167 (8-31-11) provides:

> "Q. The Parties may retain consulting services as necessary to complete the BDCP-DHCCP Planning Phase, including the BDCP and EIS/EIR. Consistent with Section II.F, above, the Director of DWR shall manage the retained consultants to carry out the BDCP and EIS/EIR." (Emphasis added.)

III.I. of Exhibit SDWA-158 and Exhibit SDWA-167 provides:

> "I. In the event DWR designates SFCWA as a consultant contract administrator, DWR shall continue collecting funds from the Public Water Agencies, including but not limited to those member agencies identified in Exhibit 2, pursuant to the BDCP-DHCCP Planning Phase funding agreements, and DWR shall distribute those funds to SFCWA to fund the consultants that are contracting directly with SFCWA for the completion of the BDCP-DHCCP Planning Phase." (Emphasis added.)

The USFWS and NMFS, the agencies with the most direct responsibility for protection of endangered species and the parties expected to grant the essential permits have been relegated to a back seat role. They don't hire or direct the consultants; their submission of comments must be through the USBR and thence through DWR to the consultants. If their comments are untimely DWR and Reclamation make the call. USFWS and NMFS cannot even hire consultants unless they are approved by DWR and DWR can even delegate administration of the consultant contracts to the water contractors.

The manipulation of the lead, co-lead and cooperating agencies and the delegation of responsibilities by the State and federal agencies has left the most conflicted parties in charge of the NEPA environmental process. Although the ultimate approval is left with the respective agencies, the thousands of pages of text and studies is virtually impossible to adequately review. The 132 page Executive Summary can be contrasted to the 15 page normal summary referenced in 40 CFR section 1502.12 and the thousands of pages in the DEIS/EIR can be contrasted to the 150 to 300 pages referenced in 40 CFR section 1502.7. The impartiality and avoidance of conflicts whether financial or otherwise, of the consultants is critical to the objective analysis required by NEPA. Those who contract with the consultants and most important those who direct the consultants will have the greatest impact on objectivity. As related to BDCP the DWR and in turn the USBR are essentially the agents of their respective contractors and should be viewed as applicants for the purpose of NEPA compliance. 40 CFR section 1506.5(c) specifies that a consulting firm involved in preparing an EIS must execute a disclosure statement setting forth any "financial or other interest in the outcome of the project." Whether this was done and by whom is of interest however, even with such disclosure, direction of the consultants will greatly dictate the bounds of objectivity.

Objectivity to assure the need to "rigorously explore and objectively evaluate all reasonable alternatives" is made more critical by the revolving door of employees between federal and state agencies and export water contractors.

~~For NEPA purposes, USFWS and NMFS should now engage independent consultants which they direct to review, revise and supplement the already prepared BDCP documents and issue their own draft EIS for public comment and final action. The cost for such effort should be paid in advance by the contractors.~~

~~At this juncture the Independent Science Board or some other independent body should be authorized and funded to review, revise and supplement the already prepared BDCP documents and issue a new CEQA draft for public comment and final action. The cost for such effort should be paid in advance by the expert water contractors.~~

~~In the face of the obvious predetermination and corruption of required objectivity the SWRCB should not proceed with permitting of the three intakes and tunnels until an independently directed and corrected draft EIS and EIR is circulated for public review and comment and completed in good faith compliance with law.~~

THE FEDERAL CENTRAL VALLEY PROJECT (CVP) AND STATE WATER PROJECT (SWP) HAVE FAILED TO ACT IN GOOD FAITH TO MEET THE CONDITIONS OF THEIR PERMITS, TO DILGENTLY DEVELOP SURPLUS WATER TO MEET THEIR RESPECTIVE OBLIGATIONS AND TO HONOR SENIOR RIGHTS AND PUBLIC TRUST RESPONSIBILITY.

The State and Federal agencies with public trust responsibilities including the State Water Resources Control Board have failed to uphold such trust.

The failure of the CVP and DWP to meet the SWRCB permit conditions and other obligations in the watersheds of origin is clear. Whether or not the projects can if they so desired, operate the projects to meet such obligations is not clear. It is obvious that there has been no attempt to carryover sufficient stored water to meet such obligations through a reoccurrence of a six year or longer drought.

Whether in the context of initiation of a new water right or further evaluation of performance under existing permits the true and legally permissible firm yield of the projects needs to be established. Mitigation of the CVP and SWP adverse project impacts and the burden for satisfying the affirmative obligations of such projects should not be shifted onto others in the Bay-Delta watershed including those in and upstream of the Bay and Delta.

Limiting exports to water which is truly surplus to the present and future needs of the Delta and other areas of origin including fish and wildlife needs is the cornerstone of the promises and law. Urban development and permanent crops in areas dependent upon exports from the Delta cannot be sustained on an infirm supply. A forthright recognition of the inability to deliver the desired export quantities from the Bay-Delta watershed will help avoid the wasteful expenditure of billions of dollars on the tunnel related facilities which will cause great harm to the watersheds of origin and result in little or no benefit to the exporters. Reduced reliance on exports from the Delta and a focus on developing self-sufficiency in importing areas is the better course. Water conservation, water reclamation, desalination of brackish groundwater and where feasible seawater could help reduce the need for restrictions

on arid land development and limitations on the planting of permanent crops with infirm supplies.

The promises and law restricting exports from the Delta to truly surplus water are reflected in the representations and promises made at the inception of both the CVP and SWP.

A summary of the promises made on behalf of the United States to those in the areas of origin is contained in the 84th Congress, 2D Session House Document No. 416, Part One Authorizing Documents 1956 at Pages 797-799 as follows:

> "My Dear Mr. Engle: In response to your request to Mr. Carr, we have assembled excerpts from various statements by Bureau and Department officials relating to the subject of diversion of water from the Sacramento Valley to the San Joaquin Valley through the operation of the Central Valley Project.
>
> A factual review of available water supplies over a period of more than 40 years of record and the estimates of future water requirements made by State and Federal agencies makes it clear that there is no reason for concern about the problem at this time.
>
> For your convenience, I have summarized policy statements that have been made by Bureau of Reclamation and Department of the Interior officials. These excerpts are in the following paragraphs:
>
> On February 20, 1942, in announcing the capacity for the Delta-Mendota Canal, Commissioner John C. Page said, as a part of his Washington D.C., press release:
>
> "The capacity of 4,600 cubic feet per second was approved, with the understanding that the quantity in excess of basic requirements mainly for replacement at Mendota Pool, will not be used to serve new lands in the San Joaquin Valley if the water is necessary for development in the Sacramento Valley below Shasta Dam and in the counties of origin of such waters."
>
> On July 18, 1944, Regional Director Charles E. Carey wrote a letter to Mr. Harry Barnes, chairman of a committee of the Irrigation Districts Association of California. In that letter, speaking on the Bureau's recognition and respect for State laws, he said:
>
> "They [Bureau officials] are proud of the historic fact that the reclamation program includes as one of its basic tenets that the irrigation development in the West by the Federal Government under the Federal reclamation laws is carried forward in conformity with State water laws."
>
> On February 17, 1945, a more direct answer was made to the question of diversion of water in a letter by Acting Regional Director R. C. Calland, of the Bureau, to the Joint Committee on Rivers and Flood Control of the California

State Legislature. The committee had asked the question, "What is your policy in connection with the amount of water that can be diverted from one watershed to another in proposed diversions?" In stating the Bureau's policy, Mr. Calland quoted section 11460 of the State water code, which is sometimes referred to as the county of origin act, and then he said:

"As viewed by the Bureau, it is the intent of the statute that no water shall be diverted from any watershed which is or will be needed for beneficial uses within that watershed. The Bureau of Reclamation, in its studies for water resources development in the Central Valley, consistently has given full recognition to the policy expressed in this statute by the legislature and the people. The Bureau has attempted to estimate in these studies, and will continue to do so in future studies, what the present and future needs of each watershed will be. The Bureau will not divert from any watershed any water which is needed to satisfy the existing or potential needs within that watershed. For example, no water will be diverted which will be needed for the full development of all of the irrigable lands within the watershed, nor would there be water needed for municipal and industrial purposes or future maintenance of fish and wildlife resources."

On February 12, 1948, Acting Commissioner Wesley R. Nelson sent a letter to Representative Clarence F. Lea, in which he said:

"You asked whether section 10505 of the California Water Code, also sometimes referred to as the county of origin law, would be applicable to the Department of the Interior, Bureau of Reclamation. The answer to this question is: No, except insofar as the Bureau of Reclamation has taken or may take assignments of applications which have been filed for the appropriation of water under the California Statutes of 1927, chapter 286, in which assignments reservations have been made in favor of the county of origin.

The policy of the Department of the Interior, Bureau of Reclamation, is evidenced in its proposed report on a Comprehensive Plan for Water Resources Development–Central Valley Basin, Calif., wherein the Department of the Interior takes the position that "In addition to respecting all existing water rights, the Bureau has complied with California's 'county of origin' legislation, which requires that water shall be reserved for the presently unirrigated lands of the areas in which the water originates, to the end that only surplus water will be exported elsewhere."

On March 1, 1948, Regional Director Richard L. Boke wrote to Mr. A. L. Burkholder, secretary of the Live Oak Subordinate Grange No. 494, Live Oak, Calif., on the same subject, and said:

"I can agree fully with the statement in your letter that it would be grossly unjust to 'take water from the watersheds of one region to supply another region until all present and all possible future needs of the first region have been fully determined

and completely and adequately provided for.' That is established Bureau of Reclamation policy and, I believe, it is consistent with the water laws of the State of California under which we must operate."

On May 17, 1948, Assistant Secretary of the Interior William E. Warne wrote a letter to Representative Lea on the same subject, in which he said:

"The excess water made available by Shasta Reservoir would go first to such Sacramento Valley lands as now have no rights to water."

Assistant Secretary Warne goes on to say, in the same letter:

"As you know, the Sacramento Valley water rights are protected by: (1) Reclamation law which recognizes State water law and rights thereunder; (2) the State's counties of origin act, which is recognized by the Bureau in principle; and (3) the fact that Bureau filings on water are subject to State approval. I can assure you that the Bureau will determine the amounts of water required in the Sacramento Valley drainage basin to the best of its ability so that only surplus waters would be exported to the San Joaquin. We are proceeding toward a determination and settlement of Sacramento Valley waters which will fully protect the rights of present users; we are determining the water needs of the Sacramento Valley; and it will be the Bureau's policy to export from that valley only such waters as are in excess of its needs."

On October 12, 1948, Secretary of the Interior Krug substantiated former statements of policy in a speech given at Oroville, Calif. Secretary Krug said, with respect to diversion of water:

"Let me state, clearly and finally, the Interior Department is fully and completely committed to the policy that no water which is needed in the Sacramento Valley will be sent out of it."
He added:

"There is no intent on the part of the Bureau of Reclamation ever to divert from the Sacramento Valley a single acre-foot of water which might be used in the valley now or later."

The California Water Resources Development Bond Act provides in Water Code Section 12931 that the Sacramento-San Joaquin Delta shall be deemed to be within the watershed of the Sacramento River.

Exhibit SDWA-168 is a copy of the 1960 ballot argument in favor of the California Water Resources Development Bond Act which spawned the State Water Project (SWP). Of particular note are the following representations:

> "No area will be deprived of water to meet the needs of another nor will any area be asked to pay for water delivered to another."
>
> "Under this Act the water rights of Northern California will remain securely protected."
>
> "A much needed drainage system and water supply will be provided in the San Joaquin Valley."

In ES.1.2.2 Exhibit SWRCB-3 of the RDEIR/SDEIS it is stated that State policy regarding the Delta is summarized in the Sacramento-San Joaquin Delta Reform Act of 2009. Reference is made only to Water Code Sections 85001, subd. (c) and 85002 while failing to recognize sections 85031(a), 85054, 85021 and others.

Water Code section 85031(a) provides:

> "(a) This division does not diminish, impair, or otherwise affect in any manner whatsoever any area of origin, watershed of origin, county of origin, or any other water rights protections, including, but not limited to, rights to water appropriated prior to December 19, 1914, provided under the law. This division does not limit or otherwise affect the application of Article 1.7 (commencing with Section 1215) of Chapter 1 of Part 2 of Division 2, Sections 10505, 10505.5, 11128, 11460, 11461, 11462, and 11463, and Sections 12200 to 12220, inclusive." (Emphasis added.)

Water Code Sections 11460 et seq. and 12200 et seq. are particularly specific in defining the limitation on the export of water from the Delta by the SWP and CVP. Water Code Section 11460 et seq. were added by Statutes 1943, c. 370, p. 1896 around the time of commencement of the CVP. Water Code Section 12200 et seq. was added by Statutes 1959, c. 1766, p. 1766 around the time of commencement of the State Water Project.

The limitation of the projects to the export of only surplus water and the obligation of the projects to provide salinity control and assure an adequate water supply sufficient to maintain and expand agriculture, industry, urban, and recreational development in the Delta is clear.

Water Code "12200 through 12205 are particularly specific as to the requirements to provide salinity control for the Delta and provide an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban and recreational development.

For ease of reference, the following Water Code sections are quoted with emphasis added:

'12200. Legislative findings and declaration

The Legislature hereby finds that the water problems of the Sacramento-San Joaquin Delta are unique within the State; the Sacramento and San Joaquin Rivers join at the Sacramento-San Joaquin Delta to discharge their fresh water flows into Suisun, San Pablo and San Francisco bays and thence into the Pacific Ocean; the merging of fresh water with saline bay waters and drainage waters and the withdrawal of fresh water for beneficial uses creates an acute problem of salinity intrusion into the vast network of channels and sloughs of the Delta; the State Water Resources Development system has as one of its objectives the transfer of waters from water-surplus areas in the Sacramento Valley and the north coastal area to water-deficient areas to the south and west of the Sacramento-San Joaquin Delta via the Delta; water surplus to the needs of the areas in which it originates is gathered in the Delta and thereby provides a common source of fresh water supply for water-deficient areas. It is, therefore, hereby declared that a general law cannot be made applicable to said Delta and that the enactment of this law is necessary for the protection, conservation, development, control and use of the waters in the Delta for the public good. (Added by Stats. 1959, c. 1766, p. 4247, '1.)

'12201. Necessity of maintenance of water supply

The Legislature finds that the maintenance of an adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban, and recreational development in the Delta area as set forth in Section 12220, Chapter 2, of this part, and to provide a common source of fresh water for export to areas of water deficiency is necessary to the peace, health, safety and welfare of the people of the State, except that delivery of such water shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. (Added by Stats. 1959, c. 1766, p 4247, '1.)

'12202. Salinity control and adequate water supply; substitute water supply; delivery

Among the functions to be provided by the State Water Resources Development System, in coordination with the activities of the United States in providing salinity control for the Delta through operation of the Federal Central Valley Project, shall be the provision of salinity control and an adequate water supply for the users of water in the Sacramento-San Joaquin Delta. If it is determined to be in the public interest to provide a substitute water supply to the users in said Delta in lieu of that which would be provided as a result of salinity control no added financial burden shall be placed upon said Delta water users solely by virtue of such substitution. Delivery of said substitute water supply shall be subject to the provisions of Section 10505 and Sections 11460 to 11463, inclusive, of this code. (Added by Stats. 1959, c. 1766, p 4247, '1.)

'12203. Diversion of waters from channels of delta

It is hereby declared to be the policy of the State that no person, corporation or public or private agency or the State or the United States should divert water from

the channels of the Sacramento-San Joaquin Delta to which the users within said Delta are entitled. (Added by Stats. 1959, c. 1766, p 4249, '1.)

'12204. Exportation of water from delta

In determining the availability of water for export from the Sacramento-San Joaquin Delta no water shall be exported which is necessary to meet the requirements of Sections 12202 and 12203 of this chapter. (Added by Stats. 1959, c. 1766, p 4249, '1.)

'12205. Storage of water; integration of operation and management of release of water

It is the policy of the State that the operation and management of releases from storage into the Sacramento-San Joaquin Delta of water for use outside the area in which such water originates shall be integrated to the maximum extent possible in order to permit the fulfillment of the objectives of this part. (Added by Stats. 1959, c. 1766, p 4249, '1.)@

'11460 provides:

> **11460. Prior right to watershed water**
>
> In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein. (Added by Stats. 1943, c. 370, p. 1896. Amended by Stats. 1957, c. 1932, p. 3410, '296.)@

The December 1960 DWR Bulletin 76 (Exhibit SDWA-169) which includes a contemporaneous interpretation by DWR of Water code Section 12200 through 12205 provides at page 12:

"In 1959 the State Legislature directed that water shall not be diverted from the Delta for use elsewhere unless adequate supplies for the Delta are first provided. (Emphasis added.)

Similarly the DWR confirmed its interpretation of law in the contract between the State of California Department of Water Resources and the North Delta Water Agency For the Assurance of a Dependable Water Supply of Suitable Quality dated January 28, 1981, which provides:

> "(d) The construction and operation of the FCVP and SWP at times have changed and will further change the regimen of rivers tributary to the Sacramento-San Joaquin Delta (Delta) and the regimen of the Delta channels from unregulated flow to regulated flow. This regulation at times improves the quality of water in the Delta and at times diminishes the quality from that which would exist in the absence of the FCVP and SWP. The regulation at times also alters the elevation of water in some Delta channels."
>
> "(f) The general welfare, as well as the rights and requirements of the water users in the Delta, require that there be maintained in the Delta an adequate supply of good quality water for agricultural, municipal and industrial uses."
>
> "(g) The law of the State of California requires protection of the areas within which water originates and the watersheds in which water is developed. The Delta is such an area and within such a watershed. Part 4.5 of Division 6 of the California Water Code affords a first priority to provision of salinity control and maintenance of an adequate water supply in the Delta for reasonable and beneficial uses of water and relegates to lesser priority all exports of water from the Delta to other areas for any purpose." (Emphasis added.) (See Exhibit DWR-306.)

In United States vs. State Water Resources Control Board 182 Ca.App.3d82 (1986) at page 139 the court concluded:

> "In 1959, when the DWP was authorized, the Legislature enacted the Delta Protection Act. (§§ 12200-12220.) The Legislature recognized the unique water problems in the Delta, particularly 'salinity intrusion,' which mandates the need for such special legislation 'for the protection, conservation, development, control and use of the waters in the Delta for the public good.' (§ 12200.) The act prohibits project exports from the Delta of water necessary to provide water to which Delta users are 'entitled' and water which is needed for salinity control and an adequate supply for Delta users. (§§ 12202, 12203, 12204.)" (Emphasis added)

In SWRCB D-1485 Exhibit SWRCB-23 at page 9 the SWRCB ruled:

> "The Delta Protection Act accords first priority to satisfaction of vested rights and public interest needs for water in the Delta and relegates to lesser priority all exports of water from the Delta to other areas for any purpose."

As related to the Peripheral Canal or Tunnels or any other isolated conveyance facility, the requirements of WC 12205 are particularly relevant.

> "It is the policy of the State that the operation and management of releases from storage into the Sacramento- Joaquin Delta of water for use outside the area in which such water originates shall be integrated to the maximum extent possible to permit fulfillment of the objectives of this part."

The objectives include salinity control and an adequate water supply. Conveyance facilities which transport stored water to the export pumps with no outlets or releases to provide salinity control and an adequate water supply in the Delta would not comply.

The responsibility for mitigation for the CVP and SWP adverse impacts and the affirmative obligations to legal users of water and to fish and wildlife should not be shifted to others. The proposed changes illegally shift such burden and violate the obligations so as to harm legal users of water within and upstream of the Bay-Delta.

The export projects must fully mitigate their respective impacts and meet the affirmative obligations to the Delta and other areas of origin including those related to flow for fish. Failure to so do results in a shift of the cost of the project to someone else. The State Water Resources Development Bond Act was intended to preclude such a shift in costs or burdens.

In Goodman v. Riverside (1993) 140 Cal.App.3d 900 at 906 the court confirmed the requirement that the costs of the entire project be paid by the contractors.

In footnotes 3 and 4 the court included the following:

> [3]"Alan Cranston, then State Controller, notes in a press release: "'As additional security for the bonds, and to prevent a drain on the General Fund in case of deficiency, the local contracting agencies will have ad valorem taxing power over and above the cost of water which the user will pay. [¶] Local agencies will therefore be able to meet their commitments to the State even if revenues from local sales of water are not sufficient for this purpose. [¶] Through this procedure, the beneficiaries of the Water Plan become the financial keystone and support rather than the General Fund and the general taxpayer.'"
>
> "Governor Pat Brown's press comments at the time are also informative:"

> "Governor, what is your answer to people who say, 'I don't want to pay for somebody else's water.' Like San Franciscans. "I have already paid for one water project. Why should I be compelled to buy another?'
>
> "Governor Brown: Well, they won't. The plan itself is completely self-supporting. The law provides that the contracts have to provide for the repayment of the cost of the entire Project, That's the real answer to it." (Italics added.)
>
> [4]The League of Women Voters' analysis observed: "The state will contract with public agencies having the assessment power so they can meet the required payment to the state by the use of taxes as well as water rates if they so desire. In this way no area will be subsidizing water for another region."

Water Code Section 11912 requires that the costs necessary for the preservation of fish and wildlife be charged to the contractors. The term "preservation" appears to be broader than mitigation and appears to create an affirmative obligation beyond mitigation.

Title 34 of Public Law 102-575, SDWA-6 referred to as the Central Valley Project Improvement Act in Section 3406(b)(l) authorizes and directs the Secretary of Interior to enact and implement a program which makes all reasonable efforts to ensure by the year 2002 natural production of anadromous fish (including salmon, steelhead, striped bass, sturgeon and American shad) will be sustainable on a long term basis at levels not less than twice the average levels attained during the period of 1967-1991. This burden is an affirmative obligation of the CVP and should not be shifted onto others.

~~The Delta Reform Act of 2009 includes provisions intended to provide additional protection for the Delta. Such provisions include Water Code §85054 which provides:~~

~~"§85054. Coequal goals~~

> ~~'Coequal goals' means the two goals of providing a more reliable water supply for California and protecting restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."~~
> ~~Water Code §85021 which provides:~~

~~"§85021. Reduction of reliance on Delta for future water supply needs~~

~~The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts."~~

The Delta and other areas of origin both upstream and downstream are part of California and also need a more reliable water supply. The modified purposes of the WaterFix are clearly directed only at the ability of the SWP and CVP to export water from the Delta. Restoration and protection of Delta water quality and flows including flushing flows are part of a more reliable water supply for California. Non-degradation of water quality and the statutory obligations to provide enhancement of water quality and an adequate supply for the Delta are absent from the purposes of the WaterFix and the petition for change.

The embedded isolated conveyance will clearly render water supply less reliable in all areas of the Delta downstream of the Sacramento River intakes and those areas along the current routes of Sacramento River flow to the export pumps. The common pool for the interior Delta will be eliminated along with the common interest in protecting the water quality. The isolated conveyance has no outlets and requirements to protect water quality in dry periods are always circumvented. For areas throughout the watershed, including those along the tributaries upstream of the Delta, curtailment of local water use, and water transfers to increase utilization of the highly expensive tunnels combined with the need for fish flows and high water consumption habitat to mitigate for the construction and operation of the tunnels will greatly add to unreliability.

The Water Fix ignores the need to reduce reliance on exports of water from the Delta. The hydrology of the Delta watershed is inadequate to support even the past level of exports. Development within the watersheds of origin and the need to recapture water from SWP and CVP exports will increase. There is evidence that more water will be needed to mitigate for the SWP and CVP damage to fish including meeting the CVPIA anadromous fish restoration requirements of 2 times the average natural production for the years 1967 through 1991. Climate change is also expected to adversely affect water supply. The increasing threat of terrorism, the continuing threat of natural calamities, including earthquakes and the growing need for electricity all gravitate towards less reliance on exports from the Delta and instead concentration on developing local self- sufficiency. The deficit due to the failure to develop North Coast watersheds will not be overcome by efforts at self-sufficiency, however, increased efforts in urban communities can increase the amount of water available for agriculture and the environment.

The hydrology predating the construction of the CVP and SWP reflected that no surplus water would be available for export from the Sacramento-San Joaquin Watershed during a reoccurrence of the 1929-1934 drought.

Exhibit SDWA-170 is a copy of the hydrographs from page 116 of the Weber Foundation Studies titled "An Approach To A California Public Works Plan" submitted to the California Legislature on January 28, 1960. The highlights and margin notes are mine.

The 1928/29-1933/34 six year drought period reflected on Exhibit SDWA-170 shows the average yearly runoff is 17.631 million acre feet with local requirements of 25.690 million acre feet. There is a shortage during the drought period within the Delta Watershed of 8.049 million acre feet per year without any exports. It is questionable whether the groundwater basins can be successfully mined to meet the shortage within the watershed let alone the export demands. A comparable review of the hydrograph for the North Coast area reflects that surplus water could have been developed without infringing on local requirements.

The limited hydrology was clearly recognized in the planning for the SWP which was to develop projects on the rivers in the North Coast watersheds sufficient to import to the Delta about 5,000,000 acre feet of water seasonally for transfer to areas of deficiency. (See Exhibit SDWA-169 December 1960 Bulletin 76 page 13). Such areas of deficiency were expected to be both north and south of the Delta pumps. The projects in the North Coast watersheds were never constructed and the projects are woefully short of water.

The original planning for the SWP and CVP appears to have underestimated the needs to protect fish both as to flow requirements and carryover storage required for temperature control. Without such 5 million acre feet of water per year there is no truly surplus water for export except in wet years.

In 2009 after only two (2) dry years, the SWP and CVP violated the February outflow requirements claiming that meeting the outflow requirements would reduce storage below the point necessary to meet cold water requirements for salmon later in the year. Although the project operators lied and the real reason for the violation was the ongoing pumping of the unregulated flow to help fill San Luis Reservoir, the incident clearly shows the inability of the projects to provide surplus water for export in the 3rd, 4th, 5th and 6th years of drought.

In May of 2013 the SWP and CVP again claimed a need to preserve cold water in storage for fish. They requested and were allowed by the SWRCB to reduce outflow by changing the year classification so as to exceed the western and interior Delta agricultural water quality objectives to save such cold water in storage. They did not suggest and did not reduce export pumping which would have had the same effect as reducing outflow.

In 2014 the 2nd or 3rd year of drought, the SWRCB issued curtailment notices to post 1914 water right holders in the areas of origin and reduced exports due to the lack of water.

The events surrounding the 2009 and 2013 Water Quality Standard Violations reveal disturbing collaboration among the USBR, DWR, state and federal fish agencies and the SWRCB to facilitate exports rather than meet legal obligations in the Bay Delta watershed.

In 2009 the Fishery Agency Representatives did not object to the planned violation of the standards and even though the water needed to meet the standards was being exported the SWRCB did not even admonish the state and federal agencies to seek relief in advance of violation. Although the need for retention of water in storage to meet cold water requirements for fish was the alleged motivation for the violation of the standards exports continued at a an increasing rate including water that could have been held in storage for cold water requirements. See Exhibit SDWA- 172.

In 2013 again the reason for the violation was to retain water in storage to meet cold water requirements for fish. Following the violation the USBR and DWR requested that the standards for protection of agriculture in the central and western Delta be relaxed by allowing operation to critical year standards rather than dry year standards. The California Department of Fish and Wildlife Service, the United States Fish and Wildlife Service, and NOAA's National Marine Fishery Service supported the request. Although the SWRCB staff and all such agencies conferred on the matter, there was no suggestion that exports be reduced in lieu of water quality standards relaxation. Most disappointing was the SWRCB Executive Directors agreement not to recommend taking any enforcement action for the future operation to the relaxed standard thereby effectuating a change in standards without even a public hearing. See Exhibit SDWA-171.

In both the 2009 and 2013 cases exports continued at a relatively high rate even though the need for retention of water in storage for meeting cold water fish requirements was clearly recognized. See Exhibit SDWA-172.

It is clear that the CVP and SWP have not operated the projects in a manner so as to meet water quality standards during a reoccurrence of six years or even two years of drought.

Six year droughts can be expected and even longer droughts are possible. The historic occurrence of multi-year droughts was reported in a DWR Report, California's Most Significant Droughts: Comparing Historical and Recent Conditions (February 2015). Exhibit SDWA-173 is Table 2.1 from such report.

The State Water Project Final Delivery Capability Report 2015 shows for Table A, a long-term average (1921-2003) as 2,550,000 acre feet per year; a single dry year (1977) as 454,000 acre feet and a 6-year drought (1987-1992) as 1,182,000 acre feet per year. These figures can be contrasted to the Maximum Possible SWP Table A Delivery of 4,132,000 acre feet per year. See Exhibit SDWA-174 excerpts from SWP Final Delivery Capability Report 2015.

The failure of the SWP and CVP to carry out the plan for development of water projects to yield sufficient surplus water including the 5 million acre feet from the North Coast to meet the needs and obligations within the Delta and other areas of origin and the expectations of the export contractors is at the root of the crisis in the Delta.

Under CEQA the Purpose and Need cannot be artificially narrowed to limit objective consideration of reasonable alternatives. The lead agencies have done just that. They rely on the proposition that "a reasonable definition of underlying purpose and need" could be used to avoid the objective consideration and evaluation of alternatives that cannot achieve that basic goal. Their definition of purpose and need is not reasonable or compliant with law.

~~The requirements for NEPA are different. The DEIS/EIR must meet the requirements of 40 CFR section 1502.14 which provides:~~

~~"§1502.14 Alternatives including the proposed action.~~

> ~~This Section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (§1502.15) and the Environmental Consequences (§1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall:~~
>
> ~~(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.~~
> ~~(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.~~
> ~~(c) Include reasonable alternatives not within the jurisdiction of the lead agency.~~
> ~~(d) Include the alternative of no action.~~
> ~~(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.~~
> ~~(f) Include appropriate mitigation measures not already included in the proposed action or alternatives." (Emphasis added.)~~

An alternative which requires that the SWP and CVP be operated in accordance with current law is a reasonable alternative which must be rigorously and objectively evaluated. The Water Fix clearly ignores the law establishing the priorities for meeting needs within the Delta and other areas of origin including the needs of fish and wildlife. The current change proceeding precludes the rigorous and objective consideration of alternatives.
//

The purpose statement has changed a number of times in apparent response to the demands of applicant export water contractors. These contractors, who as permittees, are required to fund the objective and impartial review of the environmental impacts by the public

regulatory agencies should not have been allowed to leverage changes in purpose so as to constrain the analysis towards their favored alternative.

Of particular note is the addition and continued inclusion of the following:

> "Restore and protect the ability of the SWP and CVP to deliver up to full contract amounts, when hydrologic conditions result in the availability of sufficient water, consistent with the requirements of State and federal law and the terms and conditions of water delivery contracts and other existing applicable agreements." (Emphasis added.)

The ability of the SWP and CVP to deliver "full contract amounts" never existed and thus could not be restored or protected. The words "up to" conceivably should cover a range from zero deliveries to a high of what can be supported with full compliance with State and federal law and hydrologic conditions.

~~Although obviously not intended by those controlling the preparation of the EIS/EIR, a range of reasonable alternatives must be considered including substantially reduced and at times no exports from the Delta. The upper range is of course limited by law and hydrology.~~

Export of water from the Delta is counter-productive to improving the ecosystem and the Water Fix has failed to present the environmental impacts and alternatives in a manner providing a clear basis for choice among options by the decision maker and the public as required by 40 CFR section 1502.14. The proposition that removal of natural flows into and through the Bay-Delta Estuary will improve the ecosystem is unique, bold and unsupportable.

Reliability of water supply for exports from the Delta must be junior to the needs and obligations requiring water in the Delta and other areas of origin including fish and wildlife needs. The modeling and analysis should provide a clear confirmation of the types and numbers of years when no water will be available for export and provide estimates of the amounts that might be available in other years. Care should be taken to model carryover storage requirements with due consideration of meeting temperature, flow and statutory requirements to determine the firm yield available for export.

Reliability of water supply for Northern California requires that water to meet the needs of and obligations to restore and even enhance fish not be exported.

Both State and Federal laws seek to prevent degradation of water quality. Isolated conveyance will remove the higher quality Sacramento River water from the Delta pool thereby reducing the dilution of the poorer quality water returning to the Delta by way of the San Joaquin River from SWP and CVP operations which deliver water to the west side of the San Joaquin Valley. The delivery of such water to the San Luis Unit was prohibited by the San Luis Act of 1960 unless there was a Valley Drain with an outlet to the ocean. (See Exhibit SDWA-175). The prohibition was circumvented. Even the promise that "A much needed drainage system and water supply will be provided in the San Joaquin Valley" included in ballot argument in favor of the California Water Resources Development Act (SWP) was not

kept. (See Exhibit SDWA-168). The Purposes and this proceeding unreasonably seek to maintain and increase exports from the Delta to the west side of the San Joaquin Valley which degrade Delta water quality. The commitment to isolated conveyance aggravates such degradation.

The provision of salinity control and an adequate supply for the Delta was deemed to be of utmost importance and is a critical feature of a reliable supply for the Delta.

Salinity control for the Sacramento-San Joaquin Delta is a primary purpose for Shasta Dam.

Water Code Section 11207 provides:

"§11207. Primary purposes

Shasta Dam shall be constructed and used primarily for the following purposes:

(a) Improvement of navigation on the Sacramento River to Red Bluff.
(b) Increasing flood protection in the Sacramento River.
(c) Salinity control in the Sacramento-San Joaquin Delta.
(d) Storage and stabilization of the water supply of the Sacramento River for irrigation and domestic use. (Added by Stats. 1943, c 370, p. 1896) (Emphasis added.)

The Delta Protection Act of 1959 in WC 12200 specifically provides: "It is, therefore, hereby declared that a general law cannot be made applicable to said Delta and that the enactment of this law is necessary for the protection, conservation, development, control and use of the waters in the Delta for the public good."

The degradation of water quality in the Delta adversely impacts agricultural, industrial, urban ~~and recreational (including fish and wildlife)~~ uses in the Delta and surrounding areas as well as areas served with exports from the Delta.

Except as provided by agreement, salinity control and the adequacy of the quality of the water supply for the Delta is determined by water quality objectives set by the SWRCB. Such objectives provide the minimum level deemed necessary to protect beneficial uses. Although the objectives are set for certain uses for certain periods, it is the composite of all objectives which the SWRCB determined would provide the protection for all beneficial uses. Such objectives have at times been violated and it is critical to the rigorous and objective analysis of alternatives to incorporate with and without compliance conditions.

Federal law is specific as to the obligations for the CVP.

PL99-546 (HR3113) specifically provides:

> "(b)(1) Unless the Secretary of the Interior determines that operation of the Central Valley project in conformity with State water quality standards for the San Francisco Bay/Sacramento-San Joaquin Delta and Estuary is not consistent with the congressional directives applicable to the project, the Secretary is authorized and directed to operate the project, in conjunction with the State of California water project, in conformity with such standards. Should the Secretary of the Interior so determine, then the Secretary shall promptly request the Attorney General to bring an action in the court of proper jurisdiction for the purposes of determining the applicability of such standards to the project.
> (2) The Secretary is further directed to operate the Central Valley project, in conjunction with the State water project, so that water supplied at the intake of the Contra Costa Canal is of a quality equal to the water quality standards contained in the Water Right Decision 1485 of the State of California Water Resources Control Board, dated August 16, 1978, except under drought emergency water conditions pursuant to a declaration by the Governor of California. Nothing in the previous sentence shall authorize or require the relocation of the Contra Costa Canal intake." (See Exhibit SDWA-176.)

Section (b)(1) does not allow for the Bureau of Reclamation to operate the CVP without conforming to the State water quality standards for the San Francisco Bay/Sacramento-San Joaquin Delta and Estuary even if the SWRCB is willing to look the other way. A determination by a court of law is required. (See Exhibit 19.)

There are specific processes and procedures for changes to Water Quality Control Plans including review by the United States EPA, which are not being considered.

Section (b)(1) is thus applicable and requires USBR and USF&WS compliance unless the Secretary of Interior makes a determination that compliance is inconsistent with congressional directives applicable to the project and then the Attorney General is to be requested to bring a legal action for a court determination of the applicability of the standards. There is no such court determination that would allow the CVP to operate without conforming to the standards.

Section (b)(2) provides an additional constraint with regard to the water quality at the intake to the Contra Costa Canal. Even if the standards were determined by the court to not be applicable to the CVP, then the D-1485 water quality standards would be applicable to the intake of the Contra Costa Canal except under drought emergency water conditions pursuant to a declaration by the Governor of California.

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In 2004 Congress passed another law to ensure that Delta water quality standards and objectives would be met.

PL 108-361 (HR 2828) in pertinent part provides:

(D) "Program to Meet Standards. -

(I) In General. - Prior to increasing export limits from the Delta for the purposes of conveying water to south-of-Delta Central Valley Project contractors or increasing deliveries through an intertie, the Secretary shall, not later than 1 year after the date of enactment of this Act, in consultation with the Governor, develop and initiate implementation of a project to meet all existing water quality standards and objectives for which the Central Valley Project has responsibility." (See Exhibit SDWA-177.)

Increasing exports from the Delta which to the extent such are for serving south-of-Delta Central Valley Project contractors would be directly contrary to the direction of Congress which was to assure that all existing (October 25, 2004) water quality standards and objectives would first be met.

The WaterFix RDEIR/SDEIS Exhibit SWRCB-3 at ES.1.2.2.2 states: "It is not intended to imply that increased quantities of water will be delivered under the proposed project." At best this statement is misleading and at worst is a lie. Figure 4.3.1-16 (Also Exhibit SDWA-184) shows Alternative 4 H3 (ELT) as increasing average annual wet year exports by 624,000 acre feet over existing conditions and by 898,000 acre feet over the No Action Alternative.

At page 4.3.1-5 it is stated: "Under Alternative 4A, average annual CVP south of Delta agricultural deliveries as compared to No Action Alternative would increase by up to 12% at ELT and by up to 13% at LLT."

At page 4.3.1-7 it is stated: as to the CVP "Therefore, average annual CVP south of Delta M&I deliveries would increase or remain similar under Alternative 4A as compared to the conditions without the project." as to the SWP "Therefore, average annual total SWP deliveries and average annual total SWP south of Delta deliveries under Alternative 4A would show a decrease or an increase as compared to conditions without the project depending upon the range of spring outflow requirements."

At page 4.3.1-9 under CEQA Conclusion it is stated: "Alternative 4A would increase water transfer demand compared to existing conditions. Alternative 4A would increase conveyance capacity, enabling additional cross-Delta water transfers that could lead to increases in Delta exports when compared to existing conditions."

Contrary to Water Code Section 85021 the project will increase rather than decrease export reliance on the Delta. Thereby harming legal users of water.

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THE BDCP/WATER FIX HAS UNREASONABLY DEFINED PURPOSES AND NEED TO CONSTRAIN DELTA ECOSYSTEM IMPROVEMENTS TO ALTERNATIVES WHICH CONVERT AGRICULTURAL LAND TO HABITAT

RATHER THAN REDUCE SWP AND CVP EXPORT OF WATER NEEDED TO PROVIDE ADEQUATE WATER FLOW AND QUALITY

There is strong evidence indicating that fish need water flowing into and out of the Delta to the Bay. The timing and amounts are the subject of ongoing debate and evaluation.

The SWP and CVP affect flow into and out of the Delta primarily through diversions to storage and direct diversions from the tributaries and from locations in the Delta to areas outside the Delta. The reliability of water supply for fish at times directly conflicts with the reliability of the water supply for SWP and CVP deliveries for other purposes and in particular exports from the Delta. The priorities for providing such reliability are established by law.

~~Water Code Section 85086 of the Delta Reform Act of 2009 assigned to the SWRCB the task of determining instream flow needs and new flow criteria for the Delta ecosystem necessary to protect public trust resources. Such determinations have not yet been completed, yet the RDEIR/SDEIS has been prepared and steps towards design and construction are underway. Such flow criteria are important to the required rigorous exploration and objective evaluation of all reasonable alternatives required by 40 CFR 1502.14. The rush to decision in advance of critical evaluations is further evidence of predetermination and lack of a good faith effort at full disclosure and analysis of impacts.~~

Driving the need for ecosystem restoration is the need to address the dramatic decline in fish species and in particular those in danger of extinction. The RDEIR/SDEIS continues the proposition that habitat in the Delta and factors other than the amount flow into and through the Delta are the cause of the subject fish declines. The impacts of the SWP and CVP diversions to storage and diversions for export of water that is not truly surplus are discounted. The projects divert to storage and divert from the Delta the winter and spring natural flows that would otherwise flush the Delta and push back salinity from the bay. Export pumping reverses flows and entrains fish. Export of water released from storage depletes the amounts needed to meet senior requirements including fish and wildlife requirements.

~~The export of water from the proposed intakes on the Sacramento River where there are far greater numbers of fish will likely increase losses of fish, eggs and larvae due to entrainment and the impacts of screening. Unlike passage through the channels of the Delta passage through the tunnels does not allow for escape. Predators will surely occupy the proposed Sacramento River intakes forebays and tunnels. The related impacts to fish and wildlife have not been adequately examined.~~

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~~The correlation between SWP and CVP exports and the decline of the fisheries has been a concern for many years. In August of 1978 the State Water Resources Control Board rendered its Water Right Decision 1485. The Decision was the culmination of 32 days of evidentiary hearing initiated on November 15, 1976 and~~

concluded on October 7, 1977. At that time the striped bass index was considered to be the indicator of ecosystem health for the Delta and Suisun Marsh. Striped bass were in effect the "canary in the coal mine". As the years passed and striped bass populations plummeted, the water exporters claimed striped bass to be invasive species, predators on endangered species and major cause of fish declines wrongfully attributed to the export of water. The canary died and the death was ignored to facilitate greater exports. As Exhibits SDWA-178 show, striped bass, steelhead, Delta smelt, fall-run Chinook salmon and winter-run Chinook salmon all co-existed at relatively high populations at lower export levels.

In 1978 the SWRCB concluded in D-1485 at page 13 that:

> "To provide full mitigation of project impacts on all fishery species now would require the virtual shutting down of the project export pumps." (See Exhibit SWRCB-23.)

The SWRCB also concluded in D-1485 at page 14 that:

> "Full protection of Suisun Marsh now could be accomplished only by requiring up to 2 million acre feet of fresh water outflow in dry and critical years in addition to that required to meet other standards." (See Exhibit SWRCB-23.)

Exports from the Delta were not curtailed and the additional 2 million acre feet of outflow was not provided for the marsh.

Exhibits SDWA-178 show that significant declines in fish populations commenced when annual exports reached 2 million acre feet. Increased development in the watersheds and the effects of climate change would indicate that additional water yield would have to be developed within the Delta watershed to provide a comparable level of fish protection for the future and maintain the 2 million acre feet of exports. Little or no export water in dry years and more in wet years would likely be necessary in any event.

An examination of the fish population graphs indicates that restoration of the ecosystem for fish is not correlated with Delta wetland habitat conditions in the 1850's or at all. The likely relationship is to water conditions, particularly flow.

The Delta was fully leveed and reclaimed by about 1930.

"By 1930 all but minor areas of the swampland had been leveed and were in production." (See page 8 of December 1960 Bulletin 76 - Exhibit SDWA-169.) The USACE completed project levee construction on the San Joaquin River in the early 1960's. There are no significant changes in leveed areas or even riverine habitat which

appear to be the cause of the decline of the fisheries. In fact, there have been increases in Delta wetland habitat during the periods of apparent decline. Mildred Island flooded in 1983 and has not been reclaimed. Little Mandeville and Little Frank's Tract flooded in the 1980's and have not been reclaimed. Lower Liberty Island levees were not restored and the area has been in a tidal wetland condition since at least 2002.

The focus on conversion of Delta land to habitat as a substitute for water for fish is misplaced and the result of the manipulated BDCP purposes. Adequate analysis has not been done to determine if development of shallow wetland habitat is actually detrimental to salmon and other anadromous fish. In particular, stranding and predation from otters, egrets, herons, cormorants, gulls, white pelicans and the like needs further analysis. The limited study (Exhibit SDWA-179) showing a picture of larger salmon smolts raised for a time in a wetland versus smaller smolts raised in the channel is cited by BDCP proponents as the evidence that shallow seasonal wetland in the Delta would be a substitute for flow and justification for a 50 year take permit. The study monitored caged smolts in the channel where the fish must constantly swim against the current and compared those smolts to smolts in cages in shallow wetlands where there was little or no current. The experiment did not attempt to evaluate stranding or predation and it is doubtful that the smolts in the channel cages if uncaged would spend as much time swimming against the stronger currents rather than seeking areas of the channel where the velocity is lower. The presentation of results by BDCP including the fat fish/skinny fish photo neglected to show the sizes of the fish from the cages in the channel upstream of the shallow habitat which reportedly were comparable to those in the wetlands. "During periods of low, clear water, fish growth rates in the river site above the floodplain were comparable to those in the floodplain". (Exhibit SDWA-179, pg. 1.)

Creation of Floodplain Habitat Is Not a Substitute for Flow

The available evidence and studies do not support such a substitution. The floodplain habitat which is suggested as potentially beneficial is that which is inundated by high flows for a limited period; involves a large area of water of a proper depth to help avoid predation; assumes avian predator populations are limited; is properly drained to avoid stranding and avoids increased water temperatures detrimental to salmonids.

The Jeff Opperman Final Report for Fellowship R/SF-4 referenced above containing the picture of the fat fish and skinny fish is often shown as support for the proposition that floodplain habitat can be substituted for flow (Exhibit SDWA-179.) The study does not put forth that conclusion but suggests "that juvenile Chinook benefit from access to floodplain habitats". (Page 2) It is important to recognize that the test fish were caged and thus predation from birds, fish and other animals was not an issue. Stranding was down played but admittedly not tested. The test was conducted in and along the Cosumnes River. The skinny fish were in the river swimming against the current and because they were in cages and couldn't move with the current or move to quiet and more productive water. The fat fish obviously saved their energy for growth

and apparently benefitted from improved food availability. The report states "During high flows the river offers poor habitat and fish living in this type of habitat will tend to be displaced downstream." High flows and displacement downstream are likely not detrimental. It is generally accepted that the salmon do well in high flow years. The return of adults (escapement) is usually higher two and one-half years after a high flow year. It is recognized that ocean conditions also play a part and may in some cases reduce escapement nullifying the benefit of high flow. The difference in food availability in the high flow channel versus in the quiet water may not be significant in the test given the consumption of energy and lack of opportunity for the skinny fish to move to more favorable parts of the river. Displacement downstream into the cooler and more productive parts of the estuary is likely not bad for displaced salmon smolts.

Floodplain Habitat Not Accompanied by High Flow Does Not Appear to Result in Increased Chinook Salmon Ocean Survival and May Not Improve Survival of Sacramento River Juvenile Chinook Salmon Migrating to the Ocean

In the study titled "Floodplain Rearing of Juvenile Chinook Salmon: Evidence of enhanced growth and survival" by Sommer, et al. (2001), a copy of which is Exhibit SDWA-180, tests were conducted in the Yolo Bypass in 1998 and 1999. The study concluded that during such years salmon increased in size substantially faster in the seasonally inundated agricultural floodplain than in the river, suggesting better growth rates. The study, however, provides: "Survival indices for coded-wire-tagged groups were somewhat higher for those released in the floodplain than for those released in the river, but the differences were not statistically significant. Growth, survival, feeding success, and prey availability were higher in 1998 than in 1999, a year in which flow was more moderate indicating that hydrology affects the quality of floodplain rearing habitat". (Exhibit SDWA-180, pg. 1.)

In the discussion the authors provide:

> "Mean length increased faster in the Yolo Bypass during each study year, and CWT fish released in the Yolo Bypass were larger and had higher apparent growth rates than those released in the Sacramento River. It is possible that these observations are due to higher mortality rates of smaller individuals in the Yolo Bypass or of larger individuals in the Sacramento River; however we have no data or reasonable mechanism to support this argument."
>
> "Elevated Yolo Bypass survival rates are also consistent with significantly faster migration rates in 1998, the likely result of which would be reduced exposure time to mortality risks in the delta, including predation and water diversions."

In the study "Habitat Use and Stranding Risk of Juvenile Chinook Salmon on a Seasonal Floodplain" by Sommer, et al. (2004), a copy of which is Exhibit SDWA-181, the

authors build upon the above study with further testing in 2000 and present their analysis of ocean survival.

The author's abstract provides:

> "Although juvenile Chinook salmon *Oncorhynchus tshawytscha* are known to use a variety of habitats, their use of seasonal floodplains, a highly variable and potentially risky habitat, has not been studied extensively. Particularly unclear is whether a seasonal floodplain is a net "source" or net "sink" for salmonid production. . . . Adult ocean recoveries of tagged hatchery fish indicate that seasonal floodplains support survival at least comparable with that of adjacent perennial river channels. These results indicate that floodplains appear to be a viable rearing habitat for Chinook salmon, making floodplain restoration an important tool for enhancing salmon production. (Emphasis added.)

The data provided for ocean survival is as follows:

> Table 1. Number of coded wire tags recovered in the ocean and commercial fisheries for Chinook salmon released in the Yolo Bypass and Sacramento River. The total number of tagged fish released in each location for each year is shown in parentheses. The survival ration is calculated as the number of Yolo Bypass recoveries divided by the number of Sacramento River recoveries.

Release Group	1998 (53,000)	1999 (105,000)	2000 (55,000)
Yolo Bypass	75	136	27
Sacramento River	35	138	47
Survival Ration	2.14	0.99	0.57

In 1998 Yolo Bypass looked like a benefit, in 1999 it was a push and in 2000 Yolo Bypass looked like a detriment.

It is assumed that shaded river aquatic habitat is desirable for special status fish. Attention is called to the BDCP Draft Chapter 8 which puts forth the need to control predators by removing structures which affect flow fields and provide shade. The focus appears to be on abandoned docks, pilings and the like, however, shaded river aquatic habitat can provide the same effect on flow and provide shade. The impact of shaded river aquatic habitat on special status fish is unclear.

There are a number of significant adverse impacts associated with so-called restoration of tidal floodplain habitat within the Delta which have not been objectively considered or mitigated.

In the Delta where the waters are tidal the proposed habitat restoration is not necessarily floodplain but rather is tidal wetlands which is inundated most if not all the time.

Increased salinity intrusion could result from the increased tidal prism and/or creation of shortened pathways to the interior Delta and particularly to the large DWP and CVP intakes whether in the north Delta or south Delta.

Setting back, breaching, degrading and/or not restoring levees in the Delta has significant adverse impacts.

Increases in the tidal prism at locations similar to and including the area in and around the lower Yolo bypass not only induces greater salinity intrusion, but also results in advection adversely affecting the out migration of salmon smolts some of which are endangered.

The regularly or permanently inundated areas constitute increased habitat for predator species and increase ambush locations affecting the fish species of concern. The increase in water surface and wetland vegetation will greatly increase the evaporation and evapotranspiration of fresh water. In many cases there is an increased threat of flooding to surrounding areas due to increased fetch and wave action across the habitat area and increased seepage into adjoining levees and lands.

There is also the harm to and loss of agricultural land and production.

Exhibit SDWA-182 contains excerpts from the April 2011 report by Dave Vogel titled "Insights into the Problems, Progress, and Potential Solutions for Sacramento River Basin Anadromous Fish Restoration" prepared for the Northern California Water Association and Sacramento Valley Water Users contains the results of studies which include the Liberty Island Ecological Reserve area. (The entire study can be viewed on the Northern California Water Association website by clicking on "Fisheries")

At pages 112 and 113 the report provides:

> Subsequent, additional juvenile salmon telemetry studies were conducted by Natural Resource Scientists Inc. on behalf of the USFWS and CALFED in the north Delta (Vogel 2001, Vogel 2004). Triangulating radio-tagged fish locations in real-time (Figure 61) clearly demonstrated how juvenile salmon move long distances with the tides and were advected into regions with very large tidal prisms, such as upstream into Cache Slough and into the flooded Prospect and Liberty Islands (Figure 62). During the studies, it was determined that some radio-tagged salmon were eaten by predatory fish in northern Cache Slough, near the levee breaches into flooded islands (discussed below).

At page 120 the report provides:

> During recent years, there has been an emphasis to reclaim or create shallow, tidal wetlands to assist in re-recreating the form and function of ecosystem processes in the Delta with the intent of benefitting native fish species (Simenstad et al. 1999). Among a variety of measures to create such wetlands, Delta island levees either have been breached purposefully or have remained unrepaired so the islands became flooded. A recent example is the flooding of Prospect Island which was implemented under the auspices of creating shallow water habitat to benefit native fish species such as anadromous fish (Christophel *et al*. 1999). Initial fish sampling of the habitat created in Prospect Island suggested the expected benefits may not have been realized due to an apparent dominance of non-native fish (Christophel *et al*. 1999). Importantly, a marked reduction of sediment load to the Delta in the past century (Shvidchenko *et al*. 2004) has implications in the long-term viability of natural conversion of deep water habitats on flooded Delta islands into shallow, tidal wetlands. The very law rates of sediment accretion on flooded Delta islands indicate it would take many years to convert the present-day habitats to intertidal elevations which has potentially serious implications for fish restoration (Nobriga and Chotkowski (2000) due to likely favorable conditions for non-salmonid fish species that can prey on juvenile salmon. Studies of the shallow water habitats at flooded Delta islands showed that striped bass and largemouth bass represented 88 percent of the individuals among 20 fish species sampled (Nobriga *et al*. 2003).
>
> There have likely been significant adverse, unintended consequences of breaching levees in the Delta. There is a high probability that site-specific conditions at the braches have resulted in hazards for juvenile anadromous fish through the creation of favorable predator habitats. The breaches have changed the tidal prisms in the Delta and can change the degree in which juvenile fish are advected back and forth with the tides. (Figure 61; previously discussed). Additionally, many of the breaches were narrow which have created deep scour holes favoring predatory fish. Sport anglers are often seen fishing at these sites during flood or ebb tides. Breaching the levees at Liberty Island is an example (Figure 72 and 73). Recent acoustic-tagging of striped bass in this vicinity confirmed a high presence of striped bass (Figure 74, D. Vogel, unpub. data.)

The increased loss of fresh water due to creation of tidal and wetland habitat is clear. Exhibit SDWA-183 is Table A-5 from DWR Bulletin 168, October 1978 shows the annual Et values for various crops and for Riparian Vegetation and Water Surface. The Riparian Vegetation and Water Surface 67.5 inches can be compared to tomatoes 33.8 inches and alfalfa 46.0 inches. The increased fresh water loss is from 33.7 inches when compared tomatoes and

21.5 when compared to alfalfa. The increased loss of fresh water is particularly significant in drier years.

The Division of Water Resources (predecessor to The Department of Water Resources) in the Sacramento – San Joaquin Water Supervisor's report for the year 1931 dated August 1932 and designated Bulletin 23 includes the results of studies of water consumption of tules and cat-tails Exhibit DWR-22 includes Tables 69, 74, 75 and 77 from such report. Consumptive use for open water surface is shown as 4.91 acre feet per acre, tules at 9.63 acre feet per acre, and alfalfa at 3.51 acre feet per acre. To examine the relatively high consumptive use for tules the U.S. Department of Agriculture undertook a continuation of the study of consumptive use for asparagus, tules and cat-tails. The tables show an average of 14.63 acre feet per acre for cat-tails and 13.48 acre feet per acre for tules. Results from cat-tails and tules grown in tanks at Camp 3, King Island for 1931 are shown in Table 77. The results for normal sized tules was 8.0 acre feet per acre.

INJURY TO LEGAL USERS FROM THE PROPOSED CHANGES INCLUDE INJURY TO MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL USERS FROM ALTERATION OF WATER FLOWS AND ALTERATION OF WATER QUALITY.

Legal users of water are entitled to protection of the priority of their traditional water rights, contract rights and statutory protections and failure to provide such protection constitutes injury. Additionally, such users are injured when the mitigation and affirmative obligations of the CVP and SWP are not met by the projects and/or the burdens are shifted onto them.

The CVP and SWP must provide salinity control for the Delta and assure an adequate Delta supply including maintenance of the Delta common pool, provision of overland facilities and maximize use of the stored water released for export to provide incidental benefit. Most important is the prohibition of project exports from the Delta of water necessary to provide water to which Delta users are 'entitled' and water which is needed for salinity control and an adequate supply for Delta users. Such burdens are not to be shifted to others.

The CVP has the burden of meeting the anadromous fish doubling and other requirements of the CVPIA which can be considered to be mitigation and/or enhancement. The SWP has the burden of preserving fish and wildlife which should be directed at populations existing at the 1960 inception of the project. Such burdens should be met by the projects and not be shifted to others. Additionally, the SWP and CVP must mitigate the damages caused by their respective projects including and without limitation the inducement of upstream water use, diversion of the San Joaquin River at Friant, water delivery to the San Luis Unit without a drainage outlet to the ocean, construction of flood control projects, ship channels and the like, depletion of surface flow and groundwater through water transfers and water right settlement mechanisms, destruction of and isolation of fish spawning habitat, creation of habitat which induces salinity intrusion and increases the concentrations of methyl mercury, microcystis and other harmful elements, damage to fish from operation of large pumping and other diversion facilities. Such burdens should be met by the projects and not be shifted to others.

The resulting degradation in quality from the proposed changes and related mitigation injures legal users in the Delta by increasing salinity in the water supply thereby limiting reuse, increasing treatment costs and adding salinity to the soil thereby inhibiting plant growth. The increase in methyl mercury, microcystis, boron and other harmful constituents creates a danger to human and animal health both in the channels, on the farm and in the urban areas, and contaminates the land and potentially the safety of crops for human consumption.

The Adverse Impacts To Legal Users Cannot Be Adequately Evaluated At This Time Due To The Lack Of Description And Analysis Of The Project and Its Operations

Figures 4.3.1-15, 16 and 17 Exhibit SWRCB-3 show for different year types the portions of the north and south Delta exports passing through the channels of the Delta and through the proposed new intakes and tunnels. Much of the justification for the changes is the forecasted failure of Delta levees due to sea level rise and earthquakes. The project does not include funds or plans for improvement of the Delta levees to avoid such failures or to promptly restore the same to mitigate the consequences. There is no adequate analysis of the impacts associated with the diversion of all water for export through the new intakes and tunnels or the intended intentional flooding of Delta islands under the pretense of mitigation for project related impacts.

Petitioners contend that the proposed changes would allow the projects to export water in the event of levee failures due to earthquakes and/or sea level rise and avoid the necessity of releasing reservoir water to flush saltwater from the Delta. The legal obligation of the projects to provide salinity control even it if requires overland supply and even if on occasion it requires water from reservoirs is not eliminated by reason of the desire to export water. The export of water is junior to the obligation to provide salinity control. To construct and operate facilities for the purpose of evading the legal obligation to protect legal users of water in the Delta is obviously injurious to such users.

It is obvious that avoidance of the threat of earthquake damage to levees in the Delta does not eliminate the earthquake threat to the hundreds of miles of canals, pipelines, pumping plants and electrical facilities used to divert and transport water from the Delta to areas south of the Delta. Exhibit SDWA-188 showS the active faults paralleling and in proximity to the project facilities delivering water to the south. Exhibit SDWA-189 shows an example of the California Aqueduct and the pumps and pipelines delivering water to the South Coastal region. Exhibit SDWA-190 shows the earthquake faults beneath the pipelines from the Edmonston Pumping PlanT to the Tehachapi Afterbay Control Structure. Exhibit SDWA-191 is a drawing of the 20-Island failure scenario circulated by DWR. Exhibit SDWA-192 contains Extracts of USACE May 23, 2007 comments on the 20-Island failure analysis. A more careful analysis of the threat of levee failure must be undertaken as a prerequisite to consideration of the proposed changes including interim measures during construction if such is ultimately approved.

Petitioners contend a sea-level rise of as much as 5 1/2 feet can be expected within 90 years implying that such a rise is applicable to the Delta and is compelling their pursuit of this project. Complete analysis has not been presented as to the likely extent of sea level rise

impacting the Delta and the relevance to the Petitioners duty to avoid injury to legal users. Exhibit SDWA-193 is a copy showing the earth from Google Maps. The earth is not shown as flat. From personal experience I have verified that the earth is not flat. Of equal importance is the recognition that sea level rise varies with location and is impacted differently by the time duration of surges and likely winds, ocean currents and changes in the earth surface. Exhibit SDWA-194 shows the mean sea level trend for the Golden Gate, Alameda, Juneau Alaska and Pietarsaari, Finland. Exhibit SDWA-195 contains plots from the NOAA website of sea level rise and fall arrows reflecting degree for various parts of the earth. Delta agricultural levees incorporate 18 inches of freeboard and many are being built with wider crowns to accommodate greater freeboard in the future. A more careful analysis of sea level impact in the Delta is merited. The July 26, 2016 CVFPP climate change briefing plot of actual sea level rise, San Francisco includes a 33 year Gaussian average which appears to be flattening out. See Exhibit SDWA-196.

It is also important to recognize that abandonment of Delta levees could result in a large loss of infrastructure. Exhibit SDWA-197 shows the potential loss of Delta infrastructure within the 100-year flood limits as $56.3 billion in 2005 dollars and $67.1 billion in 2050 dollars. Such impacts will adversely impact legal users and must be considered as possible impacts of the proposed changes.

A comparison of Exhibit SDWA-185 and 186 shows that historic salinity intrusion into the Delta occurred infrequently and late in the growing season, that after the commencement of the CVP salinity control was provided and that after commencement of the SWP salinity peaks were controlled but longer duration of salinity intrusion at lower levels was the result. Further increases in salinity will increase the already troublesome concentrations of salinity encountered by legal users.

This portion of my testimony is presented to verify some of the documents presented by SDWA et.al. during cross-examination of the Petitioners' witnesses. As was argued by SDWA et.al. and finally agreed to by the hearing officers, SDWA et.al. introduced certain documents to show that Petitioners were not in compliance with various federal and state statutes and other regulatory provisions which mandate how the Petitioners must operate the SWP and the CVP. Until the Petitioners plan for and do operate in accordance with these requirements there cannot be an accurate base case or no action alternative for their project. Without such accurate base case or no action alternative, the modeling supporting the WaterFix is meaningless as it does not indicate what the effects of the project would be.

SDWA 5 includes California Water Code sections 12200-12205 (page 336), commonly referred to as the Sacramento-San Joaquin Delta Act or Delta Protection Act of 1959. The language of the Act speaks for itself, but it is clear that the Act requires the SWP and CVP to provide both water quality and supply for all in-Delta needs. It also mandates that upstream reservoir releases be coordinated to the maximum extent possible to help meet the various goals of the Act; water quality and supply.

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SDWA 6 includes excerpts of Title 34 Public Law 102-576 (page 1 and 12) which is the Central Valley Project Improvement Act. The complete Public Law is offered as SDWA-200.

SDWA 7 includes excerpts from the Final Restoration Plan for the Anadromous Fish Restoration Program (pages 35-38, 67-68, 81-84, 86-88, 92-101). SWRCB-99 is the complete Plan.

SDWA 8 includes excerpts from the Public Law 108-361 (Section 103 Bay Delta Program, Program to Meet Standards (i) through (vii)), the Water Supply, Reliability and Environmental Improvement Act (federal CalFed Reauthorization) of 2004. The full Act is included as SDWA-201

SDWA 9 includes excerpts from the USBR Program to Meet Standards (pages ES - through ES-6), which was mandated in PPL 108-361 referenced above. The Complete Program is SDWA-202

SDWA 10 (pages 149 - 156) and 21 (page 184 and 185) are excerpts from D-1641. That water right order is SWRCB-21

SDWA 11 is the Response Plan for Water Level Concerns produced by DWR and USBR as mandated by D-1641.

SDWA 13 includes excerpts of the Water Quality Response Plan (pages 1 and 6) produced by DWR and USBR as mandated by D-1641. The complete Plan is SDWA-203 As noted during cross examination, a provision of this Plan (on page 6) requires that transfers of water through the CVP or SWP must conform to the requirements of Joint Point of Diversion (as defined and authorized by D-1641) including this Plan.

SDWA 14 is the letter dated 7-1-2005 from the SWRCB to DWR and USBR approving the Water Quality Response Plan referenced above with certain changes which add compliance with a pending cease and desist order.

SDWA 15 includes excerpts from SWRCB WR Order 2006-0006 (pages 1, 28, 32, and 33), a Cease and Desist Order issued against DWR and USBR. The complete Order is SDWA-204

SDWA 16 includes excerpts from SWRCB WR Order 2010-0002 (pages 1, 2, 19 - 26), which amended WR 2006-0006. The complete Order is SDWA-205

SDWA 24 includes excerpts from Public Law 99-546 (page 10), the federal law approving the Coordinated Operations Agreement between California and the US government. This Act requires that the USBR operate in compliance with all regulatory mandates imposed on it by the SWRCB unless certain findings are made and pursued.

SDWA 2 is a printout from the DWR California Data Exchange Center (CDEC) showing the hydrologic classification indices for the Sacramento and San Joaquin Rivers. The printout goes from 1901 to 2015. This exhibit is submitted to show how often a dry or critical year follows a dry or critical year, which was the criteria for considering seeking a TUCP under the terms of the January 2016 draft Biological Assessment.

SDWA 3 includes excerpts from the draft Biological Assessment for the California WaterFix (pages 3-214 to 3-215), dated January 2016. The complete BA is SWRCB-104. The excerpts describe the conditions under which DWR and USBR would seek a temporary urgency change to their permits. Such a change would mean that they would not be operating under their current terms and conditions and thus would be adversely affecting the beneficial uses protected by those terms and conditions. This also indicates that the modeling done in support of the Petition does not accurately reflect how the projects would in fact be operating under these certain hydrologic conditions.

SDWA 12 are emails (dated November 2, 2016, July 5. 2016, July 6, 2016, July 12, 2016, July 13, 2016, and August 5, 2016) between DWR Delta personnel and John Herrick, Esq., counsel and general manager of SDWA regarding water level problems in the south Delta and the impacts therefrom. These emails indicate that even when the levels are in accordance with the Water Level Response Plan they may not be sufficiently protective of local diversions. In those emails Mr. Herrick asks that the minimum levels set forth in the Plan be re-evaluated, as is provided in the Plans.

SDWA 18 are printouts from the DWR Operations and Maintenance website showing measured and 30-day averaged EC at the four southern Delta water quality compliance locations from January 1, 2014 to August 2, 2016. These data show that whereas the modeling results of averages presented by the Petitioners' modeling panel never rise above the current standards of 0.7/1.0 EC, in fact these standards were regularly violated over the term shown.

SDWA 27 is an email and attachments sent from DWR personnel to a service list of interested recipients date July 15, 2016. The email describes an ongoing transfer of water and the projected impacts to water quality and water levels. One of the attachments is a graph showing projected EC at Old River near Middle River with and without the transfer. In both cases, the projected water quality is below the 0.7 EC of the standard. These forecasts also indicate that small changes in exports (the 350 cfs transfer) can affect southern Delta water quality by as much as (approximately) 120 EC.

SDWA 35 is a printout of the actual and 30-day averages for EC at the four southern Delta compliance locations. This actual data shows that at the same Old River near Middle River location the daily EC's were significantly higher than the DWR forecasts in SDWA 27. Whereas the forecasted EC was never above 0.7 EC, the actual EC reached 1120 EC indicating that the modeling forecasts do not reflect actual conditions.

SDWA 28 are CDEC printouts (graphs) for EC at Old River near Tracy and the San Joaquin River at Brandt Bridge from June 22, 2006 through August 8, 2016. These graphs show that although the modeling results of average EC presented by Petitioners show no

exceedances above the 0.7/1.0 EC standard, the actual EC's over this time frame exceed the standards regularly. This actual data covers much of the time during which D-1641 was in effect whereas the Petitioners' modeling covers a time frame when D-1641 was not in effect.

SDWA 31 includes excerpts (page 30) from the Central Valley Regional Water Quality Control Board's report entitled Salinity in the Central Valley, dated May 2006. The excerpts show that the salts coming down the San Joaquin River each year amount to 742 thousands of tons a year (mean from 2001 to 2004) with the annual salt load minimums, maximums and mean for the period of 1985 to 2004 of 263,000, 2,557,000 and 922,000 tons respectively. The complete Report is SDWA-206.

Dated: August 31, 2016

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DANTE JOHN NOMELLINI, SR.