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VIA E-MAIL and CERTIFIED MAIL RETURN RECEIPT REQUESTED

Delta Stewardship Council
Attn: Terry Macaulay
980 Ninth Street, Suite 1500
Sacramento, CA 95814
E-mail: eircomments@deltacouncil.ca.gov

Re: *California Sportfishing Protection Alliance (CSPA), California Water Impact Network (CWIN), AquAlliance, and the Pacific Coast Federation of Fisherman's Association's (PCFFA) Comments to the Draft Delta Plan Program Environmental Impact Report*

Dear Ms. Macaulay,

Thank you for this opportunity to provide comments on the Draft Delta Plan Program Environmental Impact Statement ("DPEIR") regarding the Delta Plan ("Plan") issued in November 2011. These comments represent the comments of the California Sportfishing Protection Alliance (CSPA), the California Water Impact Network (CWIN), AquAlliance, and Pacific Coast Federation of Fisherman's Association (PCFFA) (hereinafter, collectively referred to as ("the Groups"). The groups urge the Delta Stewardship Council ("DSC" or "Council") to reject the DPEIR as proposed because the DPEIR fails to consider many potentially significant environmental impacts of the Plan and alternatives to the Plan, and otherwise fails to meet the requirements of the National Environmental Policy Act and the regulations of the Council on Environmental Quality implementing it ("NEPA")[1], the California Environmental Quality Protection Act pursuant to California Public Resources Code sections 21000 *et seq*. ("CEQA"), the Clean Air Act ("CAA") the Federal Reclamation Act of 1902, the Clean Water Act ("CWA"), the Coastal Zone Management Act, the Omnibus Appropriations Bill, the Central Valley Project Improvement Act of 1992 and numerous other statutory and common law provisions described in greater detail below.

The Role of the Delta Stewardship Council in Shaping the Delta Plan

The Sacramento-San Joaquin Delta Reform Act of 2009 ("Delta Reform Act") established a suite of requirements for the Delta Plan ("Plan" or "project"). These requirements

[1] 40 USC §4321, *et seq.* and 40 C.F.R. Parts 1500-1508 Council on Environmental Quality Guidance

are framed by the Water Code's "basic goals" for the Delta; first among these is to "[a]chieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem," which closely tracks the second "basic goal" to "[p]rotect, maintain, and, where possible, enhance and restore the overall quality of the Delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities." (Wat. Code § 29702; *see also* Wat. Code § 85054.) The pursuit of these goals must conform with the Legislature's determination that "[t]he permanent protection of the Delta's natural and scenic resources is the paramount concern to present and future residents of the state and nation." (Wat. Code § 85022(c)(2).) The Delta Plan created and directed the Delta Stewardship Council (DSC) (an independent agency of the state created by SBX7 1) to develop a legally enforceable Delta Plan to achieve the coequal goals of "providing a more reliable water supply for California" while "protecting, restoring, and enhancing the Delta ecosystem" 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 Section 85054). The Act also established a state policy of promoting regional self-reliance and reduced reliance on the Delta in meeting California's future water supply needs. The objective of the DSC is to "...develop, adopt, and commence implementation of the Delta Plan by January 1, 2012." (Water Code Section 85300).

The groups are particularly concerned that the DPEIR contains inadequate description of the overall program, discussion and analysis of the "Project" overall, fails to address many baseline environmental conditions, and inadequately evaluates feasible alternatives and the "no project" alternative. At a minimum, the DPEIR must set forth basic costs and clearly defined baseline conditions so that the Proposed Program can be measured against the various Alternatives, which it does not do. The DSC further fails to define and quantify the following terms: 1) a "more reliable water supply," 2) "protecting, restoring, and enhancing the Delta ecosystem," 3) "enhancement of the Delta as an evolving place" and 4) "regional self-reliance" and "reduced dependence on the Delta." By failing to define what is meant by the foregoing terms, the DSC is incapable of quantifying, analyzing and balancing the goals and policies outlined in the Delta Reform Act. These failures undermine and sabotage efforts to resolve California's water crisis.

For example, the failure of the DSC to define and quantify what a "reduced dependence on the Delta" would look like makes it impossible to determine the extent to which the Delta is currently over appropriated. As it is, consumptive water rights issued by the State Water Resources Control Board (State Board) exceed unimpaired flow into the Delta; state and federal water project contracted water deliveries are greater than available supplies and the delivery capacity of the systems; increased pollutant mass loading to the estuary has exhausted assimilative capacity and exacerbated water quality degradation; and excessive diversions have led to the collapse of estuary's biological tapestry. Two recent state agency reports, [2] which were developed through extensive public processes, conclusively establish that an increase in Delta outflow is necessary to protect and restore the estuary's aquatic ecosystem. In other words, California's water system is seriously oversubscribed, operating in deficit, and is thus incapable of meeting competing demands on the system. The DSC's charge is to resolve this imbalance. In the near term, it's largely a zero sum game, as more water to protect public trust values

[2] State Water Resource Control Board. August 2010. *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*; California Department of Fish and Game. November 2010. *Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta.*

translates to less water for consumption values. Over the longer term however, through improved efficiencies, conservation, reclamation, reuse and improved storage and diversion methods, water shortages would be largely alleviated. The DSC cannot avoid having to make difficult decisions regarding the distribution of limited water resources. Sadly, the Fifth Draft of the Delta Plan fails to provide the structure and information critically necessary to make intelligent but painful decisions, with the DSC resorting to gamesmanship to maintain an over appropriated status quo.

The DSC Plan and the DPEIR Fail to Analyze The Delta Plan
In Light of The Public Trust Doctrine.

"The longstanding constitutional principle of reasonable use and the *public trust doctrine* shall be the foundation of state water management policy and are particularly important and applicable to the Delta." Water Code Section 85023. As an agency of the state of California, the DSC is creating a 100 year plan that must conform with CEQA statutes, regulations, guidelines and California case law to analyze the plan.

The California Supreme Court last visited public trust law in the seminal case of National Audubon Society v. Superior Court of Alpine County, 33 Cal.3d 419 (1983) in which the court held that the state has "an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust whenever feasible." The Supreme Court further quoted, with favor, now Justice of the 3rd Appellate District Ron Robie, that "the requirements of the California Environmental Quality Act (Public Resources Code 21000 et. seq.) impose a similar obligation." In keeping with the Supreme Court ruling, the state must take the public trust into account in the Delta Plan. The Delta Plan functions as a strategic document which provides guidance and recommendations to cities and counties, as well as state, federal, and local agencies on how to restore the Delta ecosystem and provide a more reliable water supply for California. The plan contains regulatory policies and establishes a certification process for proposed projects to ensure that they comply with the Delta Plan. The plan further envisions the incorporation of other "completed" plans into the Delta Plan, thereby "certifying" that proposed plans, projects, and covered actions are consistent with the Delta Plan.

The planning and allocation of limited and oversubscribed resources implies that there has been an analysis and balancing of the competing demands on these resources. Inexplicably, the Fifth Draft of the Delta Plan makes no effort to balance the public trust and resolve these competing demands for limited resources. The Fifth Draft of the Plan contains no water availability analysis that would show, at a minimum, what water will be available to meet the Reform Act's goals. Such an analysis would have to include an evaluation of the existing seniority-based water rights system, an assessment of real vs "paper" water and area of origin statutory restrictions, and a discussion of the public trust doctrine. The Plan and its DEIR do none of these things. The DSC plan will guide the Bay/Delta activities for 100 years. It is time to use CEQA in a real analysis of the plan before finalizing what could be a mistake that would haunt California water policy for decades. These deficiencies alone fall short of the statutory requirements of the Delta Reform Act and do not comport with the state's requirements to consider the public trust doctrine as held in Mono Lake.

The DSC denies that it has any affirmative duty to analyze whether the plan protects the public trust in the Bay/Delta. However, the DSC, as an agency of the sovereign state of California, has an affirmative duty, inherent in the public trust doctrine, and made a specific duty

by the California Supreme Court in Audubon, to evaluate and compare the proposed alternatives to see if, and how completely, each of the alternatives satisfy the public trust in the Delta. The Legislature has expressly declared that "*permanent protection* of the Delta's natural and scenic resources is the *paramount* concern to present and future residents of the state and nation." (Wat. Code, § 85022(c)(3) (emphasis added).) Thus the Legislature, like the Supreme Court in the *Bay-Delta Programmatic EIR* case, has expressed a *preference* for public trust values, using the word paramount. The plain meaning of "paramount" is the "highest in rank or jurisdiction, chief; pre-eminent; supreme." (Webster's Dictionary). Because that legislative determination cannot be characterized as unreasonable, and is supported by other policies of the Delta Reform Act, the Legislature's implementation of the public trust by the preference expressed in section 85022, subdivision (c)(3) must be honored by the DSC. (*California Trout v. State Water Res. Control Bd.* (1989) 207 Cal. App. 3d 585, 624-625, 629-631.) Here, however, the DSC and the DPEIR do no public trust analysis, because the DSC incorrectly insists that the duty to evaluate the effects of the Delta Plan on public trust resources is not within their purview, even though the Delta Reform Act mandates that the public trust and the doctrine of reasonable use are "particularly important and applicable to the Delta." The groups dispute the DSC's position that an analysis of the public trust doctrine is unwarranted, and request an analysis of whether it is feasible to protect the trust under each of the proposed alternatives. The groups further incorporate the DPEIR comments of the firm of Rossman and Moore, as if set forth herein in full, on the issue of whether or not, and how, to legally evaluate the public trust at the planning stage of the DSC process.

Deficiencies in the Plan's "Area of Origin" Water Rights Analysis

The California Legislature has created a variety of Water Code provisions to protect the area of origin water rights of Californians living in the state's wet areas. These area of origin rules include the Watershed Protection Act, Water Code sections 11460 through 11463; the County of Origin protection, Water Code section 10500; the Delta Protection Act, Water Code sections 1220 through 12204; and the protected area provisions, Water Code sections 1215 through 1222. Generally speaking, these statutes mandate that large-scale water transport systems, like the CVP and the State Water Project, not deprive an area where water originates of the prior right to all water reasonably required to adequately meet the beneficial needs of the area and its inhabitants.

During the Central Valley Project Act's legislative process, area of origin residents insisted the Act contain provisions guaranteeing they have first access to water originating in their area. Residents argued that excess water should only be exported to drier areas of the state once area of origin residents received their water. The legislature addressed these concerns in several key provisions of the Act, now codified as California Water Code sections 11460-11463. These provisions, known as the "Watershed Protection Act" ostensibly gave inhabitants of the watersheds of origin priority over out of area users:

> In the construction and operation by the [Department of Water Resources] 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.*

Water Code Section 11460 (emphasis added).

These state watershed protections apply to the federally operated CVP pursuant to 43 U.S.C. § 383 (2006); *California v. United States*, 438 U.S. 645, 678 (1978) (federal Reclamation projects must comply with state water law.) The Delta Protection Act of 1959 further requires that the coordinated operations of the CVP and SWP maintain water quality standards and, in doing so, prohibits any person, corporation or government agency from diverting water to which local users of Delta water are entitled from the channels of the Sacramento-San Joaquin Delta. "Protected areas" are also statutorily safeguarded from plundering by out of area demands through a series of statutes commonly known as the "protected areas" statutes of 1984, which expressly prohibit water exporters from depriving designated protected areas of the prior right to water reasonably required to adequately supply the beneficial needs of the protected area. These numerous protections enacted since 1927 evidence the California Legislature's commitment to protecting area of origin residents' access to local water prior to the exportation of that water to drier areas of the state.

The DSC failed to take into account the water needs of water rights holders within the Delta watershed, and failed to consider the water needs sufficient to sustain beneficial uses, including environmental needs, in the watersheds that are protected by the "area of origin." Water users upstream from the Delta are understandably concerned that their long-standing water rights will be hijacked to subsidize increased inflow in the Delta in order to maintain maximum water exports to junior water rights users that are served by the state and federal project pumps in the Delta. Such a result would directly conflict with the Delta Reform Act, which admonishes against interference with area of origin laws and the system of water rights seniority. The looming BDCP process, and the umbrella authority for BDCP built into the Delta plan, needs to be disclosed and analyzed within the DPEIR, with alternatives compared and watershed needs mitigated. The omission of these important discussions in the present draft of the DPEIR will result in a skewed and incomplete understating of potential environmental effects on the Delta, which at a minimum will serve to exacerbate water rights litigation throughout the state.

Deficiencies in the Plan's Water Availability Analysis Renders Meaningful Environmental Conclusions Impossible

A state lead agency is required to prepare an EIR for each discretionary project that *may* have a significant effect on the environment. (Pub. Resources Code, §§ 21080, subd. (d),21100, subd. (a).) "The word 'may' connotes a 'reasonable possibility'" that a project will have a significant environmental impact. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 309, quoting *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83 n.16.)

The CEQA Guidelines define a "significant effect on the environment" as a "substantial, *or potentially substantial*, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." (Cal. Code Regs., tit. 14, § 15382, emphasis added; see also Pub. Resources Code, § 21068.) A lead agency's determination of the significance of environmental effects is governed by the criteria in CEQA Guidelines sections 15064 and 15065 and Public Resources Code section 21083, subdivision (b). The Sacramento-San Joaquin Delta is a natural resource of statewide, national, and international significance, containing irreplaceable

resources, and it is the policy of the state to recognize, preserve, and protect those resources of the delta for the use and enjoyment of current and future generations. (Public Resources Code Section 29701)

Water Code section 85300, subdivision (a) therefore requires the DSC to "develop, adopt and implement" the Delta Plan. The Delta Plan itself qualifies as "an activity directly undertaken by a public agency." Thus, the Plan must be analyzed to determine whether it "may cause either a direct physical change… or a reasonably foreseeable indirect physical change[,] in the environment" – thereby qualifying as a "project" subject to CEQA. (Pub. Resources Code, § 21065; see also Cal. Code Regs., tit. 14, § 15060, subd.(c).) The Delta Plan must include "quantified or otherwise measurable targets associated with achieving the objectives of the Delta Plan," and describe "the methods by which the Council shall measure progress toward achieving the co-equal goals." (*Id*., § 85308, subds. (b) and (d); see also *id*., § 85211.) The mere fact that the DSC prepared the DPEIR for the Fifth Draft of the Delta Plan demonstrates the DSC's belief that the plan has potential to cause direct or foreseeably indirect physical changes in the Delta environment. However, the present DPEIR fails to include quantifications or measurable targets to achieve the objectives of the authorizing law. On this issue alone, the present draft of the Delta Plan completely fails as a programmatic document under CEQA.

Water Code section 85302, subdivision (a) further requires that the Delta Plan actually to be implemented to achieve the co-equal goals required under Water Code Section 85054. Once implemented, these goals of the Delta Plan clearly will have physical environmental effects. SB 1 requires that the Delta Plan include specific implementation measures and calls for a plan that is "legally enforceable." (Water Code §§ 85001, subd. (c), 85302, subds. (d) and (e).) The only enforceable components of the Plan, according to the DPEIR, are the "policies." A number of critical elements of the Plan have no policies associated with them, as shown below (without limitation). Hence, those components are unenforceable. The Plan must include enforceable strategies and subgoals as required by the Reform Act, and it is within this area that the Plan falls fundamentally short. The Plan contains little more than a description of the status quo, including recommendations for other government agencies to take action to improve the existing situation in the Bay/Delta. These recommendations are made without any real regulatory muscle to support or enforce them. Ultimately, the people of California cannot rely on the Plan's weak "policies" and unenforceable "recommendations" to meaningfully confront the challenges facing the Delta. As explained below, however, the EIR assumes that the project (*i.e.*, the Delta Plan) will succeed in its grand ambitions and neglects to consider the potential, even likely, result that the Plan will fail to deliver the full range of benefits presupposed but not necessarily realizable.

The DSC's failure to conduct a water availability analysis to determine whether water exists now, or in the future, to sustain present south-of-Delta exports or whether water presently exists to accomplish the State Board's recommended flows is fundamental to the DPEIR's flawed decisions on alternatives: the possible range of alternatives, a realistic "no project" alternative, analysis of those alternatives, and the mitigation of impacts caused by competing water needs. Without a water availability analysis, the DPEIR is complete guesswork and provides no information from which the public can understand whether the Delta Plan will meet the mandatory state requirements under the Delta Reform Act.

Deficiencies in the Plan's Water Availability Analysis Renders Meaningful Economic Conclusions Impossible

One of the significant flaws of previous unsuccessful Bay-Delta proceedings was the absence of a comprehensive economic analysis of the benefits of protecting in-Delta beneficial uses against the benefits of diverting and exporting water from the estuary. The DPEIS continues a flawed tradition of approving projects without economic analysis of the Plan, or alternatives. The lack of economic evaluation deprives decision makers and the public of the critical information necessary to reach informed decisions that reflect an appropriate balance of competing demands.

To properly address ecosystem restoration and water supply reliability requires a comprehensive cost/benefit analysis that describes the economic consequences of various projects and their alternatives, including changes in economic impacts and the distributional outcomes for each alternative. A reasonable economic assessment should describe current and baseline conditions for each alternative; measure the economic effects on physical, human, social and natural capital; and apply a "with" vs. "without" approach that can isolate the economic effects (values, impacts, equity) caused by the alternatives from changes unrelated to the alternatives. A proper economic assessment must include:

1. The changes in the values of goods and services available to Californians that result from the market and non-market activities associated with alternatives. These include changes in economic benefits, costs and changes in the quality of life.
2. The economic impacts that occur to jobs and incomes for workers, costs or revenues for private firms, and expenditures or tax revenues for governments, including multipliers.
3. The effects and economic impacts across brackets of households, ethnicities and geographic areas and identification of how groups that enjoy the benefits differ from those who bear the costs.
4. Measurement of the economic effects of policies on ecosystem services that have value to humans using non-market valuation techniques.

Comprehensive economic analyses are routinely employed by state and federal agencies throughout the nation. The historic failure to apply them in evaluating competing beneficial uses in the Bay-Delta is at the core of the current water crisis in California.

In 1983, the U.S. Water Resources Council published, *The Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (P&G). The *P&G* helps federal agencies, including the Corps of Engineers and Bureau of Reclamation, to plan water-related projects. The 2007 Water Resources Development Act requires that the *P&G* ensure the best available economic principles and analytical techniques. Unfortunately, the *P&G* has not been updated since it was published. Recently, the National Research Council (NRC) of the National Academies reviewed proposed changes to the *P&G*.[3]

[3] National Research Council of the National Academies. 2010. *A Review of the Proposed Revisions to the Federal Principles and Guidelines Water Resources Planning Document*. Committee on Improving Principles and Guidelines for Federal Water Resources Project Planning, Water Science and Technology Board, Division on Earth and Life Studies.

While the NRC ultimately concluded that the proposed changes did not adequately address the many deficiencies in the outdated *P&G,* and thus were not representative of current best economic practices, the NRC review contains valuable insight into current best practices for economic principles and analytical techniques. As a result of the review, the California Department of Water Resources (DWR) developed the *Economic Analysis Guidebook (Guidebook)* in 2008 to address deficiencies in the *P&G*, in order to help DWR economists conduct economic analyses using up-to-date methods and describe economic concepts and analyses to non-economist staff.[4] The *Guidebook* describes economics as "critical" to describing the environmental consequences, social effects, and costs and benefits of water-management alternatives. This is significant because for every environmental issue, a tradeoff inherently exists between "natural" and "human" demands on water resources. Because of this tradeoff, the examination of environmental issues should always take into account the economic effects of water uses that benefit the natural environment, even if this use adversely impacts agricultural and urban water users. Economics can also help describe effects on social equity or environmental justice, because economic costs and benefits include both monetary and non-monetary effects.[5]

In 2005, DWR produced a four-part study that describes the importance of considering the full range of economic costs and benefits of public policies that affect aquatic resources. DWR refers to this as a "multi-object approach" to floodplain management because it takes into account objectives besides flood mitigation (a single objective) to consider consequences on habitats, water quality, society, etc. This multi-objective approach includes:

1. A report titled *Ecosystem Valuation Methods* (*Methods*), describing a number of up-do-date methods of valuing aquatic-based ecosystem services. The analytical methods discussed have relevance to, and can help inform, assessments of the economic significance of ecological uses of Bay-Delta flows.[6]
2. A second report, *Natural Floodplain Functions and Societal Values* (*Functions*), describing biophysical aspects of floodplain habitats and examples of economic values of the ecosystem services that floodplains provide.[7]
3. A third report, *Middle Creek Flood Ecosystem Restoration Project Case Study: Benefit and Cost Analysis* (*Case Study*), describes the results of a case study of applying analytical methods and data described in the *Methods* and *Functions* reports to a floodplain restoration project.[8]

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[4] California Department of Water Resources (CDWR). 2008. *Economic Analysis Guidebook*. The State of California. January.

[5] CDWR (2008), p.viii.

[6] California Department of Water. 2005A. *Ecosystem Valuation Methods. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

[7] California Department of Water Resources. 2005B. *Natural Floodplain Functions and Societal Values Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

[8] California Department of Water Resources. 2005C. *Middle Creek Flood Ecosystem Restoration Project Case Study: Benefit and Cost Analysis*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

4. A fourth report, *Floodplain Management Benefit and Cost Analysis Framework* (*Framework*), describes a framework for analyses of ecological, social and economic consequences of policy decisions that affect aquatic resources. It emphasizes the importance of including information on ecological consequences in decision-making. It stresses the importance of incorporating environmental and social consequences into management decisions, measuring the economic effects of policies on ecosystem services having value to humans using non-market valuation techniques, selecting appropriate discount rates for economic effects that will occur in the future, accounting for analytical uncertainty and risk and considering ecological, social, and economic effects of policy decision on a broad watershed scale.[9]

The U.S. Environmental Protection Agency (EPA) recently released two guidelines for preparing economic analyses and valuing ecological services. The first, entitled *Valuing the Protection of Ecological Systems and Services,* was released by the EPA's Science Advisory Board (SAB) in May of 2009.[10] The report describes methods of identifying and describing the economic significance of natural resources and associated ecosystem services affected by policies or projects. The SAB noted the importance of valuing ecosystem services using up-to-date economic methods, while promoting collaboration among social scientists and biophysical scientists. Many of the recommendations have relevance to assessing the economic effects of water allocations in the Delta. These include:

1. Identifying and describing the critical relationships between biophysical aspects of natural resources and ecosystem services, and analyses of the economic effects of policies that impacts resources and services.
2. Choosing appropriate valuation methods.
3. Identifying and describing sources of uncertainty in analyses of the economic significance of ecosystem services. [11]

The most widely used tool for evaluating alternative approaches and balancing public trust uses with other beneficial uses is the Benefit Cost Analysis (BCA). BCA requires the identification and clarification of the elements of each alternative.[12] Care must be taken to avoid errors of omission, as these errors would affect the outcome of the analysis. The scope of analysis (i.e., which benefits and costs matter, to whom, over what geography and over what period of time), along with what should be included in the analysis and who and what should be excluded must be identified.[13] Risk and uncertainty must be identified and accounted for. For

[9] California Department of Water Resources. 2005D. *Floodplain Management Benefits and Cost Analysis Framework. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. June.

[10] Environmental Protection Agency (EPA) Science Advisory Board. 2009. Valuing the Protection of Ecological Systems and Services. EPA-SAB-09-012. May.

[11] EPA, 2009, p.1-7.

[12] Field, B.C. 1997. *Environmental Economics*, 2nd Edition. San Francisco: McGraw-Hill Company, Inc. p.116-117; U.S. Environmental Protection Agency (EPA). 2010. *Guidelines for Preparing Economic Analyses.* Report No. EPA-240-R-10-001. December. p.A-8.

[13] U.S. Environmental Protection Agency (EPA). 1993. *Guide for Cost-Effectiveness and Cost-Benefit Analysis of State and Local Ground Water Protection Programs*. U.S. Environmental Protection Agency, Office of Water, and

example, the analysis should not assume that all Californians would perceive numerically equal upside and downside risks in a neutral way because, when it comes to environmental matters, people tend to be risk averse. [14] Non-quantified factors must therefore be assessed and explained.[15] If important benefits and costs cannot be expressed in monetary units, BCA can be misleading because the calculation of net benefits does not demonstrate a full evaluation of benefits and costs.

Best practices for BCA would therefore include, but are not be limited to:

1. Comparing conditions with the alternative to conditions without the alternative: a good BCA avoids comparing conditions before the alternative to conditions after the alternative.[16]
2. Reporting and documenting methods, information and assumptions. A good BCA should rely on transparent assumptions and allow for straightforward replication by a third-party analyst.[17]
3. Applying methods and assumptions consistently throughout the analysis.[18] For example, uncertainty should not be accounted for in one aspect of the BCA and ignored in another.
4. Recognizing that economic impacts and economic equity are complements to BCA and not substitutes for it. Consider EPA's guidance, "[c]ounting the number of jobs lost (or gained) as a result of a regulation generally has no meaning in the context of benefit-cost analysis."[19] Each of the categories of economic effects (i.e., economic values, economic impacts and economic equity) plays a distinct role in a comprehensive economic description and evaluation of alternatives for improving Bay-Delta flows and should remain distinct.
5. Addressing externalities explicitly; i.e., accounting for the effects of a transaction on those who did not agree to experience the costs or benefits. The expected undesirable side-effects and ancillary benefits of a proposed action or alternative should be added to the direct benefits and costs as appropriate.[20]

Office of Ground Water and Drinking Water. April. p.11.

[14] Lesser, J.A., D.E. Dodds, and R.O. Zerbe, Jr.. 1997. *Environmental Economics and Policy*. p.406. Goodstein, 1999. E.S. *Economics and the Environment*. p.150. Field, B.C. 1994. *Environmental Economics*. p.129.

[15] Office of Management and Budget (OMB). 2003. *Informing Regulatory Decisions: 2003 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. Office of Information and Regulatory Affairs. February. p. 127.

[16] Office of Management and Budget (OMB). 1992. *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. Circular A-94. October. p.6.

[17] OMB, *Informing Regulatory Decisions*, 2003, p.134.

[18] Rossi, P. and H. Freeman. 1982. *Economics*, 13th Edition. New York: McGraw-Hill Book Company. p.275.

[19] EPA, 2010, p.8-8. See also, OMB, 1994, p.6-7.

[20] OMB, *Regulatory Analysis*, 2003, p.3.

Evaluation of economics and alternatives must not become trapped in a simplified in-stream or habitat use vs. an agricultural or municipal use (jobs vs. fish) argument. As the Public Policy Institute of California (PPIC) describe in their recent report, *Myths of California Water – Implications and Reality,* the competition for Bay-Delta water resources is much more complex:

> Healthy ecosystems provide significant value to California's economy, partially and sometimes fully offsetting their costs to traditional economic sectors. Direct benefits include improvements in recreation, commercial fishing, and drinking and agricultural water quality, and indirect benefits include improvement in the quality of life in California. [21]

In its December, 2010 publication entitled *Guidelines for Preparing Economic Analyses (Guidelines)* the EPA updated best practices for the third time since the guideline's initial publication in 1983. [22] This most recent update includes detailed recommendations on identifying and describing baseline conditions that would exist with and without a proposed policy revision or regulation, along with an expanded description of the methods used to define and quantify the ecological benefits of projects and policies that protect natural resources.

In analyzing conditions in the Bay-Delta at present, it is clear that insufficient resources exist to satisfy all the demands on Bay-Delta water resources for goods and services. When water is used to produce one set of goods and services, demands for other must go unmet. Understanding this demand competition and balancing opposing needs is an essential task of the DSC. These demands include:

1. Competition for agricultural, municipal, industrial and hydroelectric supply that are economically important to public and private enterprises and households. There is potential for these demands to adversely impact other commercial uses like commercial and guided sport fishing.
2. Quality-of-life demands like aesthetic and recreational values that can increase economic well-being by enabling individuals to live in a place that offers recreational opportunities, pleasant scenery, wildlife viewing and other amenities considered important. These quality-of-life issues can raise property values and demand for commercial products.[23] In fact, differences in quality of life explain about half the interstate variation in job growth during periods of economic growth.[24]
3. Environmental demands associated with economic values that do not necessarily entail a conscious, explicit use of ecosystem goods and services. Environmental

[21] Hanak, Ellen et al. 2010 (PPIC 2010). "Myths of California Water—Implications and Reality." *West- Northwest*, Vol. 16, No. 1, Winter. p 20-22.

[22] National Center for Environmental Economics. 2010. *Guidelines for Preparing Economic Analyses. U.S. Environmental Protection Agency*. EPA 240-R-10-001. December.

[23] Roback, J. 1982. "Wages, Rents, and the Quality of Life." *Journal of Political Economy* 90: 1257-1278; 1988. "Wages, Rents, and Amenities: Differences among Workers and Regions." *Economic Inquiry* 26: 23-41.

[24] Partridge, M. and D. Rickman. 2003. "The Waxing and Waning of Regional Economies: The Chicken-Egg Question of Jobs Versus People." *Journal of Urban Economics* 53: 76-97.

values increase as people learn more about the environment, the services it provides, and environmental degradation.[25] These include:

a. Non-use values and values of goods and services that generally go unrecognized. Non-use values arise whenever people place a value on maintaining some aspect of the environment, even though they do not use it. For example, studies have shown that regardless of direct interaction with salmon populations, many Californians hold a positive willingness to pay to ensure the long-term survival of salmon.[26]
b. Ecosystem services that provided benefits that people generally consume without being aware of them. Some of these maintain the web of life. Others, such as the ability of wetlands to purify water and mitigate flood damage or water that dilutes wastes and maintains water quality have a more direct link to the well-being of California residents. Scientists and economists believe these services have great economic value, even though people are generally unaware of their importance.[27]

While quality of life and environmental values are typically harder to measure than commercial values, this does not diminish their value or impact on jobs and incomes. Rather, the difficulty in measuring environmental values merely reflects the lack of tools for measuring them. One of the challenges the DSC faces is identifying, describing, evaluating and balancing the full range of benefits and costs of the competing demands for Bay-Delta water resources. It is in this area where the lack of a quality water availability analysis renders a BAC infeasible.

The DSC's Failure to Analyze Changing Hydrology Invalidates its Analysis of Effects on the Bay-Delta

The DPEIR fails to use the latest information on changing hydrology in the Delta watershed, thereby invalidating its "no project" assessment. The California Legislature recognized in 2006 legislation (AB 32) that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California," including a "reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems." (Health & Saf. Code, § 38501(a).) The Legislature went on to list multiple uses of water it expects to be reduced or threatened by global warming, including the quality and supply of water from Sierra snowpack, hydropower generation, the protection of recreational uses, fisheries, marine life, and public health. Health & Saf. Code, § 38501(b). The "harms associated with climate change are serious and well recognized," (*Massachusetts v. Environmental Protection Agency* (2007) 127 S. Ct. 1438, 1455) and yet climate change goes virtually unmentioned in the PDEIR's discussion of the program, its potential facilities, and the existing environmental setting. The no-project

[25] Blomquist, G.C. and D.R. Johnson. 1998. "Resource Quality Information and Validity of Willingness to Pay in Contingent Valuation." *Resource and Energy Economics* 20:179-196.

[26] Loomis, J., T. Brown, and J. Bergstrom. 2007. "Defining, Valuing, and Providing Ecosystem Goods and Services," *Natural Resources Journal* 47: 329-376.

[27] Daily, G.C. (ed). 1997. *Nature's Services: Societal Dependence on Natural Ecosystems.* Washington, D.C.: Island Press.

assessment never calculates the foreseeable consequences of climate change on program operations. These effects must be properly recognized and analyzed by the DPEIR.

Failure to analyze the foreseeable consequences of climate change violates the requirements of CEQA. In *Communities for a Better Environment v. City of Richmond* [*City of Richmond*] (2010) 184 Cal.App.4th 70, 85), the court set aside the EIR for a refinery project partly because it lacked "any objective quantification" of factors to the project that directly impacted GHG emissions, which the court found made some of the conclusions "meaningless." The "difficulties caused by evolving technologies and scientific protocols do not justify a lead agency's failure to meet its responsibilities under CEQA by not even attempting to formulate a legally adequate mitigation plan." (*Id*. at p. 96.)

The CEQA deficiency in the present matter is even clearer than the deficiencies found by the court in *City of Richmond.* The deficiencies in the DPEIR do not simply involve the project's GHG contribution, but rather a question of whether foreseeable changes in climate must be studied to determine effects on the program's ability to provide water to multiple uses during its proposed one hundred year term. While not expected to foresee the unforeseeable, an agency must use its "best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144; see also *City of Richmond*, 184 Cal.App.4th at p. 96; *Vineyard*, 40 Cal.4th at p. 428.) As in *Vineyard*, failure to provide the analysis omitted from the DPEIR would leave uncertain the program's long-term ability to furnish water to its referenced uses. (*Id.)* In this instance, the agency must first conduct a "thorough investigation" of climate change and support its proposed hydrology "by scientific or objective data." (*Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* [*Berkeley Keep Jets*] (2001) 91 Cal.App.4th 1344, 1370-71 (rejecting non-analysis of air quality problem even where no universally-accepted protocol yet existed).) The DSC DPEIR should include climate data available to its sister agencies, such as DWR's *California Water Plan Update, 2005*. This report finds that "evaluating impacts of global climate change on the management of the SWP can be done with existing resources" and that "state government must help predict and prepare for the effects of global climate change on our water resources and water management systems." (Maurice Roos, *Accounting for Climate Change*, in DWR, *Water Plan 2005*, appendix 4.) This DWR report surveys the "large number of potential effects on California water resources infrastructure due to global warming." (*Id.* at p. 4-616.) While the EIR notes its reference to some uncertainty, that uncertainty is "primarily on the degree of change to be expected," and that the report found that "[r]esponsible planning requires that the California planning community work with climate scientists and others to reduce these uncertainties and to begin to prepare for those impacts that are well understood, already appearing as trends, or likely to appear." (Roos, *op cit.*, at 4-612.)

Clearly, data exists regarding the potential impacts of global climate change on the Bay-Delta. The 2005 Roos report helps illuminate just how climate change is likely to affect DSC program facilities operation. It refers to "new and updated temperature modeling" being developed for Oroville relicensing, and states that "a logical extension would be to apply the new temperature models to evaluate the affect [*sic*] of a changed climate and runoff scenario, *beginning with Lake Oroville and the Feather River*." (*Id.* at p. 4-616 (emphasis added).) Roos also finds that "[i]t is time to try to *quantify the effects of projected climate change on California's water resources*." (*Id.* at p. 4-625 (emphasis added).[28]

[28] *See also Progress on Incorporating Climate Change into Management of California's Water Resources* (*Progress 2006*,) for examples of "incorporating climate change into existing water resources planning management

In *Progress on Incorporating Climate Change into Management of California's Water Resources (Progress 2006)*, the authors describe how the loss of the State's snowpack will affect the operation of most major multipurpose reservoirs at low and mid-elevations in the Sierra. *Progress 2006*, at 2-31; *see also id.* at 6-31 to 6-33 (discussing changing flood risks in the Feather River Basin). The report warns that climate change will increase water temperatures, which in turn will "pose a threat to aquatic species that are sensitive to temperature, including anadromous fish. Increased water temperatures will also cause decreased dissolved oxygen concentrations in water and other water quality changes, and will likely increase production of algae and some aquatic weeds." *Id.* at 2-60. For example, the expected consequences of the first impact, "reduction of the State's average annual snowpack," are "[p]otential loss of *5 million acre-feet or more* of annual average water storage in the State's snowpack," and "*increased challenges for reservoir management* and balancing the competing concerns of flood protection and water supply." *Id.* (emphasis added).

The failure of the DPEIR to disclose and analyze potential climate change effects on the hydrology upon which the Delta Plan relies is stunningly incompetent. This omission makes it impossible for the public and the decision-makers to evaluate the alternatives, the mitigations, and the true nature of the environmental impacts of the proposed DSC program, all of which are violations of CEQA's fair disclosure requirements. This shortcoming manifests itself throughout the portions of the document that describe the Plan's "policies" and "recommendations." Of these two categories, only "policies" create binding obligations; "recommendations" merely suggest ideas to other actors for their contemplation. (Delta Plan at pp. 53-54.) Hence, the likelihood of the Plan's success as a "legally enforceable" document for the "comprehensive, long-term management [of] the Delta" (Wat. Code §§ 85000(c), 85059) must be judged by analyzing its policies alone since there is no certainty whatsoever that any of the "recommendations" will be heeded.

Within the Plan's twelve policies, there is scant substance that advances the Legislature's goals beyond preexisting laws and strategies. Most of the policies repeat existing requirements, demand the drafting of studies or plans that will inform further actions, or allow for unfettered wiggle room by setting standards based not on numeric targets, but solely on "feasibility" or "appropriateness." This lack of substance is far from sufficient to ensure the provision of a more reliable water supply for California and the protection, restoration, and enhancement of the Delta. In adopting such policies, the Plan also ignores the Legislature's direction that the Plan should "[i]nclude quantified or otherwise measurable targets associated with achieving the [Plan's] objectives" and "[b]e based on the best available scientific information." (Wat. Code § 85308.)

CEQA Standards Are Not Met in The DPEIR

As discussed above, a state lead agency is required to prepare an EIR for each discretionary project that *may* have a significant effect on the environment. (Pub. Resources Code, §§ 21080, subd. (d),21100, subd. (a).) The CEQA Guidelines describe a number of advantages to preparation of a program EIR, such as: (1) providing "for a more exhaustive

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tools and methodologies." (In this respect, compare *PCL v. DWR*, 89 Cal.App.4th at p. 919 (EIR violated CEQA's information disclosure requirements by refusing to forecast based on simulation models DWR used elsewhere).

consideration of effects and alternatives than would be practical in an EIR on an individual action;" (2) ensuring full consideration of cumulative impacts; (3) avoiding "duplicative reconsideration of basic policy considerations;" and (4) allowing for consideration of "broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts." (*Id*., § 15168, subd. (b).) Therefore, prior to an approval of the Delta Plan, the DSC must ensure that the significant environmental effects of the plan are avoided or mitigated to a level of insignificance whenever feasible. (Pub. Resources Code, §§ 21002, 21002.1, subd. (b).) CEQA provides that the DSC should not approve the Delta Plan "if there are feasible alternatives or feasible mitigation measures which would substantially lessen the significant environmental effects of" the plan. (*Id.*, § 21002; see also Cal. Code Regs., tit. 14, §§ 15021, subd. (a)(2), 15092, subd. (b)(2)(A).)

Prior to approving the Delta Plan, the DSC must consider the final EIR and make one or more of the following three findings with respect to *each* significant effect identified in the EIR:

1. Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;
2. Changes or alterations that are within another agency's responsibility or jurisdiction have been, or can and should be, adopted by that other agency; or 3) Specific economic, legal, social, technological or other considerations make infeasible the mitigation measures or alternatives identified in the EIR and specific overriding economic, legal, social or technological benefits of the project outweigh its significant environmental effects. (Pub. Resources Code, § 21081, subds. (a)(1)-(3) and (b); Cal. Code Regs., tit. 14, §§ 15004. subd. (a), 15043, 15091, subd. (a), 15093, subd. (a).) These findings must be supported by substantial evidence in the record. (Pub. Resources Code, § 21081.5; Cal. Code Regs., tit. 14, §15091, subd. (b), 15093, subd. (b).) Finally, if the Council has required implementation of mitigation measures in its findings, it also must adopt a mitigation reporting or monitoring program pursuant to Public Resources Code section 21081.6 and Guidelines section 15097. (See Cal. Code Regs., tit. 14, § 15091, subd. (d).)

None of these requirements are met in the DPEIR.

Ambiguities and Lack of Crucial Data in the DPEIR Prevent An Objective Assessment of Whether the Project and its Alternatives Can Accomplish the Asserted Objectives

A. The EIR Fails to Meet the Purposes of a Program EIR.

Using a program EIR affords a lead agency no cover for a CEQA document that "does not provide decision-makers, and the public, with the information about the project required by CEQA." (*Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 916.) A program EIR cannot rationalize vague or evasive analysis. The CEQA guidelines' list of "advantages" to preparing a program EIR include a "more exhaustive" examination of effects and alternatives, "full consideration" of cumulative impacts, and allowance for analysis of "broad policy alternatives and program wide mitigation measures" at a time when the lead agency has the best opportunity to address them properly. (Cal. Code Regs., tit. 14, § 15168(b).)

The DPEIR utterly fails to meet these standards. The groups incorporate by this reference the comments filed by the firm of Rossmann & Moore on this point. As they point out, the DSC cannot assert that the Delta Plan does not "analyze the operation of present or foreseeable future operations of the export projects in the Delta so how can the DSC determine "consistency" with the proposed Delta Plan.

B. The EIR Evades a Genuine Comparison Between the Project and Alternatives

"[An] EIR may not define a purpose for a project and then remove from consideration those matters necessary to the assessment whether the purpose can be achieved." (*County of Inyo v. City of Los Angeles* (1981) 124 Cal.App.3d 1, 9.) But that is precisely what occurs in the Draft EIR.

The Draft EIR identifies the Delta Plan as a "legally enforceable, comprehensive management plan for the Sacramento–San Joaquin Delta and the Suisun Marsh (Delta) that *achieves the coequal goals and all of the inherent subgoals and objectives, as described in Section 1*." (DPEIR at p. 2A-1.) The Plan and EIR are the source of information for "cities, counties, and State, federal, and local agencies to restore the Delta ecosystem and provide a more reliable water supply for California." (*Id.*) However, the DPEIR fails entirely to serve as the basis for a genuine comparison between the project and its alternatives, making the reader unable to determine even whether the plan, much less its alternatives, can feasibly accomplish these objectives.

First, the EIR's definition of the "project" itself is fraught with ambiguities. For example, it leaves uncertain whether, and under what circumstances, the "applicant-driven" BDCP will become part of the Plan and therefore be incorporated into consistency determinations. Additionally, key words that are essential to understanding the contours of the project remain undefined, most notably the "reliability" of water supplies.

Second, through a combination of euphemisms and evasive statements, the DPEIR avoids confronting critical water supply difficulties that are likely to undermine the DPEIR's assumption that the "coequal goals" can be simultaneously achieved. The lengthy analysis of water supply, for instance, barely addresses the State Board's Delta flow recommendations. These recommendations underscore the imperative to reduce water exports to sustain the Delta's ecosystem, as well as beneficial uses and public trust values. The State Board recommended flow criteria to protect these values in August 2010: "Recent Delta flows are insufficient to support native Delta fishes for today's habitats…." In order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Board are crafted as percentages of natural or unimpaired flows. These criteria include:

- 75% of unimpaired Delta outflow from January through June;
- 75% of unimpaired Sacramento River inflow from November through June; and
- 60% of unimpaired San Joaquin River inflow from February through June."[29]

Moreover, testimony from environmentalists and water suppliers in the flow proceedings reveal a depth of conflict barely addressed in the DPEIR, and the still-unresolved history of

[29] Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, State Water Resources Control Board, Aug. 3, 2010, p. 5, *available at* http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow.

controversy over the Monterey Amendments and the Kern Water Bank is not even discussed in the DPEIR's water analysis.

Third, as persuasively detailed in the comment letters of the California Environmental Water Caucus and this document, the DPEIR undermines any fair comparison between the project and Alternative 2. It does so by (1) misattributing key project elements to Alternative 2; (2) assigning to the proposed project an illusory advantage based upon retirement of drainage-impaired land; and (3) failing to ascribe to Alternative 2 significant environmental advantages likely to stem from the retirement of that land.

Finally, having recognized that global climate change is likely to have an enormous impact on future water supply (including a 4.5 to 6 million acre-foot reduction in snowpack), the EIR inconsistently applies that insight. Incredibly, the EIR cites climate change in its discussion of the disadvantages of Alternative 2 (due to its additional "facilities") but fails to apply climate change concerns to the Delta Plan's core issue: whether sufficient water supply will exist to serve the "reliability" component without severely compromising the Plan's ability to protect the "paramount concern" of enabling "permanent protection" of the Delta's resources. (Wat. Code § 85022(c)(2).) This failure also makes it impossible for the DPEIR to evaluate alternatives, potential mitigations, or to provide the disclosure necessary to allow the public and the DSC decision-makers to evaluate the effectiveness of the proposed Delta Plan.

Environmental Setting as Established in the Delta Reform Act

The 2009 legislation described the current environmental setting in the Delta as follows:

> The Delta is a critically important natural resource for California and the nation. It serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of North and South America. (Water Code Section 85002)
>
> The Delta is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced estuary and wetland ecosystem of hemispheric importance. (Water Code Section 85022(c) (1))…
>
> (a) The Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources.
>
> (b) In response to the Delta crisis, the Legislature and the Governor required development of a new long-term strategic vision for managing the Delta. The Governor appointed a Blue Ribbon Task Force to recommend a new "Delta Vision Strategic Plan" to his cabinet committee, which, in turn, made recommendations for a Delta Vision to the Governor and the Legislature on January 3, 2009.

(c) By enacting this division, it is the intent of the Legislature to provide for the
sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that will direct efforts across state agencies to develop a legally enforceable Delta Plan.

85001.

For the reasons stated below, the DSC plan has not adequately disclosed existing data in the possession of the DSC and other state and federal agencies, nor has the DPEIR addressed the policies that the Legislature enacted in the Delta Reform Act to govern the DSC plan.

Legal Standards of the Delta Reform Act

A. The 12 policies, along with the 61 recommendations that make up the Delta Plan, utterly fail to comply with the Delta Reform Act.

Rather than repeat comments on this subject that you will receive from others, the groups incorporate by this reference the discussion contained in the comment letter by the office of Rossmann & Moore, Section 1, pointing out the inadequacy of the 12 Policies in the Plan and DPEIR in meeting the standards, listed below, that were established by the Legislature for the DSC to actually use in developing its mandatory Delta Plan. Water Code § 85302 states that "[t]he Delta Plan shall include measures that promote all of the following characteristics of a healthy Delta ecosystem":

(1) Viable populations of native resident and migratory species.
(2) Functional corridors for migratory species.
(3) Diverse and biologically appropriate habitats and ecosystem processes.
(4) Reduced threats and stresses on the Delta ecosystem.
(5) Conditions conducive to meeting or exceeding the goals in existing species recovery plans and state and federal goals with respect to doubling salmon populations.

(d) The Delta Plan shall include measures to promote a more reliable water supply that address all of the following:
(1) Meeting the needs for reasonable and beneficial uses of water.
(2) Sustaining the economic vitality of the state.
(3) Improving water quality to protect human health and the environment.

(e) The following subgoals and strategies for restoring a healthy ecosystem shall be included in the Delta Plan:
(1) Restore large areas of interconnected habitats within the Delta and its watershed by 2100.
(2) Establish migratory corridors for fish, birds, and other animals along selected Delta river channels.
(3) Promote self-sustaining, diverse populations of native and valued species by reducing the risk of take and harm from invasive species.
(4) Restore Delta flows and channels to support a healthy estuary and other ecosystems.

(5) Improve water quality to meet drinking water, agriculture, and ecosystem long-term goals.
(6) Restore habitat necessary to avoid a net loss of migratory bird habitat and, where feasible, increase migratory bird habitat to promote viable populations of migratory birds.

Water Code § 85302 (c) – (e)

Unless the Plan's unenforceable recommendations are converted into enforceable policies, the Plan will fail to uphold its statutory purpose. In its current state, the Plan will likely fail, and yet this the DPEIR does not factor this failure into its analysis. For example, forty plus years after the enactment of the federal Clean Water Act and Porter Cologne, virtually every significant water body in the Central Valley, including the entire Delta, is identified as "impaired" and incapable of supporting identified beneficial uses because of multiple pollutants. With the exception of several legacy pollutants, these impairments exist because the chronically understaffed agencies charged with implementing water quality statutes have been unwilling or unable to carry out their mandated responsibilities. Despite the serious and broadly recognized impacts that deteriorating water quality poses to the viability of the Bay-Delta, the plan and the DPEIR call for no new, meaningful actions to address this threat. Rather, the plan and the DPEIR simply reiterate existing efforts and already-planned initiatives that, to succeed, would require understaffed agencies to accomplish measures they have been unable or unwilling to do over the last 30 years. In analyzing the Plan, the DPEIR simply acknowledges the impairment problem and then blithely ignores it.

The DPEIR is similarly superficial in its discussion on water supply reliability. The Proposed Project does not require specific water reliability projects - rather it contains broad requirements and recommendations. Given both the general nature of the Proposed Project policies and recommendations and the uncertainty concerning the extent to which the Proposed Project will result in any particular action, it is unclear what types of projects will actually be implemented as a result of the Proposed Project policies and recommendations. Yet despite this uncertainty, this DPEIR asserts that the Proposed Project will lead to an increase in local and regional water reliability projects. (DPEIR at p. 2A-6.) The logic of this assertion is untenable, because DSC has no authority over many of the projects that would lead to increased storage facilities, and therefore cannot contend that Proposed Project recommendations regarding storage will lead to an increase in water storage projects. These are just two examples of the utter legal failure of the Draft Plan and the DPEIR to disclose, analyze, and mitigate the existing problems in past governance, enforcement, and management by state and federal agencies that lead to the passage of the Delta Reform Act. We list and comment upon many more such failures in this letter in the Specific Comments Section, below.

B. <u>The Ecological Crisis In The Delta Is Not Adequately Analyzed In The DPEIR</u>

The text of Water Code section 85001 holds that:

a) The Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources.
b) In response to the Delta crisis, the Legislature and the Governor required development of a new long-term strategic vision for managing the Delta. The Governor appointed a Blue

Ribbon Task Force to recommend a new "Delta Vision Strategic Plan" to his cabinet committee, which, in turn, made recommendations for a Delta Vision to the Governor and the Legislature on January 3, 2009.

c) By enacting this division, it is the intent of the Legislature to provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that will direct efforts across state agencies to develop a legally enforceable Delta Plan.

The objectives of the Delta Plan are defined by the coequal goals, and policy objectives presented in Water Code sections 85054, 85020, 85021, 85022(c), and 85023. “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 section 85054.) The policy of the State of California is to achieve the following objectives that the Legislature declares are inherent in the coequal goals for management of the Delta:

a) Manage the Delta's water and environmental resources and the water resources of the state over the long term.
b) Protect and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place.
c) Restore the Delta ecosystem, including its fisheries and wildlife, as the heart of a healthy estuary and wetland ecosystem.
d) Promote statewide water conservation, water use efficiency, and sustainable water use.
e) Improve water quality to protect human health and the environment consistent with achieving water quality objectives in the Delta.
f) Improve the water conveyance system and expand statewide water storage.
g) Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and investments in flood protection.
h) Establish a new governance structure with the authority, responsibility, accountability, scientific support, and adequate and secure funding to achieve these objectives.

Water Code section 85020.

Populations of Sacramento River and Delta native pelagic and salmonid fisheries and their associated food webs are collapsing. This is not surprising when the estuary has systematically been deprived of half of its water flow, its critical habitat has been reduced, variability has been eliminated, and the hydrograph turned on its head. The destruction of native pelagic and salmonid fisheries in the Delta are especially vulnerable to such dramatic degradation due to their slow pace of evolution over several millennia.

The historical collapse of fisheries in the Central Valley is amply documented. In 1978, following a long formal evidentiary hearing and in a moment of remarkable candor, the State Water Board found that “full mitigation of project impacts on all fishery species now would

require the virtual shutting down of the project export pumps."[30] In 1988, following another extensive evidentiary hearing, the State Water Board acknowledged, "a safe level of exports is not known." [31] Indeed, the Board's 1988 draft order found that "optimal water quality objectives" for shad and striped bass larvae and salmon smolt survival in the Delta would require the prohibition of all exports between April 1 through November 30, in all types of water years.[32] By 1991:

1. Adult fall-run Sacramento River salmon escapement had been halved from its numbers in the late 1960s
2. Spring-run Sacramento river salmon abundance was about 0.5% of historic runs
3. The San Joaquin River fall-run salmon escapement dropped from 70,000 in 1985 to 430 in 1991
4. The 1985 level of Delta smelt abundance was 80% lower than the 1967-1982 average population
5. Adult striped bass declined from about 3 million (early 1960s) to 1.7 million (late 1960s) to approximately 590,000 (1990)
6. Abundances of shrimp and rotifers declined between 67% and 90% in the 1970s and 1980s
7. White catfish populations severely declined since the mid-1970s and overall fish abundance in Suisun Marsh has been reduced by 90% since 1980.[33]

Fisheries collapse over the last decade has accelerated. The Department of Fish and Game's (DFG) Fall Midwater Trawl indices for 2009 reveal that young striped bass, Delta smelt, splittail and threadfin shad are at record historical lows and that longfin smelt and American shad are at the second and third lowest level of record, respectively.[34] Salmonids have fared as poorly as pelagic species. Sacramento River fall-run Chinook salmon, numbering some 750,000 in 2002, dropped to 90,000 in 2007 to 66,264 in 2008 and to a dismal new low of 39,530 in 2009. In response, the Pacific Fisheries Management Council and the Fish and Game Commission closed the ocean and coastal fishery to commercial and recreational fishing for the 2008 fishing season and the Commission banned salmon fishing in all Central Valley Rivers, with the exception of limited fishing on a stretch of the Sacramento River. The ban on all salmon fishing was extended through the 2009 season but eased somewhat for 2010.[35]

While the causes of fishery declines are numerous, including contaminants and invasive species, the major factors in their decline are the significant reductions in Delta inflow and outflow. These reductions have caused extensive changes in the historic hydrograph of the Delta, resulting in loss and degradation of habitat that is so significant that the habitat is on the point of collapse. Central Valley Project and State Water Project pumps seasonally export up to 65% of inflow. In 10 of the last 20 years, more than 50% of total freshwater inflow has been diverted from tributary rivers or from the Delta. Sacramento Basin inflow has been reduced and the Delta's annual freshwater outflow has been reduced, especially in the critical fall and spring periods. Both exports and reverse Old and Middle River flows have increased over the last

[30] SWRCB. 1978. D-1485. Page 13.
[31] SWRCB. 1988. Draft 1988 Water Quality Control Plan for Salinity, 7.3.2.5. Pages 7-32.
[32] Ibid. Table 5-4-1. Page 5-110.
[33] SWRCB. 1992. Draft Water Right Decision 1630. Page 29.
[34] DFG. 2010. Fall Midwater Trawl. 3 pages.
[35] SWRCB. 2010. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. 3 August 2010. Page 39.

decade.[36]

The California Legislature, in the Delta Reform Act, (as specified above) tasked the SWRCB to gather the best available science and develop flow criteria for the Delta ecosystem necessary to protect public trust resources, including the volume, quality, and timing of water needed under different conditions. The SWRCB conducted a proceeding in the matter. An astonishing assemblage of biologists and scientists from resource and water agencies, academia and the NGO community testified and presented evidence in the hearing. A final report was issued on August 3, 2010. The report observes that "[t]he combined effects of water exports and upstream diversions reduced average annual net outflow from the Delta from unimpaired conditions by 33% and 48% during the 1948 – 1968 and 1986 – 2005 periods, respectively and that Sacramento River inflows over the last 18 to 22 years have been about 50% on average between April through June compared to unimpaired conditions. [37] The report determined that "[r]ecent Delta flows are insufficient to support native Delta fishes for today's habitats." The report's criteria for flows include, among many other measures, "75% of unimpaired Delta outflow from January through June and 75% of unimpaired Sacramento River inflow from November through June."[38] Existing water criteria fails to address many issues that must be considered in considering impacts on aquatic life. For example, during the SWRCB's Delta flow hearing, Dr. G. Fred Lee pointed out that:

> The current US EPA criteria development approach only considers some and in some cases a small part of the impacts of chemical contaminates on aquatic life. For example, the approach currently used to develop water quality criteria does not include additive/synergistic properties of regulated chemicals that occur in concentration below the water quality criteria allowing unanticipated adverse impacts to aquatic life. Adverse impacts of chemicals to aquatic life that occur for especially sensitive species, such as zooplankton which serve as fish food organism were not included in the development of the water quality criteria. These criteria are only applicable to protecting about 90% of the species. Therefore there could readily be fish species in the Delta and its tributaries that are more sensitive to a chemical than those used to establish the water quality criterion value. There is also very limited information on chronic exposure to sub-lethal impacts of a chemical and mixtures of chemicals to fish populations. Another issue is that other stressor such as low DO, ammonia etc. that can impact the lethal and especially sub-lethal impacts of chemicals. It has been well known for over 40 years through biomarker studies that fish and other organisms show organism biochemical responses to chemical exposures at concentrations well below the water quality criterion. The significance of these biomarker responses to an organism or group of organisms is largely unknown. Chemicals can adversely impact the health of the fish and other aquatic life that weaken their ability to resist adverse impact of stressors such as low DO, elevated

[36] Swanson, C. 2010. Presentation to NRC Committee of Sustainable Water and Environmental Management in the California Bay-Delta. 26 January 2010. 18 slides.

[37] SWRCB. 2010. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. 3 August 2010. 3.3.2, page 28.

[38] Ibid. 1.2 Summary Determinations, Flow Criteria and Conclusions, page 5.

> temperature and predation as well to disease. It's been known for over 40 years that very low levels of copper affect the "breathing" rate of some fish.[39]

Dr. Lee went on to point out, "many thousands of unregulated chemicals, including pharmaceuticals and personal care products, industrial chemicals, and other potentially hazardous chemicals, are discharged to waterways, including the Delta and its tributaries, in domestic wastewaters, agricultural runoff and waste waters."[40]

This data, and other volumes of relevant evidence are largely ignored or downplayed by the Delta Plan and the DPEIR. Relevant evidence necessary to determine whether or not the proposed Delta Plan and the alternative examined would arrest this dire situation, and whether mitigations could bring these impacts below a state of significance are not included. This is a CEQA failure of huge magnitude.

The DPEIR Fails to Adequately Address State Policy to Reduce Reliance on the Delta

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. (Water Code section 85021.) 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. (Id.) The Legislature finds and declares all of the following:

> (1) The Delta is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced estuary and wetland ecosystem of hemispheric importance.
> (2) The permanent protection of the Delta's natural and scenic resources is the *paramount* concern to present and future residents of the state and nation.
> (3) To promote the public safety, health, and welfare, and to protect public and private property, wildlife, fisheries, and the natural environment, it is necessary to protect and enhance the ecosystem of the Delta and prevent its further deterioration and destruction.
> (4) Existing developed uses, and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to persons living and working in the Delta.

Water Code section 85022 (c) (emphasis added).

The groups hereby incorporate, in so far as they are consistent with the views expressed in this document, the comments of the South Delta Water Agency prepared by John Herrick for this DPEIR process. As Mr. Herrick says: "What is needed is for the DPEIR to determine whether the DSC Plan has satisfied these laws is a detailed analysis of what water is produced in the relevant watersheds, what is necessary for environmental needs as described in the State

[39] Ibid. Page 4.
[40] Ibid. Page 4.

Board's Flow Recommendations, what is needed by superior right holders and what is left over for export." As does the BDCP, the Delta Plan ignores the necessary first step of preparing a water availability analysis and so ends up simply encouraging others to find new supply projects without addressing the real problem. Such encouragement does not move us closer to a reliable water supply for present Delta users, it simply tells those who do not have enough water that they do not have enough water. Water users south of the Delta all know their supply is dependent at present on available yearly precipitation. The DSC needs to compare the State Board's flow recommendations, required by the Delta Reform Act, to the alternatives to determine whether any water is available to export. Alternative 2 was suggested by the Environmental Water Caucus because modeling showed that only 3,000,000 ac. ft. is available in wet years for export after the outflow required to restore the Delta estuary is reestablished. The other alternatives rely on "paper water" unavailable without unlawfully continuing the over-appropriation of the Delta estuary.

The Delta Plan ignores the paper water issue completely, thereby allowing the DPEIR to assume water for its alternatives. What is also needed before approving a Delta Plan is a resolution of the issue of whether the state and federal projects are able to export any water from the Delta when area of origin, in-Delta and environmental needs do not get their full supply. By not examining and addressing this issue, the DSC offers no reason (for example through the cost- benefit analysis process described above) that justifies the choice of any alternative other than Alternative 2. The other alternatives cannot meet the State Board's flow recommendations and the DPEIR does not provide any analysis that says they can meet the Plan requirements of the Delta Reform Act. This too violates CEQA.

<u>There Has Been An Impermissible Deferral Of Analysis</u>
<u>Of Legally Required Elements Of The Delta Plan</u>

The Delta Reform Act includes references to two specific long-term milestones. The first reference is to *"Restore large areas of interconnected habitats within the Delta and its watershed by 2100."* (Water Code Section 85302(e)(1)) The second reference is to the incorporation of the Bay Delta Conservation Plan (BDCP) if the BDCP meets the requirements of Water Code sections 85320 and 85321. The BDCP's associated Natural Community Conservation Plan and Habitat Conservation Plan permits are anticipated to be for a 50-year period. If the Council finds that the BDCP meets the standards outlined in statute, the BDCP shall be included in the Delta Plan. If the Council determines that the BDCP fails to meet the statutory criteria listed in Water Code Sections 85320 and 85321, *"the BDCP shall not be incorporated into the Delta Plan and the public benefits associated with the BDCP shall not be eligible for state funding."* (Water Code Section 85320(b))

The DPEIR does not attempt to analyze the BDCP for consistency with the proposed Delta Plan; it instead attempts to develop a Plan without comparing the policies established by the Delta Reform Act and the extensive information already available about the BDCP and its proposed alternatives, including the 15,000 cubic feet per second canal or tunnel. Deferring evaluation of whether the DSC plan, including the BDCP, will be consistent with the Delta Reform Act will in large measure never happen if such a procedure is followed.

Specific Comments on the Delta Plan DPEIR

The following at the specific comments of the groups on the Delta Plan DPEIR:

Executive Summary (ES)-
The ES talks about ecosystem restoration, but nothing about actual restoration goals for the various species affected (ES-2). Delta as place enhancement talks nothing about Delta agriculture (ES-3). The document does not appear to compare the Proposed Project to Existing conditions or adequately describe existing conditions per CEQA Guidelines Sec 15126.6(e)(2)) (ES-4).

The EWC Alternative 2 seems to have been perverted to include agricultural drainage treatment facilities (ES 6- "It involves more facilities to treat and recycle wastewater and agricultural runoff.") like the ones being proposed for the Grasslands Bypass Project and Westlands. It includes less levee maintenance and upgrades and does not include return of the urban water preference in SWP contracts or return of the Kern Water Bank to state ownership (ES 6). The DPEIR notes that Alternative 2 would reduce toxic drainage in the Tulare Basin by retiring the 380,000 acres in the San Luis Unit, but fails to mention the San Joaquin basin and the Delta itself as benefitting from a reduction in selenium, salt, boron and other polluted discharges into the San Joaquin River from the Grasslands Bypass Project and other sources of pollution in that area (ES 8).

Introduction (Chapter 1)
The document says it is NEPA-compliant, even though it doesn't need to be. If it were, then there would be an economic component, which there is not (1-14). Section 1.3.1 (Current Conditions) is not identified as the actual description of the Existing Conditions from which all alternatives are to be compared. However Section 1.3.1 is referenced as Existing Conditions later in Chapter 2 (2A-85). Since the Existing Conditions alternative does not provide quantification of water supplies, water quality performance, percentage of fish or wildlife restoration goals met to date, or other resource areas normally evaluated in a Draft EIR, therefore there is a complete inability to actually compare the other alternatives to Existing Conditions. Dozens of environmental documents have been completed in recent years that clearly describe and quantify Existing Conditions and the No Project alternatives. There is no reason this DPEIR could not do so, but it does not.

Figure 1-1, Project Area (1-15) shows the Trinity River as part of the Project Area, but all of the subsequent analyses completely leave out impacts to the Trinity River, as if it is not plumbed to the CVP and the Delta and a source of water for environmental needs in the Delta or water exports. This is particularly important because Reclamation's Trinity River water permits from the SWRCB are inconsistent with the Trinity River Record of Decision (Trinity ROD) by 474,000 AF and Reclamation has stated that State Water Quality Objectives for the Trinity River approved by USEPA as Clean Water Act 303 standards are not permit requirements that they must comply with.[41] Impacts to the Trinity ROD are not mentioned anywhere in the analysis, nor is the fact that Trinity River Coho salmon (Southern Oregon/Northern California Coho) are listed as Threatened under both the federal ESA and CESA . See more about this subject below.

[41] See 2/23/11 letter from Acting CVP Operations Chief to Brian Person, Trinity Management Council at http://www.c-win.org/webfm_send/141.

Chapter 2 Project and Alternatives

(2A-18 lines 22-30) There are many recommendations and admonitions of activities that "should" occur in the 2003 Bulletin 118, but where are the facts of the success or failure of this DWR planning document?

- "[a]dditional local groundwater management plans should be developed to address groundwater storage and water quality, monitoring programs should be implemented, and local water supply agencies should work with local land use agencies to minimize future impacts on groundwater recharge capabilities."
- "[r]ecommended that DWR should identify groundwater basins or subbasins that have management plans, all agencies should improve data collection and analysis for all groundwater basins, and agencies that replace water sold for water transfers manage the groundwater in accordance with groundwater management plans.

How are the lofty goals highlighted above monitored not only for completion, but also for effectiveness? In an attempt to answer this question, it is essential to point out that there are many problems with local monitoring programs in the Sacramento Valley counties that truly leave management as merely a goal not a reality. Examples include:

- *Monitoring protocols of impacts to the region have not been developed.* Ken Loy, Hydrogeologist with *West Yost* Associates, explained during a December 16, 2011 groundwater workshop that impacts (such as subsidence and stream leakage) to the region will not occur in "real time" as the water is extracted from deep aquifers. He emphasized that impacts will occur over time, will be delayed, and persistent. Loy also explained that impacts will result from cumulative demands on the aquifer system. Since groundwater substitution transfers constitute a potentially large and new demand on the aquifer system, agencies that participate in such transfers have an increased responsibility to anticipate, monitor and mitigate injury that may result over time.

- Long term Impacts associated with regional use of the Tuscan aquifer formation will occur in the up-gradient recharge portion of the system. County ordinances and Basin Management Objectives (BMO) are being put forth by these Guidelines and by state/federal agencies as the primary, if not the only, mechanisms of monitoring and mitigating impacts associated with GW substitution exports. As BMO noncompliance levels are exceeded year after year in Butte and Glenn counties with no action in place to resume compliance with the basin objectives it is clear that BMOs and ordinances are not backed up by the political will or scientific specificity to manage aquifer resources. This local challenge is dwarfed by the inability of county efforts to manage a regional resource. Butte County staff clearly communicated this deficiency in the 2007 Needs Assessment for the Tuscan Aquifer Monitoring, Recharge, and Data Management Project as follows:

> "Each of the four counties that overlie the Lower Tuscan aquifer system has their own and separate regulatory structure relating to groundwater management. Tehama County, Colusa, and Butte Counties each have their own version of an export ordinance to protect the citizens from transfer-related third party impacts. Glenn County does not have an export ordinance because it relies on Basin Management Objectives (BMOs) to manage the groundwater resource, and

subsequently to protect third parties from transfer related impacts. Recently, Butte County also adopted a BMO type of groundwater management ordinance. Butte County, Tehama County and several irrigation districts in each of the four counties have adopted AB3030 groundwater management plans. All of these groundwater management activities were initiated prior to recognizing that a regional aquifer system exists that extends over more than one county and that certain activities in one county could adversely impact another. ***Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system."*** [emphasis added]

- Butte County's 2011 Basin Management Objectives report compares the quantity of groundwater to previous years, but does not assess the status of the streams or of the groundwater dependent vegetation. This is and has been a failure to comply with SB 1938, but the BMO report does not explicitly disclose this important fact. SB 1938 states, "The local agency shall adopt monitoring protocols that are designed to detect changes in... flow and quality of surface water caused by groundwater pumping in the basin."

We note in the DPEIR that it "also was recommended that Bulletin 118 be updated every 5 years; however, this has not occurred." DWR's failure to follow its own recommendation does not inspire confidence.

Chapter 2A Proposed Project and Alternatives

Section 2.1.2.1 states that regulatory actions of state agencies are exempt from being a "covered action" in the Delta Plan. It states that CESA permits by DFG are exempt. If that is the case, then the BDCP is an exempt action because it includes an NCCP that is a CESA permit. It's a rigged outcome, as there will be no opportunity to fight incorporation of BDCP into the Delta Plan, regardless of how bad it is (2A3). It goes on later to say "However, the underlying action requiring the take permit could be a covered action and, if it is, it must be consistent with the Delta Plan's policies. Therefore, even when a covered action is regulated by another agency (or agencies), the action still must be consistent with the Delta Plan." (2A4) Nonetheless, if that action is the BDCP and that's part of the Delta Plan, then it won't be a covered action and is not subject to review because the Delta Stewardship Council is required to adopt the BDCP if it meets certain statutory requirements. If and when the Peripheral Canal/Tunnel goes for permits, since the BDCP will be a part of the Delta Plan, it will be considered consistent, regardless of whether it actually is.

The Proposed Project is not much different from the No Action Alternative. It's generally a regurgitation of existing and in-process programs and plans. For instance, it includes a lot of the same projects that are ongoing anyway such as the Grasslands Bypass Project (GBP), CVRWQCB's new Drinking water policy, major water storage investigations, habitat restoration, CV-SALTS, etc. However, it's pretty vague on specifics. For instance it says less water will be exported from the Delta but doesn't say how much, nor does it say what the "existing condition" of such exports is, which is a matter of great debate since 2011 Delta exports set records. The Proposed Project does not state that BDCP's purpose and need is to deliver "full contract deliveries" to CVP and SWP contractors, which is a contradiction to the

Proposed Action that would reduce Delta deliveries to those same contractors. USEPA[42] and a coalition of EWC members[43] including C-WIN, CSPA and AquAlliance wrote to David Hayes stating concern with "full contract deliveries" and requesting that language be eliminated from the BDCP Purpose and Need. The response from David Hayes to the Coalition denied the request[44].

The Proposed Action really isn't a legitimate CEQA alternative and can't be defined in a number of areas, such as regulatory, other than to encourage the SWRCB to implement some sort of enforceable but undefined Bay –Delta Outflow Proceeding. It says nonsensical things for the TMDL section like "Selenium for the San Joaquin River, Grasslands, and Salt Slough is adopted" (2A-43) but fails to mention that Basin Plan water quality objectives for selenium are not enforced in Mud Slough and portions of the San Joaquin River and won't be until 2020, and then it will probably be extended again. It just assumes projects such as the GBP will ultimately be successful, which is very questionable for most if not all of the regulatory programs that it lists as under or similar to the Proposed Action (2A42-43). It goes on further to say that funding may limit any progress on improving water quality (2A43), thereby reducing expectations of any progress in water quality.

Despite statements like that, the Delta as Place portion of the Proposed Project talks optimistically about more state parks and recreational facilities at a time when many California State parks are scheduled for closure due to budget constraints. Basically the fluff is puffed up with positive expectations that can't be met (Delta parks and recreational facilities) and the substantial issues (enforcement of water quality laws) are watered down with reduced expectations due to lack of funding.

The document tries to avoid talking about a peripheral canal (PC) or tunnel and instead talks generally about new "conveyance" and uses the example of the North Bay Alternative Aqueduct Project, claiming that "Conveyance facilities also could be used to develop a new intake/diversion location in an area that has higher water quality or reduces adverse impact to the aquatic habitat compared to existing intake/diversion facilities. This type of conveyance project is being considered…" (2A-43). But what if the project improves water quality for exporters but harms in delta users and the aquatic habitat like a PC that increases diversions? There is no discussion of the PC's potential impact of further impairing water quality due to increased residence time and concentration of pollutants in Delta because most of the fresh water will be removed from the Sacramento River. Similar to BDCP it tries to portray the PC as a good thing for the environment by not disclosing negative impacts, or in this case, not even describing what "conveyance" actually is. Since the BDCP is required to be incorporated into the Delta Plan (if it meets certain requirements), this DPEIR should disclose what it is likely to be, even if it's not finalized. Restatement of the BDCP Purpose and Need to meet "full contract deliveries" would be a big first step toward disclosure.

Section 2.2.3.1.7- Agricultural Treatment Facilities (2A-45) contains erroneous information. It says land was retired to reduce pollution when actually land was retired because it was too

[42] EPA June 10, 2010 Letter from Alexis Strauss and Enrique Manzanilla to D. Glaser, R McInnis and R. Lohoefener. RE Purpose Statement for Bay Delta Conservation Plan (BDCP) see: http://www.epa.gov/region9/water/watershed/pdf/EpaR9Comments-BdcpPurpose-ExportPolicy.pdf

[43] http://www.c-win.org/webfm_send/163

[44] Letter from David Hayes to Tom Stokely, C-WIN, August 5, 2011. See: http://www.c-win.org/webfm_send/201

salted up with high groundwater (boron too), making it impossible to farm. As far as selenium goes, it does not limit agricultural production, but salt and boron do. The DPEIR talks about land fallowing but fails to mention the CVPIA land retirement program and its status (which is basically dead except for the 100,000 acres that have already been retired through various programs). The DPEIR fails to mention the $2.7 billion San Luis Drainage Feature Re-evaluation EIS and ROD from 2007 (SLDFR) and basically says that "It is not known at this time what types of actions would be implemented to reduce water quality effects of agricultural practices." The document completely skirts making any commitments or description of alternatives to resolve the selenium problems and even fails to mention the latest wish/hope technology- reverse osmosis and bio-treatment. It even suggests groundwater injection of treated saline pollution, which was taken off the table as a viable alternative through SLDFR years ago. It just says that some alternatives may be implemented in the future (or may not). The DPEIR is not even current on what is going on with drainage from toxic lands.

Section 2.2.4.1 to 2.2.4.4- Overview of Flood Risk Reduction (2A-46) The DPEIR talks extensively about existing and proposed Delta Levee and Floodplain improvement projects but really doesn't provide any quantitative or qualitative discussion of the differences between No Action and the Proposed Project, let alone the differences between Existing Conditions and No Action. The Proposed Project is supposed to be compared to Existing Conditions (CEQA Guidelines Section 15126.6(e)(2) but there is no quantitative analysis anywhere in the document on acres of floodplain protected by levees under the various alternatives. A basic discussion of how many miles of levees to be replaced or upgraded would suffice.

Financing (Section 2.2.6 (2A-55)- The DPEIR cites several funding mechanisms recommended by the Delta Plan, but fails to mention any funding for recreational facilities/Delta as Place. It then summarily dismisses all of the potential environmental impacts of potential fees/bonds, etc. by saying they won't cause any environmental impacts because they are just recommendations for other agencies to implement. What about impacts of reduced General Fund revenues (because of paying off bonds $2 for every $1 spent) on other programs such as Fish and Game wardens, water quality enforcement, etc.? The lack of General Fund money due to bond indebtedness could cause significant adverse environmental impacts that should be disclosed and are not. Clearly this "project" relies on Bond money and it should therefore have a basic discussion of how Bond money robs the General Fund of money for basic services.

Scoping- It seems that many of the scoping comments were dismissed, such as quantifiable performance measures to identify success and definitions of reliable water supply and Delta ecosystem restoration. There is no explanation of why these comments were rejected.

Alternatives- The Proposed Action is vague and really not very distinguishable from No Project except it assumes slightly less Delta exports (without disclosing specifically what are Delta exports under No Project, under Proposed Project and under Existing Conditions), new conveyance, new storage and a new recreational facilities that can't possibly be funded or maintained, as well as undefined habitat restoration.

Existing Conditions is not clearly defined. Chapter 2 (2A-85) indicates that Section 1.3 in Chapter 1 is the description of Existing Conditions. However, there is no quantification of Delta exports or modeling of an environmental baseline of any sort that is normally used in this type of environmental document. Nor is there quantifiable information on any other resource area from which to compare the various alternatives to Existing Conditions.

Alternatives 1A and 1B- There is no discernable difference between these two alternatives. They differ from the proposed action in that they don't reduce Delta exports or implement a SWRCB Delta outflow proceeding. The reader can't really tell the difference between the two other than all policies would be recommendations under Alternative 1B. Under 1A, only one policy regarding reliable water supply is changed to a recommendation. In either case since the DSC doesn't really have control other than to disapprove "covered actions." There are some minor and unquantifiable differences between the 2 alternatives such as the degree of levee maintenance, invasive species reductions and habitat restoration. It is all so vague that it's very difficult to see significant differences between the two alternatives and as is the case with all alternatives, there is no effort in the DPEIR to quantify differences or impacts.

Alternative 2- (2A-69) The DPEIR seems to have missed several key points of the EWC alternative as also pointed out by the Environmental Water Caucus in previous comment letters on the DSC Plan incorporated by reference herein. Those points include, but are not limited to, deleting the fish passage program recommended by NMFS at upstream Bay/Delta watershed dams, re-instating the urban preference for municipal and industrial users in low water years, returning the Kern Fan to state ownership, and improving existing levees and the South Delta export facilities to stop killing endangered fish.

In addition, **Agricultural Drainage Treatment** is incorrectly characterized in Alternative 2. The DEIS includes statements that there would be more agricultural drainage treatment facilities than the Proposed Action and possibly Existing Conditions. This is incorrect. If the 380,000 acres toxic lands within the San Luis Unit are not irrigated per the EWC's Alternative 2, there won't be a need for more drainage treatment plants like the one proposed for the Panoche Drainage District/Grasslands Bypass Project and ultimately for all of Westlands drainage impaired lands. The U.S. Geological Survey (USGS), in Open File Report No. 2008-1210 states that "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired.*"[45] The Bureau of Reclamation's own analyses for the San Luis Drainage Feature Re-evaluation (SLDFR) shows land retirement as the most cost effective way to reduce drainage. The National Economic Development Act Summary for SLDFR[46] showed that the alternative with the most land retirement was the only alternative that had a positive cost/benefit. According to the Environmental Working Group, if the cost of crop subsidies to these impaired lands is considered, the annual losses under the Preferred Alternative for SLDFR doubles from $10 million/year to $20 million/year.[47] The Bureau admits in its Feasibility Report for SLDFR that such treatment facilities are not cost effective, require additional public subsidies for the affected districts and have not yet been able to work on the scale envisioned for the western San Joaquin/Tulare basins, yet they continue down that path.[48]

Other inconsistencies between Alternative 2 and the EWC recommendations are as follows:

[45] http://pubs.usgs.gov/of/2008/1210/; accessed 4/18/2010
[46] http://www.c-win.org/webfm_send/202
[47] Environmental Working Group, "Throwing Good Money at Bad Land", 2007, see http://ewg.org/Throwing-Good-Money-at-Bad-Land
[48] See San Luis Drainage Feasibility Report, U.S. Bureau of Reclamation, March 2008. See http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html

Alternative 2, Page 2A-69.
Improper characterization of the EWC Alternative 2 as advocating more ocean desalination. The EWC Alternative does not advocate ocean desalination.

Table 24, Page 2A-71, Alternative 2, Storage. The EWC Alternative 2 did not recommend expansion of Friant/Millerton reservoir; there was no comment related to Friant/Millerton.

Table 24, Page 2A-72, Alternative 2, Conveyance. The reference to the EWC agreement with the recommendation to complete BDCP was in the described context of consistency with the provisions of the Delta Reform Act; the EWC also stated that it is unlikely to lead to BDCP meeting either the statutorily mandated flow requirements or the water quality standards envisioned in the Delta Plan, and as such, would likely not meet the recovery objectives. The EWC's qualification is important to include since it expresses doubts that BDCP can actually achieve the reliability, ecosystem goals, and water quality goals of the Delta Plan. (CEQA Guideline 15146, Degree of Specificity).

Table 24, Page 2A-72, Alternative 2, Conveyance. The EWC Alternative 2 made no recommendation regarding abandonment of South Delta intakes as indicated in Table 24; this error must be corrected. The EWC Alternative 2 also includes the screening of existing South Delta pumps.

Table 24, Page 2A-74, Alternative 2, Ecosystem Restoration. The EWC Alternative 2 is incorrectly characterized as "Less emphasis than Proposed Project on ecosystem restoration throughout the Delta…" In the EWC's comments on the Fifth Draft of the Delta Plan, we indicated the following: "We agree with the Council's reliance on the *Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions* (DFG 2011). The EWC also supports most of the Ecosystem Restoration Program features of the CALFED program. The finding in the Table that Alternative 2 places less emphasis than the Proposed Project on ecosystem restoration throughout the Delta is in error and it should indicate that Alternative 2's emphasis on Ecosystem Restoration is the same as or similar to the Proposed Project.

Table 24, Page 2A-79, Alternative 2, Flood Risk Reduction, Levee Design Standards. The characterization of the EWC Alternative 2 as "Less emphasis than Proposed Project on reducing flood risk for all lands in the Delta areas…" does not consider the EWC recommendation to immediately initiate planning to upgrade core levees above the
PL88-99 standard, in accordance with the recommendations of the Delta Planning Commission. This action, if reinforced by the Delta Stewardship Council, would significantly reduce Delta earthquake and sea level rise vulnerabilities. (CEQA Guideline 15126.5, Discussion of Alternatives).

Table 24, Page 2A-80, Alternative 2, Flood Risk Reduction, Prioritization for Levee Construction. Same comment as immediately above, Page 2A-79.

Summary of Section 2A. With the above corrections or modifications applied to Section 2A, there is little or no basis for selecting the Proposed Project as the Environmentally Preferred Alternative instead of Alternative 2." The only stated reason Alternative 2 isn't a better alternative than the Proposed Project is due to the large amount of land retirement, including 380,000 acres in the San Luis Unit and 320,000 acres in the Tulare Basin for Tulare Lake Basin

Reservoir, as well as potentially more land fallowing due to the limitation in Delta exports at 3 million AF (again, not quantified). However, it is clear that no solution is in place for the 380,000 acres of San Luis Unit drainage impaired lands either financially, technically or otherwise authorized by Congress at necessary funding levels. Ultimately, like the 100,000 acres already retired due to soil salinization, the full 380,000 acres (that includes the existing 100,000 acres) will go out of production anyway unless they are allowed to reopen the San Luis Drain and dump all of the San Luis Unit's pollution into the San Joaquin River (which definitely won't help the Delta and even BDCP doesn't propose this drastic measure). Efforts to maintain arability in the root zone of those lands through drainage treatment will require substantial increased public subsidies. According to Reclamation's 2008 Feasibility Report for San Luis Drainage Feature Re-evaluation:

> *To provide drainage service to the San Luis Unit, neither of the action alternatives is economically justified by the Federal government. For the Federal government to provide drainage service to the San Luis Unit, neither of the action alternatives is financially feasible, within existing authorities.* [49]

The Feasibility Report also found that substantial increased subsidies and Congressional funding authorization would be necessary to implement the Preferred Alternative: [50]

- Increase the funding authorization for the San Luis Act by $2.69 Billion (2006 indexing)
- Waive the required collection of full Operation and Maintenance funding (and interest), including payments to the CVPIA Restoration Fund per Section 5 of the Reclamation Act for providing drainage service to Panoche, Pacheco and San Luis Water Districts.
- Authorize indefinitely waiving repayment of San Luis Unit contractors' contractual obligation for repayment of reimbursable capital and/or reimbursable Operation and Maintenance costs incurred to implement the Preferred Alternative AND the remaining reimbursable capital costs incurred to construct pre-existing CVP facilities until the contractors can "afford to pay" their bills.

The Feasibility Report also found that if the Preferred Alternative were implemented, the CVPIA Restoration Fund would be adversely affected because the San Luis Unit contractors will be unable to pay into the CVPIA Restoration Fund and there is a pre-existing prohibition on reassigning drainage costs to CVP power customers.

The proposed Panoche Demonstration Selenium Treatment Facility will cost an estimated $37 million just to remove selenium from drainage, not salt or boron. At a treatment rate of 200 gallons per minute 24/7 for 18 months (470 AF), the cost of treating agricultural drainage only for selenium is $78,723/AF, not counting transportation and disposal of the processed solid waste to a hazardous waste facility. Even at that cost, the potential for success is low. Previous attempts to use reverse osmosis have failed. A 2010 Report by CH2MHill for the North American Metals Council[51] determined the following:

[49] See page 97 http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html
[50] Ibid. p xxvi
[51] Review of Available Technologies for the Removal of Selenium from Water, CH2MHill, June 2010. See http://www.namc.org/docs/00062756.PDF, page 8-2.

"While these physical, chemical and biological treatment technologies have the potential to remove selenium, there are very few technologies that have successfully and/or consistently removed selenium in water to less than 5 μg/L at any scale. There are still fewer technologies that have been demonstrated at full-scale to remove selenium to less than 5 μg/L, or have been in full-scale operation for sufficient time to determine the long-term feasibility of the selenium removal technology. There are no technologies that have been demonstrated at full-scale to cost-effectively remove selenium to less than 5 μg/L for waters associated with every one of the industry sectors."

Continued irrigation of the 380,000 acres of drainage impaired lands in the San Luis Unit will result in continued decline of soil productivity and will ultimately cause retirement of the land because it cannot support agriculture. Irrigation of these lands can only continue with huge subsidies and/or discharge of the toxins to the San Joaquin River and Delta. Therefore, continued irrigation of these lands does not meet the Delta Plan Financing Framework's key tenets (2A-55) for cost effectiveness and stressors as follows:

- Beneficiaries (those who benefit from the water resources of the Delta and its watershed) should pay for the benefits they receive
- Stressors (those whose actions adversely affect the Delta ecosystem) should pay for the harm they cause the ecosystem.

Taking into account the fact that Alternative 2's ultimate impact on agriculture by retirement of those 380,000 acres is really no different than Existing Conditions, No Action or the Proposed Action, it removes one reason that Alternative 2 cannot be environmentally preferred to the Proposed Action.

Mitigation for Alternative 2 impacts on fugitive dust: The Alternative 2 significant negative impact of fugitive dust from fallowed or retired lands could be fully mitigated by not disking and/or growing dry land crops and/or re-establishing native vegetation.

Chapter 3- Water Resources

Overall, this chapter is completely lacking in any kind of quantitative analysis of water resources affected by the Delta Plan in upstream and downstream areas as well as the Bay-Delta itself. For instance, the Trinity River Record of Decision is completely left out of the analysis as a guiding force for Trinity River Division operations. There is a complete lack of disclosure let alone analysis of temperature and flow standards for the Delta and all of its tributaries, artificial or natural, reservoir carryover storage, operations or anything that could possibly provide the reader with a method to compare the different alternatives with each other and Existing Conditions.

(3-1) Study Area
The Trinity River must be mentioned in the text that reflects the map on Figure 3-1. We also believe that the Pit and McCloud rivers should also be included in the text and in Figure 3-1.

(3-3)- Environmental Setting/Major Sources of information- This section should include the Trinity River Mainstem Fishery Restoration EIS/EIR (USFWS/BOR/HVT/Trinity County, 1999) and the Trinity River ROD (Interior 2000). It is a major omission regarding water operations for this important "Delta Tributary Watershed" (Water Code Section 78647.4 (b).

The 2006 Sacramento Valley Integrated Regional Water Management Plan does not represent the interests, needs, and values of the region. It was crafted by water districts that intentionally excluded the public and NGOs from visioning, describing the environmental setting, plan creation, and governance. It is inappropriate to use the SVIRWMP as a source document to describe the environmental setting for the watershed that is so vital for California.

(3-5) Figure 3.2- This map doesn't even show that the Trinity River exists downstream of Lewiston Dams. This is a serious omission considering that the Trinity River Division of the CVP (TRD) is operated in part to regulate flows on the Trinity River in order to meet the tribal trust obligation that Interior has to the Hoopa Valley and Yurok Tribes.

(3-6) It is unclear what evidence and analysis is in the DPEIR to reach the following conclusion:

> "With the growing limitations on available surface water exported through the Delta, and the potential impacts of climate change, reliance on groundwater through conjunctive management would become increasingly more important in meeting the state's future water uses." Conjunctive management, the way it is proposed in the Sacramento Valley, has the potential to replicate the destructive practices that left the Owens and San Joaquin valleys bereft of water, vegetation, and species that depend on healthy hydrology.

We appreciate the DPEIR's acknowledgement that, "A comprehensive assessment of overdraft in the state's groundwater basins has not been conducted since Bulletin 118-80 in 1980, but overdraft is estimated at between 1 to 2 MAF annually (DWR 2003, p. 2)." In light of the deficit of analysis since 1980 and the use of only an estimate of overdraft, albeit one that is massive with tremendous range, what data and analysis have been used to justify the expansion of past practices like conjunctive use, conjunctive management, and water transfers with groundwater substitution? The immense failures of water management in California have already caused extensive overdraft (see DPEIR Figure 3-4 for critically overdrafted basins; pp 3-12 to 3-13) and the collapse of fisheries and ecosystems.

(3-9) The DPEIR must include historic data that covers centuries, not simply "decade time scales." Major climate change has occurred at millennial, decadal, and annual scales in the history of the Sierra Nevada. The regional climate developed from warm, wet, tropical conditions about 65 million years ago through a cycle of at least eight major glacial and interglacial periods of the last million years to the winter-wet, summer-dry pattern of the last 10,000 years. These climatic periods have greatly influenced vegetation, animals, and human populations; their effects are observable today and influence how people manage resources. For instance, two extensive droughts, each lasting 100 to 200 years, occurred within the last 1,200 years. During the cold phase of the Little Ice Age (about a.d. 1650-1850), glaciers in the Sierra Nevada advanced to positions they had not occupied since the end of the last major ice age more than 10,000 years ago. The period of modern settlement in the Sierra Nevada (about the last 150 years), by contrast, has been relatively warm and wet, containing one of the wettest half-century intervals of the past 1,000 years. (http://ceres.ca.gov/snep/pubs/web/v1/ch01/v1_ch01_02.html)

The following statement, "… where supplemental water supplies are needed…" should be changed to read "… where supplemental water supplies are wanted…" since "need" has been

and still is currently based on speculative urban and agricultural expansion. The word "needed" in the following sentence should also be changed to "wanted." "Over time, the natural pattern of water flows continued to change as the result of upper watershed diversions and the construction of facilities to divert and export water through the Delta to areas where supplemental water supplies are needed, including densely populated areas such as San Francisco and Southern California and agricultural regions such as the San Joaquin Valley and Tulare Lake." The DPEIR fails to focus on the demand side of water in California and the ability to control demand in more ways than increasing supply with very costly infrastructure.

(3-10, lines 18-19)- It is important to note that largemouth bass showed a clear increase in Se concentrations 1999-2007 in Appendix E, Table E-1. Selenium contamination is not going away.

(3-11, lines 11-15)- We agree-the authors correctly identified that the major source of selenium to the Delta is agriculture from the San Joaquin Valley.

(3-12, lines 1-2)- Appendix D, Table D-2 only identifies the draft EIS for San Luis Drainage Feature Re-evaluation, not the final ROD of 2007 which identified a preferred alternative to treat drainage from 180,000 acres and retire 200,000 acres (which also includes the existing 54,000-100,000 acres already retired).

(3-13, lines 41-42)- The document incorrectly states that Delta water users are the largest users of Delta water (up to 1.3 MAF), but then says "After local users, the major users of Delta surface water are the CVP and SWP", making it appear that the state and federal pumps export less water from the Delta. This is untrue.

(3-14, lines 34-41)- The document should identify that while the Jones Pumping Plant has a capacity of 4,600 cfs, it is limited to a little over 4,200 cfs due to subsidence, although the State-federal intertie might allow increased deliveries to CVP contractors normally served by the Delta Mendota Canal.

(3-15, lines 1-2)- The document states that CVP/SWP Delta pumping has been significantly reduced since 2007, but fails to mention that 2011 was a record year with exports exceeding any prior year. This is very misleading.

Lines 26-13- This section mentions the CVPIA (Section 3406 b2) water but fails to mention CVPIA Refuge Water Supplies (3406 d) and Trinity water (3406 b23). All three sections of CVPIA redirected a significant amount of CVP water to environmental purposes but the document is not clear on the fact that CVPIA accomplished those actions. The DPEIR also fails to mention that most of the water released for fishery purposes under CVPIA Section 3406 b2 is pumped into the canals in the Delta before it reaches the Golden Gate.

(3-16, lines 32-39) As noted above, the McCloud, Pit, and Trinity rivers must at least be mentioned when describing the Sacramento River watershed.

(3-17, lines 10-11)- The DPEIR mentions a volume of water diverted from Whiskeytown Lake to Keswick Reservoir, but does not give a specific average Trinity River export volume, nor does it even cite the 1999 Trinity EIS/EIR and the 2000 Trinity ROD. This is another significant omission. There is no mention of Trinity River Basin Plan temperature objectives, the 2000

NMFS Trinity Biological Opinion, problems with transmission of cold Trinity water through Whiskeytown, the temperature curtains, the temperature control device at Shasta Dam or temperature issues and water quality objectives in the Sacramento River. It also fails to mention the significance of the Trinity River Division in diluting acid mine drainage discharges from Iron Mountain Mine.

(3-18/19 lines 1-40 and 1-5) This section has very limited data, and requires more evidence and supporting facts.

(3-19 lines17-21) The DPEIR asserts that Sacramento Valley "groundwater levels are generally in balance valley-wide with pumping matched by recharge…" What is the basis for that conclusion? The following examples contradict the statement above:

- "It has been long recognized that the Colusa Basin faces significant flooding, drainage, and groundwater recharge problems." (Northern Sacramento Valley Four County Group 2009.)
- Declining groundwater elevations have been observed specifically in Butte County. A 2007 Butte Basin Groundwater Status Report describes the "historical trend" in the Esquon Ranch area as showing "seasonal fluctuation (spring to fall) in groundwater levels of about 10 to 15 feet during years of normal precipitation and less than 5 feet during years of drought." The report further notes: "Long-term comparison of spring-to-spring groundwater levels shows a decline of approximately 15 feet associated with the 1976-77 and 1986-94 droughts (Butte Basin Water Users Association, 2007). The 2008 report indicates that, "The spring 2008 groundwater level measurement was approximately three feet higher than the 2007 measurement, however it was still four feet lower than the average of the previous ten spring measurements. Fall groundwater levels are approximately nine feet lower than the averages of those measured during either of the previous drought periods on the hydrograph. At this time it appears that there may be a downward trend in groundwater levels in this well," (Butte Basin Water Users Association 2008.)
- Professor Karin Hoover, Assistant Professor of hydrology, hydrogeology, and surficial processes from CSU Chico, found in 2008 that, "Although regional measured groundwater levels are purported to 'recover' during the winter months (Technical Memorandum 3), data from Spangler (2002) indicate that recovery levels are somewhat less than levels of drawdown, suggesting that, in general, water levels are declining." According to Toccoy Dudley, "Test results indicate that the 'age' of the groundwater samples ranges from less than 100 years to tens of thousands of years. In general, the more shallow wells in the Lower Tuscan Formation along the eastern margin of the valley have the 'youngest' water and the deeper wells in the western and southern portions of the valley have the 'oldest' water," adding that "the youngest groundwater in the Lower Tuscan Formation is probably nearest to recharge areas." (Dudley 2005.) "This implies that there is currently no active recharge to the Lower Tuscan aquifer system (M.D. Sullivan, personal communication, 2004)," explains Dr. Hoover. "If this is the case, then water in the Lower Tuscan system may constitute fossil water with no known modern recharge mechanism, and, once it is extracted, it is gone as a resource," (Hoover 2008.)

- "Overdraft of groundwater in Sacramento County over the last 6 decades has significantly impacted the magnitude and duration of fall flows on the Cosumnes River." (Fleckenstein, et al. 2004).

Additionally, how and where recharge occurs in the northern Sacramento Valley is unknown. An attempt to develop greater understanding is in its infancy: "Most recently, Butte County received funding through Prop 50 under the DWR Watershed Program to develop a groundwater model to determine run-off and recharge within the watershed areas." (Northern Sacramento Valley Four County Group 2009.)

(lines 22-40) The Sierra Nevada [mountain range] and "Coast ranges" are identified, but there is no mention of the southern Cascade Range that is a prominent geologic feature of the northern Sacramento Valley and a significant contributor to the hydrology of the Sacramento River watershed.

It is also noteworthy that the planning area for the possible Sites reservoir is not mentioned in this section. The Sites project is a proposed offstream storage reservoir located about 10 miles west of the small town of Maxwell in the Sacramento Valley. The water quality problems of Maxwell are mentioned in this paragraph with the "hills to the west" listed as the source,: exactly where a reservoir would be located. These existing water quality problems and the source minerals should be disclosed with any mention of a possible reservoir near Sites and these issues analyzed here. CEQA guidelines' list of "advantages" to preparing a programmatic EIR include a "more exhaustive" examination of effects and alternatives, "full consideration" of cumulative impacts, and allowance for analysis of "broad policy alternatives and program wide mitigation measures" at a time when the lead agency has the best chance to address them and present them to the public. (Cal. Code Regs., tit. 14, § 15168(b).)

(3-19/20) There is brief discussion of general groundwater quality in the Sacramento Valley and some specific mention of TDS, chloride, sodium, sulfate, and nitrates, but there is a noticeable absence of data and discussion regarding hazardous waste plumes and the potential for well contamination. There are significant public health and safety issues associated with large groundwater extractions associated with water transfers and groundwater storage projects as proposed in the DPEIR (pp 20, 3-77, 80, 81), For example, in 1994, following seven years of low annual precipitation, Western Canal Water District and other irrigation districts in Butte, Glenn and Colusa counties exported 105,000 af of water extracted from the Tuscan aquifers to buyers outside of the area. This early experiment in the *conjunctive use* of the groundwater resources caused a significant and immediate adverse impact on the environment (Msangi 2006). Until the time of the water transfers, groundwater levels had dropped but the aquifers had sustained the normal demands of domestic and agricultural users. The water districts' extractions, however, lowered groundwater levels throughout the Durham and Cherokee areas of eastern Butte County (Msangi 2006). The water level fell and the water quality deteriorated in the wells serving the City of Durham (Scalmanini 1995). Irrigation wells failed on several orchards in the Durham area. One farm never recovered from the loss of its crop and later entered into bankruptcy. Although the districts' groundwater substitution was in the deep levels of the aquifer, residential wells dried up in the shallow zone of the aquifer as far north as Durham (Barris 1995).

There is a lack of disclosure regarding the potential impacts from large groundwater extractions associated with conjunctive use, water transfers, and groundwater storage projects that are part of

the Delta Plan and DPEIR (p 3-78/79). As noted above there is the likelihood that water levels may collapse in domestic wells that can lead to serious contamination from heavy metals and non-aqueous fluids. Additionally, there are numerous hazardous waste plumes in most counties in the Sacramento Valley. One example, Butte County, has many hazardous waste plumes that could easily migrate when hydrostatic pressure is altered in the groundwater basin from increased groundwater pumping proposed for the Project. (Todenhagen 2010) All of this must be disclosed and analyzed cumulatively at the programmatic CEQA level.

(3-20/21)- This section should describe the hydrologic contributions and plumbing of the McCloud, Pit, and Trinity rivers in the Sacramento River watershed.. It is a significant omission.

The DPEIR asserts that, "[w]ater diverted for irrigation, but not actually consumed by crops or other vegetation becomes recharge to the groundwater aquifer or flows back to surface waterways and contributes to surface supplies either within or downstream of the Sacramento Valley." It should be noted that if recharge does occur, it would be to the shallow alluvial aquifer, not the source aquifer for most agricultural uses, which is deeper. There also is not mention of evaporation in the irrigation water budget.

(3-22, lines 32-35)- The discussion of water transfers fails to mention that DWR's Drought Water Bank water transfer program was shut down by litigation (after the fact) and that a joint EIS/EIR is being prepared by Reclamation and SLDMWA (a year overdue so far). Please provide citations for the water transfers.

(3-26, lines 26-29)- The document discusses the Basin Plan amendment for the Grasslands Bypass Project to "address selenium control" but fails to mention it was really an amendment to waive implementation of Basin Plan selenium water quality objectives for another decade because they can't meet them now and there is no technology other than land retirement that has been proven to work.

(3-27, lines 28-35)- The DPEIR leaves a great deal out of the discussion regarding the Cosumnes River groundwater basin. Examples include:

- "Overdraft of groundwater in Sacramento County over the last 6 decades has significantly impacted the magnitude and duration of fall flows on the Cosumnes River. The decline in fall flows is a primary stressor of spawning success of fall-run Chinook salmon." (Fleckenstein, et al. 2004).
- "Annual groundwater deficits are on the order of several hundred million cubic meters." *Id*

When "groundwater storage capacity" is provided here and in other sections, what does the estimated amount bring to the discussion or analysis? Does it play a role in the Project description or the alternatives? For example, is it viewed as a source of export water, as necessary for local hydrology, or, in this case, as essential for local hydrology and species as noted above? If the Consumnes River basin and other groundwater basins are part of the Project and alternatives, they must be analyzed and presented to the public.

(3-29, lines 9-10)- The statement below Table 3-2 describes "many" groundwater basins as removing more water than is recharged, but actually it is "most" (5 out of 6). Only the Chowchilla basin appears to not be removing more water than is recharged. The text is misleading as it relates to the data in the table.

(3-32)- Surface Water Use- This section is an appropriate place to identify the large amount of paper water in the San Joaquin Basin. If such information were disclosed, it would point out that the San Joaquin and its tributaries are completely over-allocated and therefore the various water permits should be licensed to eliminate paper water. The South SJID, Turlock ID and Merced ID descriptions in the DPEIR should include a description of the acres served by the districts.

(3-33, lines 1-2)- The document notes that the CVP provides "surplus" CVP water to contractors in San Felipe and San Joaquin areas. It should further note how much of that water is paper water and the fact that there hasn't been 100% delivery of contract water for many years and it is unlikely to do so in the future. Again, disclosure of that information would lead to a conclusion that there is a significant amount of paper water within the CVP, and licensing of BOR's CVP permits to eliminate paper water is necessary (along with reduction in contract amounts to correspond with actual availability of water).

(3-34, lines 6-7)- There should be a discussion of how the VAMP has failed here and what factors led to that failure. See Hankin 2010.[52]

(3-40, lines 1-3)- The document fails to mention that selenium and boron can also be pollutants in local groundwater making it unfit for use. Even 1 ppb of boron can adversely affect crops.

(lines 29-34)- This section fails to mention the 2007 San Luis Feature Re-evaluation Record of Decision (SLDFR ROD) that selected a different alternative than the one cited in this DPEIR. The "In-Valley Water Needs Land Retirement" alternative that includes 194,000 acres of land retirement was selected, not the "In Valley/Drainage Impaired Land Retirement" Alternative, which would have actually retired 298,000 acres. Both alternatives include an existing 54,000 acres of retired land.[53] The DPEIR incorrectly portrays the final decision, but it is notable that in the SLDFR DEIS, the environmentally preferred alternative was the In Valley/Drainage Impaired Land Retirement Alternative because it had the most land retirement and a positive National Economic Development (NED)Act cost/benefit analysis. Nonetheless, Reclamation requested and received a waiver from the NED requirement to otherwise adopt the most cost effective alternative and instead chose a financial loser- the "In-Valley Water Needs Land Retirement" alternative. Existing efforts to "solve" the drainage problem through cost effective large scale technologies have failed.[54] The U.S. Geological Survey (USGS), in Open File Report No. 2008-1210 states that "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired*."

[52] http://www.sjrg.org/peerreview/review_vamp_panel_report_final_051110.pdf

[53] SLDFRE ROD, Bureau of Reclamation, March 2007.
See http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2598 page 13.

[54] CH2MHill, "Removal of Available Technologies for the Removal of Selenium from Water," for the North American Metals Council, June 2010. Conclusion, Pages 8-1 and 8-2.

(3-44) Conjunctive Use- This section should mention that C-WIN, CSPA, South Delta Water Agency, Central Delta Water Agency and the Center for Biological Diversity have filed two lawsuits to return the Kern Water Bank to state control, and that it is part of Alternative 2.

(3-48, lines 9-10)- This section states that environmental water use is 58% of the Bay Area's water use, but provides no clarification if this is "developed" water or just flows through the Golden Gate Bridge. It creates an impression that most of Bay Area's developed water is used for the environment, which is untrue.

(3-50/51)- Environmental Water Use- This section still doesn't explain or quantify the 58% figure given for environmental water use. It implies that dam releases for fish are bigger than they are, or that they don't get pumped out before they reach salt water. The document needs clarification in this regard.

(3-74, lines 12-15)- The DPEIR mentions an agricultural drainage reclamation project in the San Joaquin Valley but provides no citation or source for this information or its status. Is it already happening, in planning stages, waiting government subsidies, etc.? What is the source water? To date, no project has been able to successfully treat San Joaquin Valley agricultural drainage water on a large scale and cost effectively other than land retirement (USGS Open File Report No. 2008-1210).

(3-77) Thresholds of Significance- In addition to a threshold for impacts to water supplies outside of the Delta that use Delta water, it should also include the following:

- Substantially change water supply availability to water users located upstream of the Delta (area of origin/senior water rights holders, Sacramento River and tributary rivers and streams' fisheries, etc.).
- Substantially change water supply availability and quality to in-Delta water users.

The violation of water quality objectives and standards should include specifics such as temperature, salinity, etc., but the document does not disclose the myriad water quality standards that are being violated regularly today and how frequently the various alternatives would be expected to violate those standards and WDR's in the future. The analysis is therefore incomplete.

The second bullet regarding substantial depletion of groundwater must also include:

- Substantially depleted surface waters due to depleted groundwater supplies.
- Substantially higher stream temperatures that will result in aquatic and terrestrial species mortality and threaten reproductive success.

3.4.3 Proposed Project- None of the analyses for the Proposed Project compare it to Existing Conditions per CEQA requirements even though the other alternatives are compared, at least qualitatively to Existing Conditions. There is no quantitative analysis of any of the alternatives compared to Existing Conditions or each other.

(3-79)- Effects of Project Operations- The document does not but should disclose how well different alternatives meet reservoir cold water carryover storage requirements for Shasta and

Trinity and other reservoirs which have cold water carryover requirements in Biological Opinions or other permit requirements.

(lines 2-19) Sites reservoir, the potential North-of-the-Delta Offstream Storage project, has considerable potential to violate water quality as noted above (p 3-19 comments). The DPEIR's findings - that potentially significant impacts will be avoided by future mitigation - violates CEQA, in that CEQA does not allow such deferral where substantial questions remain regarding whether such mitigation can feasibly accomplish the stated objective.

(lines 13-19) Because the Los Vaqueros expansion project EIR found that "the project would not result in significant adverse changes in Delta water quality that could cause the violation of a water quality standard," it does not follow that *all* other storage projects will be able to make that finding nor that the statement is actually accurate in fact or in practice. It also does not remove responsibility from the lead agency to analyze direct, indirect, and cumulative impacts at the programmatic level. We find no disclosure, analysis, or proposed mitigation for all impacts at the programmatic level.

(lines 32-37) The DPEIR's conclusion that, "The number and location of all potential projects that would be implemented is not known at this time," may be accurate enough for the lead agency, but it indicates that the DPEIR was not ready for prime time. Programmatic CEQA review requires more detail than complete deferral into the future. The DPEIR is preparing to potentially approve, at a programmatic level, reservoirs, groundwater banking, conjunctive use, water transfers, a peripheral canal or tunnels, ocean desalination, and other infrastructure to enable the other projects. The project area is defined on page 1-14. The lead agency may not know the *exact* number and *exact* location of all potential projects, but it is disingenuous to exclude the geographic locations and actions that are planned in the document that led to this environmental review: the 5th Staff Draft Delta Plan.

(3-80/81)- The DPEIR rightly concludes that, "Long-term operation of a groundwater storage facility encouraged by the Delta Plan would by definition result in significant fluctuations in local groundwater levels." The impacts could be devastating, but the DPEIR defers to local management as the mechanism to protect the groundwater basins. "Rising groundwater levels would occur as artificial recharge is induced into the aquifer system, followed by groundwater level declines during subsequent removal of groundwater from storage. There is currently no statewide groundwater management legislation that would regulate this type of facility. However, any operating groundwater storage facility would be subject to local groundwater management regulations (basin adjudications, county ordinances, or local groundwater management plans), as described in Appendix D." Provided above are many examples of the inadequate nature of local ordinances and plans above (2A-18 lines 22-30), which also apply here.

(3-80/81) - Effects of Project Operations- Groundwater transfers, Impact 3-2a: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge

The DPEIR rightly concludes that, "Long-term operation of a groundwater storage facility encouraged by the Delta Plan would by definition result in significant fluctuations in local groundwater levels." The impacts could be devastating, but the DPEIR defers to local management as the mechanism to protect the groundwater basins. "Rising groundwater levels would occur as artificial recharge is induced into the aquifer system, followed by groundwater

level declines during subsequent removal of groundwater from storage. There is currently no statewide groundwater management legislation that would regulate this type of facility. However, any operating groundwater storage facility would be subject to local groundwater management regulations (basin adjudications, county ordinances, or local groundwater management plans), as described in Appendix D." Provided above are many examples of the inadequate nature of local ordinances and plans above (2A-18 lines 22-30), which also apply here.

(3-81 lines 15-38) This section denies impacts from water transfers involving groundwater by citing a Yuba Basin groundwater transfer EIR and project. The DPEIR fails to describe how this single EIR and project varies greatly from plans and projects completed and proposed in the Sacramento Valley, the location where, "These types of activities and related impacts are most likely to occur…" Please consider:

- During the 1994 Drought Water Bank, the amount of surface water transfers that involved groundwater pumping was not "within historic ranges" in Butte County as the DPEIR asserts transpires with the Yuba County transfers. As described above, many wells went dry in Butte County as a result of DWR's 1994 Drought Water Bank groundwater transfers (see comments for 3-19/20).
- The DPEIR does not disclose existing conditions (see comments for p 3-19 for examples) and the impacts that are well known from 1994.
- Recently past and current proposals for water transfers that involve groundwater propose vastly more that "historic levels." For example:

    - Drought Water Bank 2009 (340,000 af)
    - North-to-South, Ten Year Water Transfer Program, Bureau of Reclamation (600,000 af) http://www.usbr.gov/mp/cvp/ltwt/docs/FederalRegisterNoticeTenYearTransfers.pdf
    - *Groundwater/Conjunctive Management* presentation to the State Water Commission where the author presents "Aquifers are emptied" from the "Full aquifers in the Sacramento Valley," (Hauge 2011) http://cwc.ca.gov/cwc/docs/Hauge%20Groundwaterfinal%20sep11.pdf

A finding of no significance from the proposed project is unjustified.

(3-82)- 3.4.3.1.3 Impact 3-3a: Substantially Change Water Supply Availability to Water Users That Use Delta Water- If the Proposed Action would actually reduce Delta exports, there would be an impact here, but it does not analyze that quantitatively, it cannot make a finding of no impact.

(3-84) 3.4.3.2.2 Impact 3-2b: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge- This section erroneously makes a finding of no impact from the Proposed Action that will increase water transfers using groundwater. The erroneous assumption is that "sustainable groundwater management plans" for areas outside of the Delta will ensure that no groundwater overdraft occurs from groundwater substitution transfers. This very chapter of the DPEIR shows several areas of California with groundwater management plans that still have groundwater overdraft. It cannot be assumed that these plans

will prevent groundwater overdraft and we have provided detailed information above regarding the inadequacy of groundwater management plans in the Sacramento Valley (see 2A-18 lines 22-30). Certainly, the provisions of SB X7 6 do not require groundwater management, only monitoring of groundwater.

3.4.3.2.3 Impact 3-3b: Substantially Change Water Supply Availability to Water Users That Use Delta Water- This section also fails to justify a finding of no significant impact. There is no actual analysis of how much Delta exports would be reduced or a calculation of how much "new" water would be created by new projects such as recycling or desalinization. Since it's clear that BDCP will actually INCREASE Delta exports through meeting "full contract deliveries" for CVP and SWP contractors, the finding may belie what the real impact of the Proposed Action will be once BDCP is incorporated into the Delta Plan.

In addition, the unsupported claim that, "The increase in groundwater levels could result in higher yields in nearby shallow wells and therefore be a benefit to shallow wells in some areas," leaves so much unsaid and unresolved, such as:

- How would this benefit shallow well owners that currently have healthy groundwater levels? Where would this potentially occur? Would a drop in levels by water transfers that use groundwater first harm other well owners before a potential, but highly unlikely, benefit may accrue?
- How would recharging the shallow aquifer assist wells that are in deeper levels of a confined or unconfined aquifer? Where is this likely to occur? Where is the acknowledgment of potential harm to these well owners?

The conclusion that the impacts would be less than significant is unfounded.

(3-91) 3.4.3.6 Mitigation Measures- There should be a mitigation measure to maintain adequate cold water carryover storage in CVP and SWP reservoirs to ensure providing cold water for fish to meet downstream temperature objectives and otherwise keep fish in good condition below dams in order to meet DFG Code Section 5937.

(3-94, lines 14-17) 3.4.4 No Project Alternative- The document fails to justify the finding that the Proposed Project will overall have less impacts than the No Action Alternative. The DPEIR fails to describe what the Proposed Project is and how it will affect various water resources issue areas such as groundwater, water quality and water supply. It assumes success without even describing in any detail what the Proposed Project is, let alone a quantitative analysis. How can a Peripheral Canal that takes water out of the Sacramento River before it gets to the Delta improve Delta water quality? How can meeting "full contract deliveries" for CVP and SWP customers not create impacts to Trinity River and Sacramento River salmon? Increased residence time and concentration of pollutants from the San Joaquin River into the Delta will clearly be a significant impact from the Proposed Action but the document does not disclose those impacts.

(3-98, lines 23-24)- The DPEIR makes an unsubstantiated finding that Alternative 2 has more water quality impacts than Existing Conditions, even though it states that under Existing Conditions there are many landowners who currently violate water quality standards and WDR's for drainage problem lands. The finding is based on an erroneous assumption that Alternative 2

includes more agricultural treatment facilities and is therefore a risk to water quality. As explained in other chapters, Alternative 2 would eliminate agricultural drainage polluted discharges because of land retirement and therefore agricultural drainage treatment plants are not necessary. Since Alternative 2 is actually superior to Existing Conditions or the Proposed Project, it is the environmentally preferred alternative for water quality.

(3-99, lines 8-9) 3.4.7.1.2 Impact 3-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge- Again the document incorrectly identifies that Alternative 2 has greater impacts than Existing Conditions (but less than the Proposed Project) because the DPEIR incorrectly assumes that Alternative 2 includes more emphasis on water transfers. Since Delta exports would be limited to 3 MAF/year, water transfers would unquestionably be less than Existing Conditions and therefore less impacts. Again, Alternative 2 is the environmentally preferred alternative.

3.4.7.1.3 Impact 3-3: Substantially Change Water Supply Availability to Water Users Located Outside of the Delta That Use Delta Water- It is probably correct that Alternative 2 has greater impacts to water users outside of the Delta (exporters) because it limits exports to 3 MAF, but it doesn't acknowledge that in-delta water users would benefit from increased freshwater flows through the Delta. However, the large number of projects under Alternative 2 to improve water supply reliability would fully mitigate for any water supply impacts, except for the elimination of water to 380,000 acres of drainage-impaired lands in the San Luis Unit. However, since those lands require substantial water, crop and drainage subsidies and will ultimately go out of production anyway due to salt buildup, it is actually a benefit to water quality, economics and the environment to eliminate water deliveries to poison lands.

Chapter 4, Biological Resources- (4-1). The Study Area does not include the Trinity River, even though it says it includes the watershed of Delta, including the Sacramento and San Joaquin basins. Since the Trinity is one of the sources of water for the Delta, it is inappropriate to leave it out, especially since some of the alternatives would retain existing Delta pumping or even increase Delta pumping- with resultant impacts to the areas of origin such as the Trinity. Trinity River Coho salmon are listed as a threatened species under federal and state law, but they aren't mentioned anywhere in the document. This is a significant omission. Even the South Delta Improvement Project DPEIR/DEIS did a temperature analysis on Trinity River salmon, albeit flawed.

Evaluation of impacts to Trinity River salmon and steelhead from the alternatives with high Delta exports such as Alternatives 1A and 1B could have been performed through evaluation of the frequency of violation of Trinity River Temperature Objectives Contained in the Water Quality Control Plan for the North Coast Region[55]. Such an evaluation is a standard procedure for evaluation of impacts to the Trinity River and has been used in several environmental documents such as the South Delta Improvement Project DEIS/EIR and the Trinity River Mainstem Fishery Restoration EIS/EIR. Additionally, the availability of water during extended drought to meet Trinity River Record of Decision flows while also meeting Basin Plan Temperature Objectives is a reasonable analysis that also was not completed.

There is no evaluation of impacts to the four races of Sacramento River Chinook salmon through

[55] See http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/083105-bp/04_water_quality_objectives.pdf page 3-8.00, footnote 5.

analysis of Sacramento River temperature objectives contained in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins[56]. Again, evaluation of the frequency of meeting the 56 degree F temperature objective and minimum carryover storage requirements for Shasta Reservoir contained in the NMFS Biological Opinion are common methods of quantitative analysis which were left out of this DPEIR.

4.3.2.2.4 (4-25)- Importance of the Delta to Water-birds- This section completely omits any references to Refuge Water Supplies contained in CVPIA. The DPEIR should indicate how the Delta Plan and BDCP will impact refuge water supplies and targets for restoration. It mentions that there are goals for wetland habitat in the Delta, but fails to mention what they are. How well each of the alternatives would meet those goals is an appropriate quantitative analysis that does not exist in this document.

Rice (4-38)- This section again fails to identify the CVPIA provision allowing for flooding of rice fields for winter migratory waterfowl habitat. It is as if this DPEIR does not acknowledge that CVPIA exists.

Shasta Dam to Red Bluff Diversion Dam (4-40)- This section mentions the Trinity River diversions to Clear Creek and the Sacramento River, but completely fails to mention that the Trinity River Record of Decision is supposed to limit those diversions. It also fails to mention that the Interior Department has a statutory and Tribal Trust obligation to the Hoopa Valley and Yurok Tribes[57] and their federally reserved fishing rights and an obligation to restore the Trinity River's fishery resources.

4.4.1 Assessment Methods (4-58)- The DPEIR states that:

> The Proposed Project (Delta Plan) and alternatives would not directly result in construction or operation of projects or facilities and therefore would result in no direct impacts on biological resources. The Proposed Project and alternatives could ultimately result in or encourage implementation of actions or development of projects, such as facilities or infrastructure, as described in Section 2A, Proposed Project and Alternatives.

It is a cop out to fail to describe potential impacts of approval of the Delta Plan and the BDCP that will be incorporated into the Delta Plan if certain statutory requirements that are rigged (such as DFG approval). Since the BDCP purpose, among other things, is to provide "full contract deliveries" to CVP and SWP contractors, the Delta Plan needs to do an analysis based on the impacts of full contract deliveries. That would include increased delivery of water and production of toxic agricultural drainage from the San Luis Unit and other lands in the western San Joaquin Valley, increased reservoir depletion for all CVP and SWP reservoirs, impacts to Trinity River fishery flows and temperatures, impacts to Sacramento River fishery flows and temperature objectives, impacts to American River temperatures and fishery flows, impacts to meeting Level 4 wildlife refuge water supplies, growth inducing impacts in urban areas, etc.

[56] See http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr.pdf, Table III-4, page III-8.00.
[57] See October 4, 1993 Interior Solicitor Opinion on Fishing Rights of Hoopa Valley and Yurok Tribes, located at http://www.schlosserlawfiles.com/~hoopa/SolOp_93.pdf

4.4.1 Assessment Methods (4-58)- The document uses the excuse that it's only a plan and therefore has no direct impact on biological resources is disingenuous. The policies and recommendations of the plan will result in changes in the physical environment, particularly when the BDCP is incorporated into the Delta Plan. At a minimum, the Delta Plan DPEIR should develop a range or impacts for BDCP based on the work done to date, such as the purpose and need to meet "full contract deliveries" for CVP and SWP contractors. The lack of specific analysis is unacceptable and does not meet the legal requirements of CEQA.

4.4.2 Thresholds of Significance (4-59)- Since there is no quantitative analysis of impacts to listed species or other listed, sensitive or otherwise protected species or habitats, it is impossible to determine if an impact is significant. One very clear threshold of significance that is not in the document is violation of water quality or air quality standards. For instance, if a particular alternative were to increase the number of violations of temperature objectives for the Trinity River or Sacramento River, it should be considered a significant impact. There are numerous water quality and air quality standards that should be considered but are not included.

Another example of a violation of specific plans and policies would be conflicts with the requirements of the Trinity River Record of Decision (2000). However, since the Trinity ROD is not mentioned or described in the DPEIR analysis, it is impossible to determine or describe conflicts. There are likely many other programs, Records of Decision, etc. that could be significantly impacted by the Delta Plan but are not mentioned. Again, the lack of specificity and quantitative analysis makes this document fatally flawed.

The Trinity River is protected from harm by diversions to the Sacramento River and Delta in numerous legal opinions, court decisions and administrative actions reflecting state and federal recognition of the Trinity's special legal status.[58] This special status creates a priority for the use of Trinity River water for Trinity River fisheries and other in-basin uses that is superior to any other use of CVP water outside of the Trinity River basin. Data in recent studies indicate that a small portion of flows originating from the Sacramento River reach interior South Delta compliance points, playing a role in salinity conditions there. Thus, Bureau of Reclamation water right permits for the Trinity River provide a portion of the water used to meet salinity objectives in the Delta as well export pumping supplies . However, current Bureau of Reclamation policies regarding the Trinity River Division operations make it clear that the Bureau does not recognize the Trinity River's special legal status. Reclamation's interpretation of the Trinity's legal status places salmon and steelhead fisheries and the overall health of the river's ecosystem and

58 See US Department of the Interior Memorandum by Solicitor Leo Krulitz to the Assistant Secretary, Land and Water Resources, Proposed Contract with Grasslands Water District, December 7, 1979, accessible online at http://www.c-win.org/webfm_send/156. Key federal authorities for doing no harm to the Trinity River include: The Trinity River Act of 1955 (PL 84-386); the Trinity River Basin Fish and Wildlife Restoration Act of 1984 (PL 98-541); Tribal Trust Doctrine, applied to the Hoopa Valley and Yurok Tribes; The Central Valley Project Improvement Act, PL 102-575 (CVPIA); Federal Reclamation Act (Section 8); Federal Clean Water Act Section 303; The 2000 Trinity River Record of Decision (page 17); and the 2000 Trinity River Biological Opinion by the National Marine Fisheries Service. State laws and policies on doing no harm to the Trinity River include: the Public Trust Doctrine; area of origin and watershed protection statutes in the California Water Code; California Department of Fish and Game recognition in environmental review comments concerning the Trinity River Mainstem Fishery Restoration Program; State Water Resources Control Board Order WR 90-05; North Coast Regional Water Quality Control Board and State Water Resources Control Board-approved temperature objectives for Trinity River, approved by US Environmental Protection Agency as Clean Water Act Section 303 standards.

economy at great risk.[59] The groups request that the Delta Plan include a policy statement in the Project Description that recognizes and extends protection, through amendment of the Bureau's water rights permits to the Trinity River, addressing salinity and flow objectives in the Delta as well as a limitation on the use of Trinity River water for Delta exports.

Proposed Mitigation Measure- SWRCB licensing of all rim dam reservoir to eliminate paper water and provide minimum instream fishery flows and requirements for temperature objectives through retention of cold water storage. The state and federal water contractors have previously made an argument against additional Delta outflows because of the need for more cold water upstream storage (to attempt to defeat additional Delta outflow) in the legislatively required flow hearings at the State Board. We agree this analysis should be done and the DSC CEQA document seems like the right place to do it.

Proposed Trinity River Mitigation Measure: - The following mitigation measure would ensure that no harm is done to Trinity River fisheries through implementation of the Delta Plan and BDCP:

The SWRCB shall convene a Trinity specific water right hearing, as directed in SWRCB Water Quality Order 89-18.[60] The water right hearing shall license Reclamation's eight Trinity River water permits as follows:

1. Conformance of Reclamation's eight Trinity River water permits with the minimum instream flows contained in the Trinity River Record of Decision.
2. Inclusion of permit terms and conditions to require Reclamation to comply with the Trinity River temperature objectives contained in the Water Quality Control Plan for the North Coast Region (NCRWQCB).
3. A requirement to maintain an adequate supply of cold water in Trinity Reservoir adequate to preserve and propagate all runs of salmon and steelhead in the Trinity River below Lewiston Dam.
4. Eliminate paper water in Reclamation's Trinity River water rights.

(4-62, lines 25-27)- This statement tries to make it sound like increased water transfers through the Delta would be good for the biological environment by repelling salt water. However, it fails to state that increased water transfers also means increased Delta pumping, South Delta water quality impacts, and mortality to fisheries from the Delta pumps, either directly or indirectly through take at the pumps and modification of flows and habitat.

[59] Letter of Paul Fujitani, Acting Operations Manager, US Bureau of Reclamation, to Brian Person, Chair, Trinity Management Council, Operating the Trinity River Division in Accordance with Water Rights Order 90-05 and Other Operational and Regulatory Objectives, February 23, 2011, accessible online at http://www.c-win.org/webfm_send/141. While USEPA maintains that Reclamation is required to comply with Trinity River Basin Plan Temperature Objectives for all project purposes, Reclamation does not agree. A February 23, 2011 letter by acting Central Valley Project Operations Manager Paul Fujitani to the Trinity Management Council stated, "We consider the Basin Plan to be objectives that we strive to meet, but do not consider the objectives as permit conditions."

[60] See: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1989/wq1989_18.pdf, page 18.

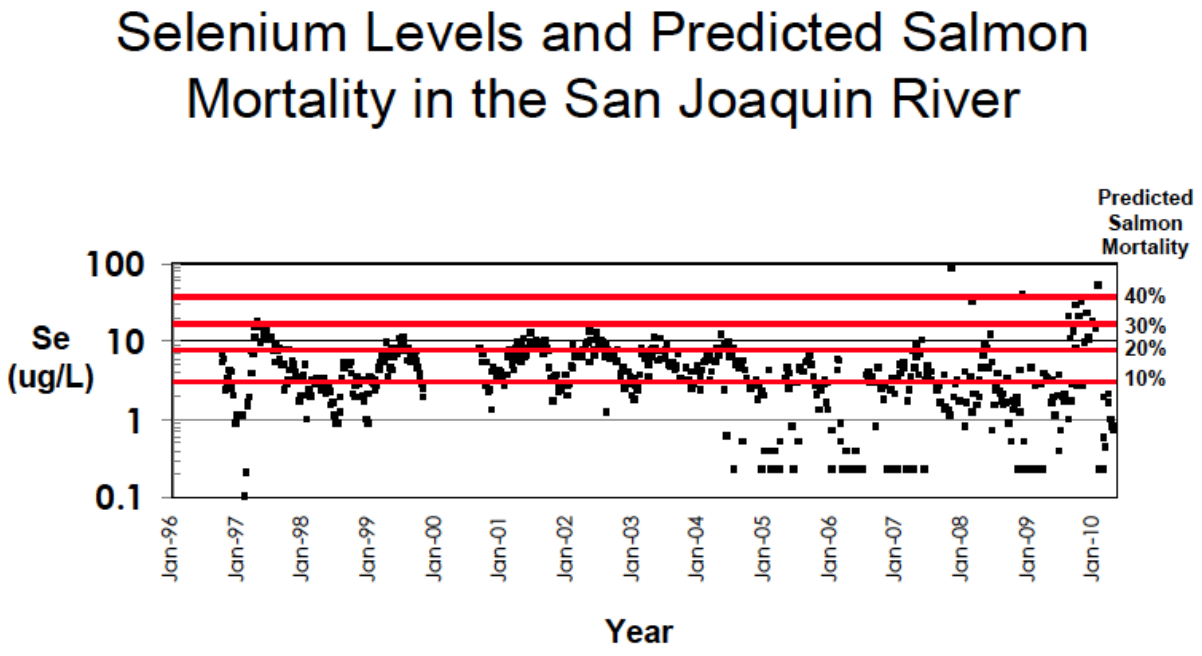
4-64/65 (end of page/top of second page)- Again, this tries to make water transfers look good by talking about increased flows in rivers going to the Delta, but it fails to identify adverse impacts to fish and water quality from increased Delta pumping associated with water transfers through the Delta.

Biological Project Impacts as a Whole- The DPEIR takes a conservative approach to most biological impacts by stating that project impacts are significant. However, most of these statements begin with something to the effect of: "Review of environmental analyses of similar projects suggests that these potentially significant impacts would be less than significant or mitigated to a less-than-significant level." Since the DPEIR does no quantitative analysis of each of the biological resource areas, the preceding statement is unsubstantiated, even if the final determination is a significant impact. Disclosure of the impact of the present CVP-SWP diversion system on the Bay/Delta ecosystem and public trust assets would make it impossible for this draft EIR to make the finding that "these potentially significant impacts would be less than significant or mitigated to a less than significant level."

4.4.3.3.2 Impact 4-2c: Substantial Adverse Effects on Special-status Species (4-74, lines 1-6)- The DPEIR makes the following statement in regard to impacts from treatment facilities such as ones proposed for treatment of selenium-contaminated agricultural drainage:

> The operation of facilities intended to improve water quality, such as discharges from wastewater treatment plants or the discharge of brine waste could adversely influence aquatic species if the discharges contained compounds or materials that produce direct toxicity or influence the aquatic food web. However, the discharges associated with any new facilities would be regulated by the SWRCB and RWQCBs to ensure compliance with existing water quality standards. Therefore, operation of these facilities would not be expected to produce significant impacts.

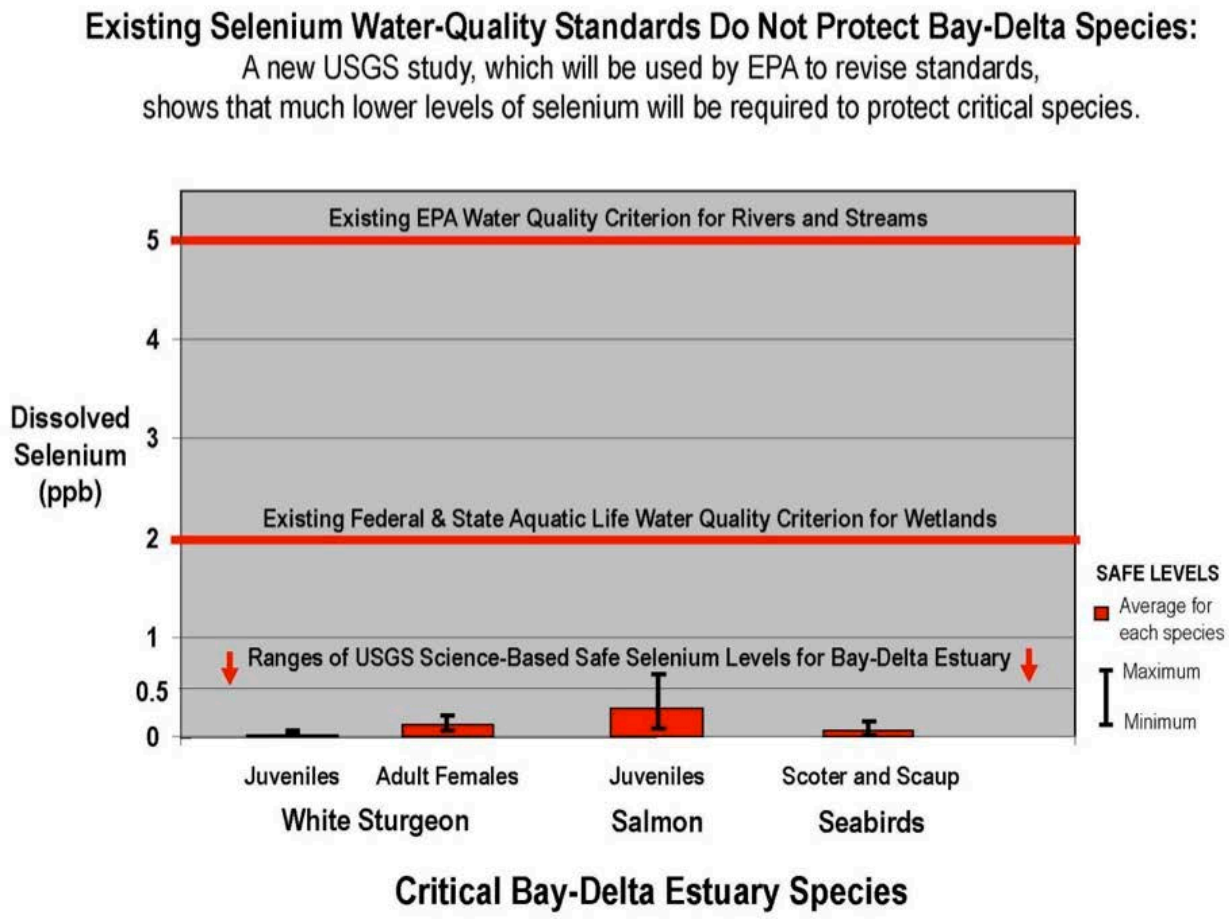
In the case of the Grasslands Bypass Project, enforcement of selenium water quality objectives in Mud Slough North and the San Joaquin River between Mud Slough and the Merced River have been waived until 2020, so the assumption is incorrect that the SWRCB and CVRWQCB will ensure compliance with existing water quality standards to protect aquatic resources. Existing selenium concentrations found in the San Joaquin River at Hills Ferry routinely exceed Basin Plan selenium water quality objectives and are inadequate to protect juvenile salmonids. See figure below.



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Additionally, the existing selenium water quality objectives are clearly inadequate to protect aquatic resources, as evidenced by the recent USGS Report[61] that indicates the existing Delta selenium water quality objective of 2 ppb should be reduced to no more than 0.5 ppb or even less in order to protect aquatic organisms and the species that feed on them. See figure below.

[61] Ecosystem-Scale Selenium Modeling in Support of Fish and Wildlife Criteria Development for the San Francisco Bay-Delta Estuary, California
By Theresa S. Presser and Samuel N. Luoma U.S. Geological Survey, Menlo Park, California. See http://www.epa.gov/region9/water/ctr/



Mitigation Measure 4.4 (4-86, lines 4-6)- In regard to alteration of flow patterns and water quality effects that could disrupt migratory cues for migratory aquatic species, it should specify that maintenance of adequate cold water storage behind the various rim dams (Shasta, Trinity, Folsom, Oroville, New Melones, Friant, etc.) is crucial to providing suitable spawning, incubating, rearing and migration of salmon, steelhead and other species.

(4-87, lines 10-15)- The document assumes that the Proposed Project will have less impact than No Project. However, since BDCP is to provide "full contract deliveries", it will entail greater Delta exports than the No Project Alternative, very likely through construction of a Peripheral "Chunnel" and possibly dual conveyance. The statement cannot be supported without full disclosure through qualitative analysis and an admission that increased Delta exports are possible once BDCP is incorporated into the Delta Plan.

Alternative 2 Analysis

(4-92, lines 31-32)- The finding is incorrect in that Alternative 2 would create less pollution as a result of agricultural treatment facilities. Instead, there would be a quantifiable improvement in water quality from savings in salt, selenium and boron mobilization from retirement of drainage problem lands. The permanent retirement of 380,000 acres of drainage impaired land in the San Luis Unit would decrease mobilization of selenium, salt, boron and other pollutants into the Grasslands Bypass Project and San Joaquin River, as well as the shallow and deep aquifers of the

western San Joaquin and Tulare basins. Based on analysis by the Bureau of Reclamation in the 2004 Broadview Water Contract Assignment Draft Environmental Assessment and Finding of No Significant Impact,[62] retirement of 10,000 acres in the Broadview Water District would result in the following reductions in pollutants to the Grasslands Bypass Project:

TABLE 4-1
DRAINAGE AND WATER QUALITY EFFECTS OF PROPOSED ACTION ON THE SAN JOAQUIN RIVER

	Existing Conditions	Under Proposed Action Conditions	Estimated Reduction Attributable to Proposed Action
BWD Drainage to San Joaquin River (afy)	3,700	1,100	2,600
BWD Estimated Salt Production (tons/yr)	24,300	7,300	17,000
BWD Estimated Selenium Production (lbs/yr)	2,140	640	1,500
BWD Estimated Boron Production (lbs/yr)	74,000	22,000	52,000

Source: Summers Engineering, 2003

Therefore, extrapolating the savings above, retirement of 380,000 acres of drainage impaired lands in the San Luis Unit would result in the reduction of 98,800 AF/year of contaminated agricultural drainage to surface water and groundwater, including a reduction of 646,000 tons of salt, 57,000 pounds of selenium and 1.976 million pounds of boron! Clearly, Alternative 2 cleans up significant sources of surface and groundwater pollution for the Delta and San Joaquin/Tulare basins and by far superior to any other alternative in this regard. The DPEIR does not disclose the magnitude of this improvement in water quality as a result of Alternative 2 because it lacks any quantitative analysis.

(4-93)- Alternative 2 does not have significant impacts to sensitive natural communities- The document incorrectly states that there will be significant impacts to sensitive natural communities (lines 21-21) compared to existing conditions because of the impacts of increased agricultural treatment facilities (although it gives no reason). As stated above, Alternative 2 does not contain agricultural treatment facilities because they would not be necessary if 380,000 acres of drainage problem lands in the San Luis Unit are retired. Therefore, Alternative 2 would not have significant impacts to sensitive natural communities as compared to Existing Conditions or the Proposed Project.

4.4.7.1.2 Impact 4-2: Substantial Adverse Effects on Special-status Species (4-93)- The DPEIR incorrectly assumes significant impacts from Alternative 2 compared to the Proposed Project and Existing Conditions because of an increase in agricultural drainage water treatment facilities. It also makes the nonsensical contradictory statement that:

"On balance, the temporary construction-related impacts under Alternative 2 would be greater than the Proposed Project because fewer projects would be constructed. In addition, the increased emphasis that Alternative 2 places on environmentally beneficial flows would likely contribute more to improving conditions for special-status species and arresting their decline.

[62] http://www.c-win.org/webfm_send/195, page 4-2.

Therefore, significant impacts on 4 special-status species under Alternative 2 would be *less than* under the Proposed Project."

Clearly, retirement of 380,000 acres and the huge reduction in selenium, salt and boron pollution, as well as establishment of instream flows and increased Delta outflows would vastly improve conditions for special status species and arrest their decline. The DPEIR makes incorrect and unsubstantiated findings in this regard in violation of CEQA's information disclosure requirements.

The same conclusions must also be made for **4.4.7.1.3 Impact 4-3: Substantial Reduction of Fish or Wildlife Species Habitat that** Alternative 2 does not create significant impacts compared to Existing Conditions or the Proposed Project.

The same conclusion also applies to **4.4.7.1.4 Impact 4-4: Interfere Substantially with the Movement of Any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, and 4.4.7.1.5 Impact 4-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources or the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Protection Plan.**

Biological Resources Conclusion: Alternative 2 does not have significant impacts on biological resources compared to Existing Conditions or the Proposed Project. The huge reduction in creation of selenium, salt and boron pollution to surface and groundwater from cessation of irrigation of 380,000 acres in the San Luis Unit of the CVP makes Alternative 2 the environmentally superior alternative.

Chapter 5- Flood Risk

Overall, it is impossible to make a reasoned analysis of benefits or impacts to flood risk from the various alternatives in this chapter. For instance, there is no quantitative list of the number, size and cost of levee improvements included under the various alternatives. Alternative 2 should have clearly included a list of all levee work necessary to bring all Delta levees up to the PL 84-99 standard as stated in EWC correspondence on the fifth draft of the Delta Plan. Instead, the DPEIR incorrectly portrays Alternative 2 as "Actions to reduce flood risk under Alternative 2 would emphasize floodplain expansion and reservoir reoperation rather than levee construction and modification."

Specific impact analysis is put off until subsequent environmental documents. There is no discernable difference between No Action and the Proposed Action in terms of flood risk. No reasoned analysis can be made from the alternative descriptions, analysis and discussion in this chapter. Based on changes to accurately reflect the EWC's Alternative 2, Alternative 2 would have less impacts and more benefits than the Proposed Action in relation to flood risk.

Figure 5-3 is the wrong map. It is supposed to be the San Joaquin River Flood Control Project but instead it shows the Sacramento River Flood Control Project, the same as Figure 5-2.

5.4.7.1.1 Impact 5-1 (5-76)- We disagree that Alternative 2 would have greater impacts on drainage pattern alteration than the Proposed Project because Alternative 2 does not contain ocean desalination projects or agricultural drainage treatment facilities, but it does include

significant levee improvements by bringing all levees up to the PL 84-99 standards. Therefore, Alternative 2 would have the least impacts and certainly less impacts than the Proposed Project.

5.4.7.1.2 Impact 5-2 (5-77)- We agree that Alternative 2 would have less impacts than the Proposed Project for alteration of drainage patterns and polluted surface runoff.

(5-78) 5.4.7.1.5 Impact 5-5: Place Within a 100-year Flood Hazard Area Structures Which Would Impede or Redirect Flood Flows, or Inundation by Seiche, Tsunami, or Mudflow- We agree that "Overall, significant impacts associated with placement of structures within a 100-year flood hazard area under Alternative 2 would be **less than** under the Proposed Project."

Chapter 6- Land Use and Planning

Overall, this section doesn't say much. In regard to comparisons of impacts between the Proposed Project and Alternative 2, it assumes equal or greater impacts from Alternative 2, especially for the impact related to conflicts with applicable land use plans, policies, regulations, or land use restrictions from construction and operations (page 6-71, lines 5-7). This is largely from water conservation, recycling and the erroneous assumption that there would be more agricultural drainage treatment facilities. If anything, Alternative 2 should be equal or lesser impacts than the Proposed Project especially when one considers that the Proposed Project will ultimately include a Peripheral Canal or Tunnel that will have very significant impacts on Delta communities from a land use perspective- turning large acreages from agriculture to the environment as well as right of way for the Chunnel and its construction footprint (which is not disclosed).

Chapter 7 - Agriculture and Forestry

(7-62/63)-Alternative 2 Conversion of Farmland to non-agricultural use- This section mischaracterizes the Environmental Water Caucus' (EWC) Alternative 2. The EWC merely recommended consideration of a feasibility study of surface storage for the Tulare Lake Basin. The EWC also did not recommend ocean desalination or an increase in the number of agricultural drainage treatment facilities. The 380,000 acres of farmland recommended for retirement by the EWC will ultimately go out of production anyway because there is no viable cost effective technology to deal with the problem of toxic drainage from the San Luis Unit of the CVP.

Additionally, the Proposed Project will also include a significant amount of farmland conversion for the footprint of the Peripheral Canal or Tunnel being proposed by BDCP, in addition to required mitigation acreage. Given that impact and the above changes to Alternative 2, Alternative 2 should have the same or less impact on conversion farmland to non-agricultural use.

We agree that Alternative 2 has less impacts on agriculture than the Proposed Project for impacts 7-2 (Zoning for Ag use or Williamson Act lands), 7-3 (Loss/conversion of forestland), 7-4 (Zoning conflicts w/forestland) and 7-5 (Other changes to farmland/forest land).

Chapter 9 - Air Quality

This section, similar to the chapter on Climate Change and Greenhouse Gas Emissions (Chapter 21), fails to identify the air quality impacts from the energy demands of reverse osmosis for

agricultural drainage treatment and pumps to move water. Given that the Proposed Action includes an isolated delta conveyance facility that will likely increase pumping to South of Delta contractors, and increase the distance to pump the water, clearly there will be significant energy impacts from the Proposed Action that are not identified.

Alternative 2 without agricultural drainage treatment facilities and ocean desalination, would clearly be less energy intensive for ongoing maintenance and operation, thereby reducing the burning of fossil fuels such as coal which cause emissions of pollutants and greenhouse gases. Alternative 2 is therefore the environmentally preferred alternative.

Chapter 10 - Cultural Resources

Overall, this chapter is severely lacking in references to the Interior Department's tribal trust obligations to the Hoopa Valley and Yurok Tribes and their federally reserved fishing rights. Those obligations are spelled out in an Interior Solicitor's Opinion from 1993 (M-36979).[63] Nowhere in the entire document are those rights and obligations mentioned, nor are the names of the two Indian Tribes who have those special rights linked to a division of the Central Valley Project, unique in California. For instance, the Bureau of Reclamation releases water from Trinity and Lewiston Dams into the Trinity River for the Hoopa Valley Tribe's White Deerskin Boat Dance on odd-numbered years sometime near the end of August. That is a cultural religious ceremony flow directly plumbed to the CVP, but is nowhere mentioned in this document. The DPEIR is deficient in not addressing the existence of these tribal rights and flows, let alone impacts to them from the various alternatives.

Overall, since Alternative 2 would allow the smallest Delta exports (no more than 3 MAF/year), it would have the least impact on the Tribal Trust/cultural resources of the Hoopa Valley and Yurok Tribes because it would leave the largest amount of water in Trinity Reservoir to meet downstream temperature and flow requirements to fulfill Interior's tribal trust obligations.

Since the document and Proposed Project do not disclose actual construction projects like the Peripheral Canal, it is impossible to disclose or evaluate impacts to cultural resources from construction activities. In general it does find significant unavoidable impacts to various cultural resources from the Proposed Project and all alternatives, but specifics are severely lacking. The Proposed Project has greater impacts on cultural resources than any of the other alternatives, which is significant. The Proposed Project is not compared to Existing Conditions, even though the other alternatives are. It is disingenuous for them to not include a general map of the proposed Chunnel sites that BDCP is considering for the proximity to known sites of significance. The DPEIR could have had a lot more detail.

(10-23)- Thresholds of significance- The DPEIR fails to mention that impacts to extant cultural and religious ceremonies of Tribes such as Winnemem Wintu, Hoopa Valley and Yurok should be considered a significant impact (puberty ceremony, white deerskin boat dance, etc.). For instance, a lack of water in Trinity Reservoir might prevent the Bureau of Reclamation from releasing water into the Trinity River for the Hoopa Valley Tribe's White Deerskin Boat Dance.

(10-25) 10.4.3.1.1 Impact 10-1a: Disturbance or Destruction of Prehistoric and Historic-Era Archaeological Resources- The DPEIR fails to identify increased reservoir drawdown from the

[63] See http://www.doi.gov/solicitor/opinions/M-36979.pdf

Proposed Project to meet "full contract deliveries" to CVP and SWP contractors. The resulting reservoir drawdown will result in increased exposure of historical resources now within the inundation areas of major reservoirs such as Shasta, Trinity and Oroville. Overall this section is a cop out, as there are known routes for the PC that are part of BDCP. The DPEIR pretends that those plans and maps don't exist through BDCP! The DPEIR could have, at a minimum, shown a potential range of locations for the Chunnel with a numerical status of potentially affected known historic or prehistoric sites in the vicinity and severity of expected impacts (how many might be totally removed/destroyed because they are in the direct path of the "facility"?).

The same logic above applies to several other impacts to cultural resource sites, historic buildings human remains, etc.- Impacts 10-1a, 10-2a, 10-3a and 10-4a.

Chapter 14- Hazards Hazardous Materials

Overall, this chapter overestimates the hazmat impacts from Alternative 2 under the incorrect assumption that the EWC alternative includes increased construction and use of ocean desalinization and agricultural drainage treatment facilities and therefore greater exposure (greater impacts) compared to the Proposed Project. Alternative 2's reduction in selenium, salt and boron production and elimination of the need for agricultural pollution treatment facilities more than offsets hazmat impacts from increased recycling and sewage treatment facilities compared to the Proposed Project. Using information from the Broadview Contract Assignment Draft Environmental Assessment (Reclamation, 2004), extrapolating the savings from retirement of 380,000 acres of drainage impaired lands in the San Luis Unit would result in the reduction of 98,800 AF/year of contaminated agricultural drainage to surface water and groundwater, including a reduction of 646,000 tons of salt, 57,000 pounds of selenium and 1.976 million pounds of boron! Clearly, Alternative 2 cleans up significant sources of surface and groundwater pollution for the Delta and San Joaquin/Tulare basins and is by far superior to any other alternative in this regard. The DPEIR does not disclose the magnitude of this improvement in hazardous material production, storage, transport and disposal, as a result of Alternative 2 because it lacks any quantitative analysis. Alternative 2 is environmentally superior for Hazards and Hazardous Materials.

This chapter also substantially fails to estimate the INCREASE in disease vectors (mosquito habitat) by delivery of more water from the Delta and increased reliability of water to south of Delta agricultural water contractors. Alternative 2 would have substantially less impact for disease vectors compared to Existing Conditions and the Proposed Project because of the permanent retirement of 380,000 acres in the San Luis Unit of the CVP and a limit on Delta exports to 3 MAF, which is less than any other alternative. (note- we may not want to mention it but increased urban water supply reliability through reinstatement of the SWP urban water preference may slightly increase mosquito habitat in urban areas served by the SWP.)

Alternative 2 is clearly the environmentally preferred alternative in regard to hazards and hazardous materials.

14.3.4- Methyl Mercury (14-4)- There should be a similar section for selenium (14.3.5), as it is a hazardous material and is mobilized into the food chain by irrigated agriculture in the WSJV, which the proposed project through BDCP will increase to "full contract deliveries" and resultant increase in selenium contamination of SJR, aquifers and SF Bay Delta Estuary. Selenium is a significant issue because Alt 2 would effectively reduce this amount to zero from agricultural lands by retiring 380,000 acres in San Luis Unit- an improvement compared to existing

conditions or the Proposed Project. The document should discuss sources of selenium and the SLDFR and GBP efforts to create selenium collection/concentration facilities and compare to Alt 2 where no agricultural selenium pollution is created due to ending irrigated agriculture on drainage problem lands.

14.4.3- Other areas in CA (14-15)- This section should include areas such as Westlands/Grasslands/San Luis Unit drainage problem/toxic lands. Ending irrigation of these lands will significantly reduce creation and need for treatment of seleniferous toxic pollution from agricultural lands and subsequent exposure to humans and environment from this hazardous material. Also Table D-1 indicates a monthly mean 15 ppb interim performance goal for selenium. Under the Clean Water Act, there are no "interim performance goals." The GBP is not meeting state or federal selenium standards. The EPA Toxics rule was adopted in 2000, not 1992 yet USEPA has yet to comply with the law. The adopted EPA standard is 5 ppb 4 day moving average. As noted elsewhere in these comments, USGS has determined the selenium criteria for the Bay-Delta needs to be revised 50x less to protect aquatic species.

(14-17)- Proposed Project – Reliable water supply 14.5.3.1- The DPEIR does not disclose the amount of agricultural drainage treatment facilities that will be constructed for the Proposed Project (which is contained in the SLDFR EIS and ROD, Reclamation, 2007), which is actually greater than Alternative 2. There will be a substantial amount of toxic drainage created by Proposed Project, especially if BDCP purpose and need to provide "full contract deliveries" is fulfilled, and therefore there is a need for treatment facilities and associated risks to exposure from hazardous selenium, as well as other harmful substances extracted in planned treatment facilities. These impacts are fully mitigated in Alternative 2 by not allowing irrigation of the 380k acres and reduced Delta exports and increased urban water supply reliability for SWP, which decreases water deliveries to toxic lands in SWP service area in Western Tulare and Kern basins.

The same comment above applies to **14.5.3.1.1 Impact 14-1a** for the proposed project **(pages 14-17 to 14-19).**

(14-20) 14.5.3.1.3 Impact 14-3a: Create Vector Habitat That Would Pose a Significant Public Health Hazard- This section fails to identify that the Proposed Project would increase impacts due to providing "full contract deliveries" to CVP and SWP agricultural contractors south of the Delta and therefore increases creation of standing water for mosquito breeding and disease vectors. Again, Alternative 2 has reduced impacts due to reinstatement of the SWP urban water preference taking water away from Ag in SWP service areas and elimination of irrigation of 380,000 acres in San Luis Unit of CVP.

(14-26) 14.5.3.3 Water Quality Improvement- This section should include descriptions of the Grasslands Bypass Project, Panoche Demonstration Selenium Treatment Plan and SLDFR treatment systems/plants in the list of projects at the bottom of 14-26/top of 14-27. This is a significant omission that results in falsely making the Proposed Project superior in impacts to Alternative 2 where there are no such treatment plants needed for selenium contamination of agricultural runoff but the document mistakenly says there are.

(14-27) 14.5.3.3.1 Impact 14-1c: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials or Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of

Hazardous Materials into the Environment- There needs to be a description of what exactly are the technologies and costs of the CV Salts program (lines 17-18) and how much hazardous materials it is expected to produce. Lines 23-24 should describe the alternative conveyance that the BDCP is expected to result in construction of (Chunnel).

(14-28) 14.5.3.3.2 Impact 14-2c: Impact 14-2a: Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code, Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment- This section makes a statement that the GBP EIS/EIR stated that there were no impacts from hazardous materials, making it appear that there are no hazardous material issues related plans to deal with toxic drainage from continued irrigation of the San Luis Unit (380,000 acres) under the Proposed Project and all alternatives other than Alternative 2. However, the GBP EIS/EIR did not include evaluation of selenium treatment facilities. The more recent Panoche Demonstration Selenium Treatment Plant Draft EA/FONSI states that 55,000 lbs. of hazardous waste annually will be created from this small demonstration project and will need to be transported to a Class 1 hazardous waste facility such as Kettleman City. It is important to note that the San Luis Drainage Feature Re-Evaluation (SLDFR) EIS and ROD (Reclamation 2007) are not even mentioned in the Delta Plan DPEIR. Furthermore, the SLDFR EIS and ROD contain no mention or analysis of hazardous materials. However, according to USGS Open File Report 2008-1210[64] the waste pile from implementing the SLDFR alternative with the existing condition of 100,000 acres of land retirement would create a selenium contaminated waste pile of 311 acres one foot deep per year. That is the equivalent of 412,000 tons a year, or 13.24 million cubic feet. Many of those wastes will contain hazardous waste concentrations of selenium (over 1,000 ug/l). Over the fifty year life of the project, it would create a pile of salts and selenium 50 feet high covering 311 acres (662 million cubic feet or 20.6 million tons of material). This is a significant amount of hazardous waste that from Existing Conditions and the Proposed Project that would not exist under Alternative 2.

(14-36) 14.5.3.6.1 Mitigation Measure 14-1- The mitigation measure to use BMP's to prevent spills, etc. would be needed more for Proposed Project than Alt. 2 because there are many less toxic substances created by cessation of irrigation of the San Luis Unit by 412,000 tons/year.

(14-45)- General description of Alternative 2- Incorrectly states more agricultural drainage treatment and ocean desalination facilities. Therefore, Alternative 2 would involve less facilities that would use or create hazardous materials than the Proposed Action.

(14-45) 14.5.7.1.1 Impact 14-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials or Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment- This discussion erroneously says that Alternative 2 has more impacts than the Proposed Project (or existing conditions). It fails to recognize that under Alternative 2, there is no need for treatment of agricultural drainage treatment facilities. Alternative 2 has less impacts than Proposed Alternative and is much less than Existing Conditions because Existing Conditions includes irrigation of 280,000 acres (380,000 acres minus 100,000 acres already retired) in San Luis Unit that aren't included in Alternative 2.

There will be less selenium, boron and salt toxic drainage created than Existing Conditions or

[64] http://pubs.usgs.gov/of/2008/1210/of2008-1210.pdf page 27-28

Proposed Action which both have less land retirement than Alt. 2.

(14-46)- 14.5.7.1.3 Impact 14-3: Create Vector Habitat That Would Pose a Significant Public Health Hazard- This section incorrectly concludes Alternative 2 would create more vector habitat than the Proposed Project or existing conditions. However, since Alternative 2 has less water going to Agriculture south of delta due to land retirement and a limit on exports to 3 MAF, there would be less vector habitat created. Again, Alternative 2 is environmentally preferred because it creates less vector habitat than existing or Proposed Action or any other alternative.

Chapter 18 - Recreation

(18-52)- Alternative 2 does not include construction of additional agricultural drainage treatment facilities or ocean desalination facilities, therefore, there would be less impacts to recreation than the Proposed Project. We agree that Alternative 2 would have less impacts to recreation than the Proposed Project in relation to impairment or degradation of recreational facilities and activities. However, because Alternative 2 would improve water quality, Delta flows and fish populations, we disagree that it would have significant impacts compared to Existing Conditions in relation to degradation of recreational facilities and activities.

(18-53)- We agree that Alternative 2 would have less impacts on physical deterioration of recreational facilities, but we disagree that it would have significant impacts compared to Existing Conditions. Improved water quality in the Delta, including improved freshwater flows would decrease salt in the Delta compared to Existing Conditions, and that alone would decrease the ongoing deterioration of Delta recreational facilities such as marinas, boats, etc.

We agree that Alternative 2 would have less impacts than the Proposed Project for construction or expansion of recreational facilities.

Chapter 22 - Cumulative Impacts

Water Resources and Biological Resources- Trinity River- The Trinity River Record of Decision, which is not mentioned anywhere in the DPEIR analysis includes, among other things, a 474,000 AF increase in Trinity River instream flows compared to Reclamation's existing Trinity River water permits that have a minimum instream flow of only 120,500 AF. Fulfillment of "full contract deliveries" per the BDCP Purpose and Need will cumulatively impact the Trinity River and cold water storage in Trinity Reservoir necessary to meet the federal fishery restoration goals for the Trinity River. See Biological Resources discussion on Trinity River for more detail and mitigation measures.

22-3- Groundwater resource impacts (lines 36-39). The document incorrectly states that impacts to groundwater resources will be less than significant for the Proposed Project because of "the likelihood of overall beneficial effects." This assumes that groundwater management plans will adequately protect groundwater resources, which is incorrect in that some plans still allow overdraft and aquifer compaction/settling.

North Coast Wild and Scenic Rivers- The cumulative impact of the Delta Plan, once BDCP is accepted into the plan, will create political pressure to un-designate California's North Coast Rivers from Wild and Scenic River protections (Trinity, Eel, Klamath and Smith rivers). The

BDCP's purpose and need to provide "full contract deliveries" to SWP and CVP customers cannot be met without diverting North Coast Rivers currently protected under Wild and Scenic designations. The State Water Project was premised on damming the Eel River and diverting it to a Peripheral Canal. The state designation of North Coast Wild and Scenic Rivers including the Eel by Governor Ronald Reagan (1972) and the federal designation by Interior Secretary Cecil Andrus in 1981 halted plans to provide millions of additional acre-feet to the CVP and SWP. As noted in the SWRCB's Bay-Delta Outflow Report, it is clear that existing Delta exports are harming the ecosystem. Increased exports through "full contract deliveries" to Delta exporters would clearly require a significant source of water not currently available, thereby creating political pressure to un-designate North Coast Wild and Scenic Rivers.

Water Resources- While the DPEIR project area includes the Trinity River and Delta tributary rivers and streams, there is no cumulative analysis of water quality or water quantity impacts to rivers/areas of origin. As stated in our comments on Chapter 3, an analysis of impacts to the Trinity River, Sacramento River and other rivers should have been completed. The ability to meet temperature and other water quality objectives as well as the ability of the various alternatives to meet prescribed flow regimes to protect Public Trust resources should have been conducted but was not.

The lack of quantifiable information on the Proposed Project's Delta outflows, instream flow regimes, water quality standards and other water resource information completely fails to disclose any cumulative impacts to water resources. Since the BDCP will include plans to increase Delta exports and construct a Peripheral Canal/Tunnel, it is logical to assume significant impacts to a variety of water resources, but this DPEIR completely fails to disclose anything. However, it is obvious that Alternative 2 would have less cumulative impacts to water resources than the Proposed Action.

There is overall no credible cumulative impact analysis for any issue area. Given the misrepresentations in Alternative 2, clearly Alternative 2 has less individual and cumulative significant impacts than the Proposed Action or any other alternative considered.

Chapter 24 - Other CEQA Considerations

There is not enough information in the DPEIR to make a reasoned analysis of other CEQA considerations. Given that there is no water availability or economic analysis in the DPEIR, it is impossible to tell what growth inducing or other impacts are likely.

Chapter 25 - Environmentally Preferred Alternative

Overall this chapter states that the Proposed Project is the environmentally preferred alternative. Alternative 2 comes in second largely because of the large amount of land retirement of drainage problem lands (380,000 acres) and the re-creation of Tulare Lake (320,000 acres). However, it is important to note that the agricultural drainage-impaired land going out of production will ultimately go out of production anyway because there is no cost effective or technologically-effective solution other than to take that land out of production. The huge impacts of salt, selenium, boron and other pollution resulting from continued irrigation of those lands until they ultimately salt up is far worse for the environmental "losses" of taking the land out of production sooner rather than later under Alternative 2.

Water Resources
We agree with the finding that Alternative 2 would have less impacts than the Proposed Project or other alternatives on water resources. While Alternative 2 would have impacts to water supply reliability for the western San Joaquin Valley from reduced Delta diversions, it would dramatically improve water supply reliability for urban areas which rely on Delta exports BECAUSE of the reduced agricultural water deliveries to poisoned lands and reinstatement of the urban preference in SWP contracts. Water quality for Delta farms would be improved. Groundwater supplies and quality north of the Delta would also be better protected under Alternative 2 than the Proposed Project because of the limitation on Delta exports that would limit north to south groundwater transfers that could negatively impact Sacramento Valley groundwater. The construction of more recycling and local water supply projects will also help mitigate negative impacts from Alternative 2's limitations on Delta exports. Alternative 2 is therefore the environmentally preferred alternative.

Biological Resources
We agree with the finding that Alternative 2 would contribute more to improving conditions for biological resources and arresting ecosystem decline than the Proposed Project, primarily because of its more rigorous pursuit of flow objectives that protect the environment and public trust resources. Furthermore, Alternative 2 would greatly improve water quality in the Delta and San Joaquin River by permanent retirement of 380,000 acres of toxic lands, a portion of which currently discharges highly toxic selenium, salt, boron and other pollutants into the San Joaquin River through the Grasslands Bypass Project. Because it limits Delta exports, Alternative 2 would also have less impacts on the Trinity River, Sacramento River and rim reservoir cold water storage for downstream fish protection.

Delta Flood Risk
We disagree that the Proposed Project would have less flood risk impacts than Alternative 2. Alternative 2 has been misrepresented in terms of providing improved levees in the Delta. Alternative should include the Environmental Water Caucus' position that all levees be upgraded to core levees above the PL 84-99 standard, in accordance with the recommendations of the Delta Protection Commission. This action is superior to the Proposed Project. If supported by the Delta Stewardship Council, this action would significantly reduce Delta earthquake and sea level rise vulnerabilities, putting Alternative 2 on a par with the Proposed Project (CEQA Guideline 15126.5, Discussion of Alternatives). Alternative 2 is therefore the environmentally preferred alternative for flood risk.

Land Use and Planning
We agree that the Proposed Project would have the greatest potential to conflict with local land use policies and plans. Since Alternative 2 would have the smallest number of projects constructed compared to any other alternatives, it is the environmentally preferred alternative for conflicts with Land Use and Planning.

Visual Resources
We disagree that Alternative 2 would have more impacts than the Proposed Project in regard to visual impacts. The DPEIR incorrectly assumes that Alternative 2 includes desalination projects and agricultural drainage treatment facilities. Since Alternative 2 does not include significant new infrastructure such as a Peripheral Canal, it should have less visual impacts. Therefore, Alternative 2 is the environmentally preferred alternative in regard to visual resources.

Air Quality
We disagree that Alternative 2 would have greater air quality impacts than the Proposed Project. The DPEIR incorrectly assumes that Alternative 2 includes desalination projects and agricultural drainage treatment facilities. Since Alternative 2 does not include significant new infrastructure such as a Peripheral Canal, it should have less air quality impacts. Reduced Delta exports would also translate directly into decreased use of fossil fuels for electrical generation to meet Delta pumping demands. Land retired under Alternative 2 could be revegetated such that dust impacts could be fully mitigated. Therefore, Alternative 2 is the environmentally preferred alternative in regard to air quality, especially after mitigation for dust from retired agricultural lands.

Cultural Resources
We agree that all alternatives other than the Proposed Project would have less impacts to cultural resources. However, Alternative 2 rises to the top as having the least cultural impacts because it reduces Delta pumping demands, which in turn reduces the following cultural impacts:

1. Reduced drawdown of CVP and SWP reservoirs, thereby reducing exposure of historical resources that are normally submerged under the reservoirs.
2. Increased water availability for cultural water flows such as the Hoopa Valley Tribe's White Deerskin Boat Dance.
3. No raising of Shasta Dam, thereby preserving remaining cultural sites of the Winnemem Tribe such as Puberty Rock.

Therefore, Alternative 2 is the environmentally preferred alternative for cultural resources.

Geology and Soils
We agree that the Proposed Project has the most construction impacts and therefore the largest impact on this resource compared to all other alternatives. Alternative 2 has the least amount of construction projects and is therefore the environmentally preferred alternative for geology and soils.

Paleontological Resources
We agree that Alternative 2 and No Action have the least impacts to paleontological resources because they have the least construction activities. Therefore, Alternative 2 is the environmentally preferred alternative for paleontological resources.

Mineral Resources
We disagree that Alternative 2 would have the same impacts on mineral resources as the Proposed Project. Alternative 2 has less construction activities and would therefore have less impacts to mineral resources than the Proposed Project. Therefore, Alternative 2 is the environmentally preferred alternative for mineral resources.

Hazards and Hazardous Materials
We disagree that Alternative 2 would have similar hazardous materials impacts as the other alternatives. Only Alternative 2 eliminates delivery of clean water to poison ground. Elimination of irrigation water to 380,000 acres of drainage impaired lands in the San Luis Unit of the CVP would reduce the creation of hazardous waste containing selenium, salt, boron and other contaminants.

We also disagree that Alternative 2 would increase vector-related hazards from construction of wetland and habitat restoration projects. To the contrary, plans to continue to irrigate 380,000 acres of land in the San Luis Unit and 320,000 acres in the Tulare Basin increases the risk of ponding water in agricultural areas that could create disease vector habitat.

The irrigation of toxic soils also poses a problem for endangered species such as the Giant garter snake and others as the selenium concentrates up the food chain.

Therefore, Alternative 2 is the environmentally preferred alternative for hazards and hazardous material resources.

Noise
We disagree that Alternative 2 would have greater impacts because of ocean desalination facilities in urban areas. Alternative 2 does not include ocean desalination facilities and has less construction than the Proposed Project. Therefore, Alternative 2 is the environmentally preferred alternative for noise.

Population and Housing
We disagree that Alternative 2 has population and housing impacts/demands similar to the other alternatives. Since Alternative 2 has less construction activities than the Proposed Project, it should have less impacts on population and housing. Therefore, Alternative 2 is the environmentally preferred alternative for population and housing.

Public Services
We agree that all alternatives have similar minimal impacts on public services.

Recreation
We agree that Alternative 2 has less impact to recreational facilities than the Proposed Action. Given the California budget mess and the fact that State Parks are closing, it is absurd for the Delta Plan to realistically think that new recreational facilities will be constructed and maintained in the Delta. Alternative 2 would improve the Delta ecosystem and fishing recreation by increased Delta outflows and improved water quality. Therefore, Alternative 2 is the environmentally preferred alternative for recreation.

Transportation, Traffic and Circulation
We agree that Alternative 2 would have less construction activities and therefore has less impacts on transportation, traffic and circulation. Therefore, Alternative 2 is the environmentally preferred alternative for transportation, traffic and circulation.

Climate Change and Greenhouse Gas Emissions
We disagree that Alternative 2 would have equal Greenhouse Gas Emissions (GHG) to the proposed project. The DPEIR erroneously assumes that Alternative 2 includes ocean desalination plants and reverse osmosis facilities to treat agricultural drainage. Since Alternative 2 should not include those 2 types of facilities, it will create less GHG's from energy generation for both pumping and other facility operation. Therefore, Alternative 2 is the environmentally preferred alternative for Climate Change and GHG.

Environmentally Preferred Alternative

An argument was previously made in these comments that the 380,000 acres of drainage impaired lands scheduled for retirement in Alternative 2 will go out of business anyway due to salt and boron buildup in the soils in comments on Chapter 2A. In all other areas, as demonstrated above, Alternative 2, as corrected, would be the environmentally preferred alternative.[i]

CONCLUSION

For all of the above mentioned reasons, this draft EIR should be withdrawn, rewritten, and recirculated consistent with these comments and the comments submitted by the Law Offices of Rossmann & Moore, the Law Offices of Stephan Volker, Lozeau Drury, Lewis Brisbois Bisgaard & Smith LLP, the South Delta Water Agency, and the Environmental Water Caucasus, as incorporated herein by reference.

Respectfully submitted February 2, 2012

s/ MICHAEL B. JACKSON

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[i] [i] References cited throughout:

Barris, Lynn 1995. Personal communication.

Butte Basin Water Users Association 2008. *2008 Butte Basin Groundwater Status Report*

Butte County DWRC June 2007. *Tuscan Aquifer Monitoring, Recharge, and Data Management Project*, Draft.

Dudley, Toccoy et al. 2005. *Seeking an Understanding of the Groundwater Aquifer Systems in the Northern Sacramento Valley: An Update.*

Fleckenstein, Jan; Anderson, Michael; Fogg, Graham; and Mount, Jeffrey 2004. *Managing Surface Water-Groundwater to Restore Fall Flows in the Cosumnes River*, Journal of Water Resources Planning and management, opening page of article.

Hoover, Karin A. 2008. *Concerns Regarding the Plan for Aquifer Performance Testing of Geologic Formations Underlying Glenn-Colusa Irrigation District, Orland Artois Water District, and Orland Unit Water Users Association Service Areas, Glenn County, California*. White Paper. California State University, Chico.

Msangi, Siwa and Howit, Richard E. 2006. *Third Party Effects and Asymmetric Externalities in Groundwater Extraction: The Case of Cherokee Strip in Butte County, California.* International Association of Agricultural Economists Conference, Gold Coast, Australia.

Northern Sacramento Valley Four County Group 2009. *Integrated Regional Water Management Regional Acceptance Process 2009 Application*.

Scalmanini, Joseph C. 1995. *VWPA Substantiation of Damages*. Memo. Luhdorff and Scalmanini Consulting Engineers.

Todenhagen, Nora 2010. Basin Management Objective Butte County Sub-Inventory Unit – CHICO URBAN AREA