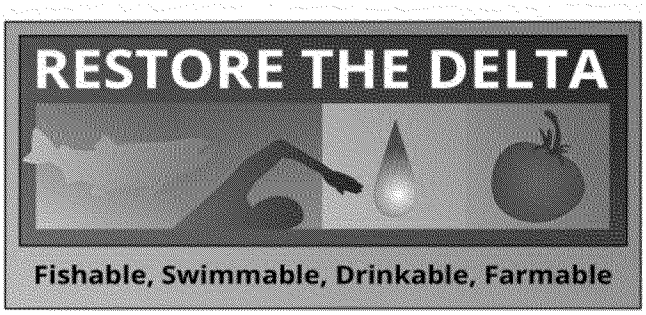

November 9, 2015

Zachary Simmons, Project Manager
US Army Corps of Engineers, Sacramento District
1325 J Street, Room 1350
Sacramento, CA 95814-2922

Subject: Restore the Delta Comments on Public Notice SPK-2008-00861

Dear Mr. Simmons:

Thank you for the opportunity to comment on the above notice concerning the Bay Delta Conservation Plan/California WaterFix Tunnels Project (Tunnels Project) application for a Clean Water Act 404 permit for dredging and filling in the Delta region.

Restore the Delta is a grassroots campaign by residents and organizations committed to restoring the Sacramento-San Joaquin Delta so that fisheries and farming can thrive there together again. We work through public education and outreach so that all Californians recognize the Sacramento-San Joaquin Bay Delta as part of California's natural heritage, deserving of restoration. We fight for a Delta with waters that are fishable, swimmable, drinkable, and farmable, able to support the health of the estuary, San Francisco Bay, and the ocean beyond. Our coalition envisions the Sacramento-San Joaquin Delta as a place where a vibrant local economy, tourism, recreation, farming, wildlife, and fisheries thrive as a result of resident efforts to protect our waterway commons.

Our comments incorporate by reference several recent comments filed in the public record on the Bay Delta Conservation Plan/California WaterFix Recirculated Draft EIR/EIS (Tunnels Project RDEIR/SDEIS).[1]

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[1] Specifically, we incorporate by reference comments submitted on October 30, 2015, by Friends of Stone Lakes National Wildlife Refuge, accessible at http://restorethedelta.org/wp-content/uploads/2015/10/FSL_RDEIRS_Cmnt_Ltr_10.30.15.pdf; Environmental Water Caucus, accessible at http://restorethedelta.org/wp-content/uploads/2015/10/EWC-Comment-Letter-FINAL-1.pdf; Friends of the River, http://restorethedelta.org/wp-content/uploads/2015/11/10-28-15-pdf-FOR-comments-BDCP.pdf; California Sportfishing Protection Alliance et al, http://restorethedelta.org/wp-content/uploads/2015/11/CSPA-et-al.WaterFixREIR-30Oct15.pdf; Earth Law Center, http://restorethedelta.org/wp-content/uploads/2015/10/ELC-Comments_BDCP-California-Water-Fix-RDEIR-SDEIS.pdf; the Environmental Justice Coalition for Water, http://restorethedelta.org/wp-content/uploads/2015/10/Delta-Tunnels-EJ-Comments.pdf; and AquAlliance, http://restorethedelta.org/wp-content/uploads/2015/11/AquAlliance CommentsWaterFixSDEIS_RDEIR_Final103015.pdf.

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restorethedelta.org/

The Tunnels Project must obtain 404 permits concerning discharge and disposal of dredged or fill material into the navigable waters of the United States. In addition, the Tunnels Project must obtain permits under the Rivers and Harbors Act Sections 10 and 14 concerning potential alterations in, under or over navigable waters, and to flood control projects and other federal engineered water ways—in the Tunnels Project case, the Sacramento and San Joaquin River flood control projects' levee systems and the Stockton Deep Water Ship Channel.

At the present time, the Corps' Notice (SPK-2008-00861, issued September 9, 2015) is silent on whether the Corps regards DWR's application as complete. Our letter herein argues firmly that it is not complete, and is at this time deficient on several points for processing.

The Corps' Notice identifies several evaluation factors, including:

- "probable impacts, including cumulative impacts, of the described activity on the public interest."
- "the national concern for both protection and utilization of important resources."
- "The benefit, which reasonably may be expected to accrue from the described activity, must be balanced against its reasonably foreseeable detriments." [2]

We understand from the Notice that public comments "will be considered by the Corps when it determines whether to issue, modify, condition, or deny a permit for this proposal." We also understand that pulbic comments "are used to assess impacts on endangered species, historic properties, water quality, general environmental effects and other public interest factors…" We urge the Corps as part of its public interest considerations of all the evaluation factors it identifies in the notice, and that the Corps consider "property ownership and, in general, the needs and welfare of the people" of the Delta.[3]

Restore the Delta objects strenuously to the Tunnels Project application submitted by the California Department of Water Resources (the Applicant) receiving a 404 permit. In order to obtain a 404 permit, as we pointed out earlier in these comments, the project in its entirety must receive a 401 water quality certification from the State Water Resources Control Board. We argue from modeling results in the RDEIR/SDEIS that the Tunnels Project will degrade Delta water ways with a variety of pollutants, reduce fresh water flows further than they already have been through the western and central Delta, increase residence times, increase the overall share of polluted water in the Delta, and violate existing water quality objectives and criteria for still other pollutants. Migratory and rare and endangered fish beneficial uses, as well as estuarine habitat beneficial uses will be degraded as a result, a further violation of the federal Clean Water Act. ***We believe it would be arbitrary and capricious—an abuse of agency discretion—for the State Water Board to issue a 401 certification for the Tunnels Project.***

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[2] US Army Corps of Engineers, *Notice SPK-2008-00861, California WaterFIx Project*, posted September 9, 2015, Sacramento District, "Evaluation Factors." Accessible at http://www.spk.usace.army.milMedia/RegulatoryPublicNotices/tabid/1035/Article/616568/spk-2008-00861-california-waterfix-project.aspx.

[3] *Ibid.*

But should the Board make that determination anyway, we feel compelled to object to issuance of the 404 permit on other grounds. This letter provides the Corps with Restore the Delta's views on the completeness and merits of the application described in the Notice, and comments on Corps' evaluation factors that the Tunnels Project consistently fails to fulfill. The topics we cover include:

- Project objectives, purposes and needs.
- Clean Water Act violations.
- Deficiency of the RDEIR/SDEIS and the application for Corps permit processing.
- Deficiency of the application for establishing and sustaining wetlands delineations.
- Deficiency of the RDEIR/SDEIS and the application with respect to environmental justice legal standards.
- Deficiency of the RDEIR/SDEIS and the application for lacking critical baseline data.

Project Objectives, Purposes and Needs

The Tunnels Project application locates its purposes in the Delta Reform Act of 2009, but does so without fully disclosing the policy framework it contains and how that framework should be applied to the Tunnels Project. The Act, like all legislation, should be read and interpreted as a unitary whole, not cherry-picked to benefit the Tunnels Project application at the expense of other essential water policy considerations.

The Tunnels Project's framework for policy evaluation must be broadened. To Tunnels Project proponents, the reasonable range of alternatives consists of variations among engineering solutions to the problems of how to stabilize reliable exports (defined to maximize contractual amounts from annual allocations) from the Delta and improve the quality of those water exports at the same time. This is far too narrow a definition and helps account for why Californians turned against the Peripheral Canal in 1982, and why they should reject the Tunnels Project now.

The state faces a policy crossroads, of which the narrower engineering solution of the Tunnels Project must be seen as just one part. The policy problems were defined and addressed directly by key policies of the Delta Reform Act of 2009: protecting, enhancing, and restoring the Delta's ecosystem, economy, and value as a unique place in California; improving water supply reliability generally; and reducing reliance on the Delta as part of achieving such goals. The RDEIR/SDEIS fails to demonstrate California's need for the Tunnels Project in the grand sweep of this policy framework.

To achieve reliable water supplies for the Tunnels Project, both supply and demand should be balanced at some level that does not prejudice or undermine California's water policy framework. The failure of the umpteen alternatives (of the Draft EIR/EIS last year and the RDEIR/SDEIS this year) is that they assume that the need for water from the Delta is accurately and reasonably represented by state and federal water contract amounts. The Tunnels Project proponents fail to demonstrate the reasonableness of this assumption. We have previously called

into question the contracts for and uses of water.[4] Last year, we presented analysis of many urban water agencies in southern California that are increasingly investing in local and regional self-sufficiency of their water supplies, becoming more efficient users of water through re-use, recycling, stormwater capture, groundwater remediation, and other means.[5]

The Environmental Water Caucus presented clear alternatives for achieving water supply reliability and Delta ecosystem restoration (Responsible Exports Plan, 2015 Sustainable Water for California Plan[6]) but its alternative was not considered in the Draft EIS/EIR, nor is it considered in the RDEIR/SDEIS. The EWC alternatives rely on strict enforcement of water quality laws, adoption of the State Water Resources Control Board and Fish and Game (now Wildlife) flow and biological recommendations, shoring up existing levees, ceasing unreasonable use of water to irrigate toxic soils (primarily in the western San Joaquin Valley) that return pollution to the estuary, while also providing for modest Delta export water supply with statewide water conservation, efficiency, and recycling measures to ensure existing supplies are extended to meet demand.

The Tunnels Project is contrary to the Delta Reform Act. Tunnels Project proponents continue to construe their responsibilities under the Delta Reform Act of 2009 far too narrowly. That analysis focuses almost entirely on Water Code Section 85320, which sets out special findings the California Department of Fish and Wildlife must make, and briefly describes an appeal process to the Delta Stewardship Council.[7] There are numerous other sections with which the Tunnels Project must also comply, and which are ignored in the limited policy analysis provided in the RDEIR/SDEIS.

A new section in "Project Objectives" introduces a Tunnels Project talking point as an objective: "Improve the ecosystem of the Delta by reducing the adverse effects to certain listed species of diverting water by siting additional intakes of the SWP and coordinated operations with the CVP."[8] The objective alleges as fact something that is demonstrably false using RDEIR/SDEIS modeling results and information: Adding north Delta intakes on the lower Sacramento River

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[4] For example, Environmental Water Caucus, *Response Letter to the US Bureau of Reclamation for the Shasta Lake Water Resources Investigation DEIS*, September 30, 2013, pp. 6-8. Accessible at http://ewccalifornia.org/reports/shastadeiscomments.pdf.

[5] EWC Comments, June 11, 2014, pp. 104-105.

[6] EWC's Responsible Exports Plan accessible at http://ewccalifornia.org/reports/responsibleexportsplanmay2013.pdf. and our Sustainable Water Plan for California, accessible at http://ewccalifornia.org/reports/ewcwaterplan9-1-2015.pdf. The latter plan is attached to this letter.

[7] This narrow treatment is exemplified in EIR/EIS, Appendix 3A, *Identification of Water Conveyance Alternatives, Conservation Measure 1*, Table 3A-15, p. 3A-149. It erroneously assumes that hydrologic conditions, flow criteria, diversion rates, and conveyance designs are the universe of appropriate selection criteria for "a reasonable range of alternatives" for BDCP.

[8] RDEIR/SDEIS, Section 1.1.4.1, *Project Objectives*, p. 1-8, lines 32-33.

increases the number of places where adverse impacts of State Water Project diversions will occur, such as reduced critical aquatic habitat, and increased pollutant loads and concentrations, contrary to state and federal endangered species acts and the Delta Reform Act of 2009.

The Act declares that "the Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable." [9]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.[10] Populations of many ecologically and commercially important species (which are also public trust resources) declined substantially over the past 15 years. These declines are related, among other factors, to increased diversions of water since 1985.

Under the Act, departments of the State of California have the duty to protect public trust resources in the Delta. This includes the California Department of Water Resources.[11] The Act's "coequal goals" have a holistic purpose beyond water and ecology:

> "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.[12]

The Act states that the public trust doctrine is at the heart of achieving these two coequal goals: "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." [13]Objectives in the Act also inhere in and flesh out what the coequal goals mean and how water supply reliability is to be understood:

> The policy of the State of California is to achieve the following objectives that the Act 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.

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[9] Wat. Code § 85001 subd. (a).

[10] Wat. Code § 85002.

[11] California Water Code Sections 85210 and 85023.

[12] California Water Code Section 85054.

[13] California Water Code Section 85023.

> (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.[14]

To implement objectives to restore Delta ecosystems and promote statewide water conservation, water use efficiency, and sustainable water use inhering in the coequal goals[15], the Act calls for reduced reliance on the Delta for the state's future water supply needs:

> The policy of the State of California is to ***reduce reliance on the Delta in meeting California's future water supply needs*** through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.[16]

The Act finds and declares that the coequal goal of "water supply reliability" in the Act "involves implementation of water use efficiency and conservation projects, wastewater reclamation projects, desalination, and new and improved infrastructure…." [17] The inherent objective, to which the Tunnels Project proponents refer often to "[i]mprove the water conveyance system" in Water Code § 85020 subd. (f) therefore must conform to achieving the coequal goals, including all of the considerations that the Act says inhere in those goals as well as meet the defining declarations of the Act.[18]

When the Act's objectives ("inherent in the coequal goals") and policy declarations for the state and the Delta are taken as a whole (which is how legislation should be read and interpreted), it is evident the Act intends active protection of the Delta's water, cultural, and environmental resources—cumulatively, they are about *stewardship*. To steward, according to the *American Heritage Dictionary of the English Language*, is to manage, guide, administer, or supervise, often in the care of real property, passengers on a ship or airliner. More recent meanings of "steward" connote care for the landscape and the environment. The plain meaning of "stewardship" provided by the Act "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

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[14] California Water Code Section 85020.

[15] California Water Code Sections 85020 subds. (c-d).

[16] California Water Code Section 85021.

[17] California Water Code Sections 85054, 85004 subd. (b).

[18] *Ibid.*

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." [19]

While the Tunnels Project aspires to "fundamental, systemic change" for the Delta, it takes no responsibility for and even evinces open hostility to statewide water policy goals that intend that the Delta be protected and sustainably managed as "the most valuable estuary resource" on the west coast of North America. The Tunnels Project severs the coequal goals of the Delta Reform Act and to concentrate state agency effort on water supply reliability at the expense of ecosystem enhancement in the Delta.

Merely achieving prevention of "jeopardy" for listed fish species under a new Section 7 biological opinion will not protect and enhance the Delta ecosystem. Jeopardy will be difficult enough to avoid since one purpose of the Tunnels project is

> restor[ing] and protect[ing] the ability of the SWP and CVP to deliver up to full contract amounts, when hydrologic conditions result in the availability of sufficient water, consistent with the requirements of state and federal law and the terms and conditions of water delivery contracts held by SWP contractors and certain members of San Luis Delta Mendota Water Authority and other existing applicable agreements." [20]

While the RDEIR/SDEIS protests that this purpose of meeting contractual amounts is "not a target," and "not intended to imply that increased quantities of water will be delivered" by the Tunnels Project, this purpose is directly contrary to the Delta Reform Act's mandate for water importers to reduce their reliance on Delta supplies. [21]

Last year's Draft EIR/EIS failed to properly consider what it will take to recover Delta ecosystems and restore fisheries. California Water Code Section 85320 lays out a process through which BDCP would go before the California Department of Fish and Wildlife prior to receiving approval of its natural communities conservation plan and incidental take permit application package and issuance of incidental take permits. Section 85320(b)(2) lists among the special findings CDFW must make:

> (A) *A reasonable range of flow criteria, rates of diversion, and other operational criteria*required to satisfy the criteria for approval of a natural community conservation plan as provided in subdivision (a) of Section 2820 of the Fish and Game Code, *and other operational requirements and flows necessary for recovering the Delta ecosystem and restoring fisheries under a reasonable range of hydrologic conditions, which will identify the remaining water available for export and other beneficial uses.*[22]

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[19] California Water Code Section 85001 subd. (c).

[20] RDEIR/SDEIS, Section 1.1.4.2, *Purpose and Need*, p. 1-9, lines 33-37.

[21] California Water Code Section 85021.

[22] Emphasis added.

The Tunnels Project is no longer eligible for this special process in the Delta Reform Act. It will instead be handled as a covered action by the Delta Stewardship Council, which will evaluate its consistence with the Delta Plan. We believe this will be hard for the Council, since the Delta Plan is currently in litigation over whether the Delta Plan itself complies with the Act. It will also be challenging to determine whether a covered action such as the Tunnels Project could truly be found consistent with the Delta Plan without having to revise the Plan first.

Last year's Draft EIR/EIS failed to properly comply with the Act's co-equal goals. The "co-equal goals" are defined as:

> 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.[23]

The Tunnels Project thoroughly unbalances application of the co-equal goals of the Delta Reform Act. It fails to "improve the water conveyance system," as required by Water Code Sections 85020(f). While this section of the Act does not set forth criteria by which "improvements" to the conveyance system of the Delta are to be judged, the Tunnels Project fails to protect, restore and enhance the Delta ecosystem; as we have already pointed out in these comments, it will actively reduce critical habitat for listed fish species, and it will degrade water quality conditions resulting in violations of pollutant criteria or degradations to sensitive beneficial uses of the Bay Delta Estuary. Thus, it cannot be found to "improve the water conveyance system" over what exists in the Delta now or at the future time without the project in the RDEIR/SDEIS's No Action Alternative, since "improvement" must be evaluated under the coequal goals framework of the Act.

The Tunnels Project also fails to comply with WC Section 85020(g) because it does not consider any Delta levee improvements in its project purpose/objectives.[24] The RDEIR/SDEIS only considers the Tunnels Project as a means of reducing future impacts to water deliveries from sea level rise and seismic or other levee failure. It does not consider Delta levee improvements as a means of reducing flood risk not only to water conveyance, but also to the people, places and infrastructure of the Delta.

Omission of Delta levee improvements flies in the face of the Delta Protection Commission's *Economic Sustainability Plan* that states that levees can be brought up to PL 84-99 standard to reduce the probability of catastrophic levee failure for $2 to $4 billion. To be consistent with

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[23] California Water Code Section 85054.

[24] Water Code Section 85020(g) states: "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: ...(g) Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and investments in flood protection."

Water Code Section 85020(g), BDCP would have to include a goal (and implementing conservation measures and funding assurances) to improve critical Delta levees for both ecosystem restoration and water supply reliability.

Last year's Draft EIR/EIS failed to comply with Water Code Section 85021. It is state policy to reduce reliance on diversions from the Delta (Water Code Section 85021). However, the project objectives and purpose call for "full contract deliveries" to CVP and SWP contractors. According to USEPA[25], that volume of water is 7.43 million acre-feet, nearly a million acre-feet more than the maximum amount of water ever diverted from the Delta in a single year. This BDCP outcome would increase, not reduce, reliance on the Delta for imported water. While the federal purpose clarifies that alternatives providing less than full contract deliveries is acceptable, the objective/purpose to work toward meeting full CVP and SWP contract deliveries is clearly an attempt to increase Delta diversions, not reduce them. This fundamental flaw continues in the RDEIR/SDEIS.

It should also be noted that in drought years, the Bureau and DWR habitually petition the State Water Resources Control Board to have Delta water quality standards waived on vague grounds of protecting "health and safety" for their contractors. The Board has yet to refuse these requests, in defiance of legal due process of all other interested parties, and there is no reason to think that the operational criteria modeled in the Draft EIR/EIS and for the RDEIR/SDEIS[26] would change this propensity to request temporary urgency changes that the Board grants with impunity. In any event, BDCP modeling and expected reliance on "real-time operations" will continue and expand reliance on the Delta for exports.

By definition of the project's purpose, need, and design of each of the alternatives, the Tunnels Project violates California Water Code Section 85021, which requires reduced reliance on the Delta for future water supplies among those already depending on Delta imports. The project's operational goals focus on increasing reliance on the Delta for North Delta Intake diversions during wet and above normal years, while continuing emphasis on South Delta diversions for export in all other water years.[27] Moreover, the Tunnels Project's unacknowledged purpose of increasing the reliability of market-based cross-Delta water transfers is also contrary to Water Code Section 85021.

Tunnels Project proponents fail to demonstrate in the RDEIR/SDEIS what they have done locally and regionally to decrease their reliance on Delta imports/exports and to justify each of their needs for the Tunnels Project.

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[25] See June 2010 letter from USEPA to USBR, NMFS and USFWS. Accessed at http://www.c-win.org/webfm_send/150

[26] RDEIR/SDEIS, Section 4.1, Table 4.1.1-2.

[27] Bay Delta Conservation Plan EIR/EIS, Chapter 5, Water Supply, Figures 5-22 (wet years) and 5-23 (dry years).

The Tunnels Project proponents' obsessive focus on full contract deliveries and north Delta diversions to the Tunnels Project come at exclusion of other potential actions. The coequal goals of the 2009 Delta Reform Act can be met by other activities less disruptive to the Delta such as levee improvements, increased Delta outflows and 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. But no such actions are analyzed as reasonable alternatives in the RDEIR/SDEIS.

The Tunnels Project RDEIR/SDEIS fails to specify how the preferred alternative would comply with Water Code Section 85086(c)(2) of the Delta Reform Act. This section requires the State Water Resources Control Board to include "appropriate flow criteria" in its order on the Tunnels Project's change petition. These criteria "shall be informed by the analysis conducted pursuant to [Water Code Section 85086(c)(1)]"—meaning the Board's *Delta Flow Criteria* report of August 2010. The RDEIR/SDEIS also fails to mention and analyze the need to incorporate continued compliance with this requirement over time through an adaptive management-based program integrating science and monitoring results into ongoing Delta water management.

The RDEIR/SDEIS fails to demonstrate how the Tunnels Project complies with the Reasonable Use and Public Trust Doctrines, mentioned in Water Code Section 85023, which states that these doctrines are "particularly important and applicable in the Delta." The EWC has located no analysis in theRDEIR/SDEIS that evaluate the proposed/preferred alternative from the standpoint of its compliance with Article X, Section 2 of the California Constitution, or of its compliance with the Public Trust doctrine. Evaluation of this action is required by Water Code Section 85023 (which merely states existing law applicable throughout California) to demonstrate this compliance.

The RDEIR/SDEIS fails to demonstrate compliance with Water Code Section 85031(a), specifically area of origin laws and doctrines that apply to the Delta. This section of the California Water Code requires that actions contemplated under the Delta Reform Act comply with area of origins water rights statutes. The RDEIR/SDEIS fails to demonstrate through its modeling results ior any other analysis that it complies with Water Code Sections 12200-12205 (the Delta Protection Act of 1959). Delta outflow is reported by the RDEIR/SDEIS to decrease while residence times of water in the Delta increase. In-Delta salinity levels are projected by the RDEIR/SDEIS to increase which will reduce the quality of water for in-Delta agricultural uses for irrigation and the beneficial uses enjoyed by environmental justice communities whose members rely on subsistence fishing in the Delta for a significant portion of their diet and nutrition. Interior Suisun Marsh salinity is expected to increase substantially from Tunnels operation, according to data in the RDEIR/SDEIS (Figure 12, this document). Reverse flows on the lower Sacramento River will increase, which may injure neighboring water right holders and put vulnerable listed and other fish at risk of entrainment and death at the north Delta intakes. Numerous water quality pollutant criteria and beneficial uses will be violated and degraded. And subsistence fishers may be harmed by worsening mercury and selenium concentrations contaminating fish tissues in the long term, resulting from Tunnels operations. ***The RDEIR/SDEIS has conducted no analysis of in-Delta water demand and subsistence fishing patterns***

represented by these beneficial uses when it conducts its operational studies of the Tunnels Project. These uses are protected by, among other statutes, the Delta Protection Act of 1959.

In addition, the RDEIR/SDEIS fails to identify the role of the ***Delta common pool*** in shaping the experiences of environmental justice communities and the informal ways in which they make use of Delta habitat, fish, and other resources for their subsistence and recreation. They are beneficial users of water via the common pool and its public trust resources. The California Department of Water Resources recognizes the Delta common pool for purposes of analyzing and regulating water transfers.[28]

The EWC described the relevance of the 1959 Delta Protection Act to the water policy framework that governs projects like the Tunnels Project.[29] We further linked Delta Protection Act concerns to environmental justice (see below) by virtue of the fact that the Act treats protection of Delta "users" which includes, in our view, not just lawful water diverters residing in the Delta, but all beneficial users of water, human and non-human.

Need for the Tunnels Project must also be analyzed directly against water conservation potential and other reliable supply sources. This year, Californians have responded to a fourth year of drought by surpassing water conservation goals established by Governor Brown for the third straight month this summer. "For June, July, and August the cumulative statewide savings rate was 28.7 percent," the State Water Resources Control Board said in an October 2015 press release. "That equates to 611,566 acre-feet of water saved—51 percent of the overall goal of saving 1.2 million acre-feet from June 2015 to February 2016," as the governor had sought in his April 1 executive order. While this is a statewide figure, many of the largest conserving jurisdictions were located within the hydrologic regions where major state and federal water contractors have seen substantial decreases in residential water use.[30] Making water conservation a way of life will be increasingly important as drought recurs throughout California under rising greenhouse gas emissions and climate change conditions. None of this is disclosed or analyzed in determining the need for the Tunnels Project.

The need for the Tunnels Project is poorly specified. A new paragraph in the Objective section of the RDEIR/SDEIS states that:

> The ecological health of the Delta continues to be at risk, the conflicts between species protection and Delta water exports have become more pronounced, as amply evidenced by the continuing court

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[28] California Department of Water Resources, *op. cit.*, footnote 27, above, p. 3.

[29] EWC Comment Letter, June 11, 2014, pp. 124-125.

[30] While statewide average residential gallons per capita per day (R-GPCD) for August 2015 rose slightly from July (102 versus 98 R-GPCD), it was 17 percent lower than August 2014, San Joaquin River basin R-GPCD has fallen from 173.9 to 135.0 R-GPCD this August over last, a 22 percent decline; Tulare Lake basin's fell from 189.9 to 164.2 R-GPCD, a 13 percent decrease; and South Coast basin levels fell from 112.7 to 94.8 R-GPCD, a decline of nearly 16 percent, according to State Water Board conservation reporting data. Accessible at http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/fs100115_conservation.pdf.

> decisions regarding the intersection of the ESA, the CESA, and the operations criteria of the SWP and the CVP. Other factors, such as the continuing subsidence of lands within the Delta, increasing seismic risks and levee failures, and sea level rise associated with climate change, serve to further exacerbate these conflicts. Simply put, the overall system as it is currently designed and operated does not appear to be sustainable from an environmental perspective, *and so a proposal to implement a fundamental, systemic change to the current system is necessary.* This change is necessary if California 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.' (California Public Resources Code Section 29702 subd.[a]).[31]

This passage uses lawsuit defeats for DWR and the Bureau combined with climate change, earthquake risk, sea level rise, and worsening conditions for Delta exports south of the Delta to justify "systemic change" apparently in the form of the Tunnels Project. While arguing for "fundamental, systemic change" to achieve the two coequal goals of the Delta Reform Act, the Tunnels Project ("the change" offered) would do nothing of the sort. ***The Tunnels Project is simply a water grab, intended to boost "water supply reliability" and water quality for south of Delta exports and no other user or the environment.*** The Tunnels Project proponents engage in a truncated misreading of the Delta Reform Act and its coequal goals. But the Delta Reform Act has a far broader, more encompassing policy framework with which the Tunnels Project falls far short of consistency.

The Bay-Delta Estuary is an over-appropriated common pool plagued by California's abject failure to rein in water rights and contractual commitments that exceed the capacity of Central Valley watershed to supply them. The Tunnels Project includes no adjustments to contractual service area commitments of either the State Water Project or the Central Valley Project in order to align supply with demand and prevent jeopardy to listed Delta fish species and enhance Delta ecosystems for the long term. No analysis of need and alternative sources of supply for south of Delta water contractors is provided in the RDEIR/SDEIS to demonstrate and justify need for the proposed Tunnels Project. This is contrary to CEQA and NEPA and defeats the purpose of full disclosure documents to reveal why a project is truly needed beyond the usual DWR, Bureau and contractor talking points concerning their own "water supply reliability," their own "improved water quality," and supposed "ecosystem health and productivity benefits" of additional huge diversion and rediversion points.

The failure to adequately define and quantify "increased water supply reliability" renders these documents legally inadequate and DWR's application to the Corps deficient. The RDEIR/SDEIS fails to inform the public and decision-makers about adverse consequences of the Tunnels Project. Absent a thorough documentation of the purpose and need for the Tunnels Project with respect to water supply reliability including reasonable alternative sources of supply for state and federal water contractors, decision makers cannot understand what type and level of reliability might be achieved and by what means. ***The National Environmental Policy Act and the California Environmental Quality Act are both violated as a result.***

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[31] RDEIR/SDEIS, Section 1.1.4, *Project Objectives and Purpose and Need*, p. 1-7, lines 31-35, and p. 1-8, lines 1-6. Emphasis added.

Cross-Delta Water Transfers inhere in the Tunnels Project purpose, but are ignored in the RDEIR/SDEIS statements of Objective, Purpose and Need. Last year, we commented that the Tunnels Project will function to increase the Central Valley Project and State Water Project's ability to arrange and facilitate cross-Delta water market transfers in drier and drought years. The RDEIR/SDEIS argues that the Project will increase the reliability of contractual deliveries relative to the present time.[32] This finding is at best arguable since climate change may neutralize gains in contractual reliability with reductions in precipitation, snowpack and runoff that otherwise would support such a finding. However, the Tunnels Project proponents view the Project as a hedge against climate change impacts on contractual allocation deliveries.

The RDEIR/SDEIS attempts to provide some perspective given the different CEQA and NEPA baselines, but appears to suffer from poor, confused editing. As we understand the concept, the Tunnels Project would increase overall reliability of contractual deliveries relative to current conditions and relative to the No Action Alternative (the future condition without the Tunnels Project in place). To accomplish this, it would increase overall conveyance capacity crossing the Delta (due to its vaunted opportunities for flexible dual diversion operations), which in the view of Tunnels Project proponents, is presently a limiting factor on consummating water transfers (understood regardless of their contractual or market basis).[33] Contrary to the NEPA conclusion of the RDEIR/SDEIS for Alternative 4A, Alternative 4A would still *increase* (not decrease, as is stated therein, which does not make sense, since what are the Tunnels but additional conveyance capacity?) conveyance capacity overall, enabling cross-Delta water transfers that could lead to increases in Delta exports when compared to the No Action Alternative.

The CEQA conclusion appears logically stated to us (though we disagree with its objective):

> Alternative 4A would increase water transfer demand compared to existing conditions. Alternative 4A would increase conveyance capacity, enabling additional cross-Delta water transfers that could lead to increases in Delta exports when compared to existing conditions.[34]

These conclusions make clear that increased conveyance capacity boosts not just contractual water supply reliability, but also market-based water supply reliability, the latter of which is not disclosed in the RDEIR/SDEIS's statement of objectives, purpose and need in Section 1.

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[32] RDEIR/SDEIS, Section 4.3.1, p. 4.3.1-9, lines 9-11 for Alternative 4A. This reasoning is also applied to Alternative 2D at Section 4.4.1, p. 4.4.1-9, lines 20-33; and to Alternative 5A at Section 4.5.1, p. 4.5.1-9, lines 20-33.

[33] The RDEIR/SDEIS does a poor job of clarifying the difference between contractual allocation-based water transfers across the Delta - the normal, preferred course of exportation from the Delta - and market-based, extra-contractual acquisitions of temporary supplies of water that are moved across the Delta primarily when project allocations reach as low as 50 percent for the SWP and 40 percent for the CVP. See EWC's comments on water transfers in EWC Comment Letter, June 11, 2014, pp. 192-200.

[34] RDEIR/SDEIS, Section 4.3.1, p. 4.3.1-9, lines 34-36.

Plus , the very existence of the water transfer market is due to this lack of water available to fulfill SWP and CVP water right claims, and the contractual demands of their south of Delta customer agencies. The Tunnels Project is intended to facilitate ***both*** more reliable contractual deliveries ***and*** a water transfer market that moves senior water right holders' supplies through the Delta for compensation. The Tunnels Project assumes that contractual allocations are the Delta's primary purpose, but this improperly places market-based water transfers in the background and causes the RDEIR/SDEIS to fail as a full disclosure document under CEQA and NEPA. In both cases, water is conveyed under the Delta through the Tunnels. The only question in the long-term with a Tunnels Project in place (from the standpoint of objectives, purpose and need) is when the water moves—under contract terms, or under market-based terms?

The purpose of the Tunnels' water transfer role is to gain access to north of Delta exported supplies for south of Delta importers in the State and Federal water project service areas. The RDEIR/SDEIS also fails to evaluate the water transfer purposes of the Tunnels Project with respect to the source(s) of market-based transfer water. Last year, we commented that BDCP Draft EIR/EIS claimed that the Sacramento Valley is the main source of supplies for the water transfer market and that it is "full" in most areas and many years.[35] We noted too that groundwater substitution water sales would be likely to increase in a future with the Tunnels Project in place, which we further argued, would likely be catastrophic for the Sacramento Valley's comparatively healthy connection of groundwater resources to extant rivers, streams and sloughs there. In remarks to the Delta Stewardship Council on September 24, 2015, State Water Resources Control Board Executive Director Tom Howard said of groundwater substitution water transfers:

> I think we need to do some work on this issue. I have a hard time understanding quite how the stream depletion factors [applied by DWR and the Bureau of Reclamation to water transfer proposals] were established and I think there is ongoing work associated with them. Right now there's a streamflow depletion factor of 12 to 13%. I keep advising people to read USGS Publication Number 1376 as the basic thesis of that USGS publication is that groundwater pumping is just another way to divert surface water. It's just another method of diversion of surface water that essentially, except in very

[35] Draft EIR/EIS, November 2013, Chapter 7, p. 7-13, line 10-16. "Applied annual agricultural water irrigation totals approximately 7.7 MAF in the Sacramento Valley Groundwater Basin [citation]. A portion of this applied water, and the remaining 13.9 MAF of runoff, is potentially available to recharge the basin and replenish groundwater storage depleted by groundwater pumping. *Therefore, except during drought, the Sacramento Valley groundwater basin is 'full,' and groundwater levels recover to pre-irrigation season levels each spring.* Historical groundwater level hydrographs suggest that even after extended droughts, groundwater levels in this basin recovered to pre-drought levels within 1 or 2 years following the return of normal rainfall quantities." Emphasis added.

limited circumstances, any groundwater pumping eventually becomes a depletion upon the nearest surface water body.[36]

The RDEIR/SDEIS continues to ignore water transfers as a crucial purpose of the Tunnels Project. They fail to describe it as a purpose in violation of CEQA and NEPA. In sum, the project would increase reliance on the Delta in flagrant defiance of the Delta Reform Act, and fails utterly to justify why the Tunnels Project is needed, a violation of NEPA and CEQA.

Clean Water Act Violations

Water quality is an imporant evaluation factor in the Corps' review of DWR's Tunnels Project application. ***The Tunnels Project will violate water quality standards for flow and other parameters, preventing necessary Clean Water Act Section 401 certification.*** The California Department of Water Resources and the United States Bureau of Reclamation filed an application for a CWA Section 404 dredge and fill permit with the US Army Corps of Engineers on August 24, 2015, and they filed an application for a 401 certification on September 23, 2015 with the State Water Resources Control Board (SWRCB).[37] The 404 permit will be needed from the Army Corps of Engineers because construction of the Tunnels Project will result in discharges of dredge or fill material into waters of the United States.[38] Section 401 requires that the SWRCB certify that the Corps' Section 404 permit meets CWA requirements before the permit may be legally issued.[39] State and federal agencies have long recognized the importance of this

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[36] *Maven's Notebook*, "Water Transfers and the Delta Plan, part 2: The agency view," October 13, 2015, accessible online at http://mavensnotebook.com/2015/10/13/water-transfers-and-the-delta-plan-part-2-the-agency-view/. Emphasis added. See also Paul M. Barlow and Stanley A. Leake, *Streamflow Depletion by Wells—Understanding and Managing the Effects of Groundwater Pumping on Streamflow*, U.S. Geological Survey Circular 1376, 84 p. (Also available at http://pubs.usgs.gov/circ/1376/.

[37] Accessed September 15, 2015, at http://www.spk.usace.army.mil/Media/RegulatoryPublicNotices/tabid/1035/Article/616568/spk-2008-00861-california-waterfix-project.aspx.

[38] "Many of the actions that will be implemented under the Tunnels Project will result in the discharge of dredged or fill materials into waters of the United States and will need to be authorized by USACE."Public Draft Plan § 1.3.7.1 (Nov. 2013), available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_1_-_Introduction.sflb.ashx. This is no less true of intake construction of the "California WaterFix" version (Alternative 4A) of the Tunnels Project.

[39] "No license or permit shall be granted until the certification required by this section has been obtained or has been waived as provided in the preceding sentence. No license or permit shall be granted if certification has been denied by the State, interstate agency, or theAdministrator, as the case may be." 33 U.S.C. § 1341(a)(1).

requirement, meeting several times to discuss it in the context of the preparation of the Tunnels Project EIR/EIS.[40]

In the Administrative Draft of the Bay Delta Conservation Plan issued in March 2013, the conservation strategy announced: "*The BDCP will fundamentally alter the hydrodynamics of the Delta.*" [41] This sentence has since been toned down to read, "The BDCP will modify the hydrodynamics (i.e., tidal flows) in the Delta channels," but the original formulation is truer.[42] Overall, says BDCP, east to west flows will increase; the frequency and magnitude of reverse flows in Old and Middle River will decrease because of reduced south Delta pumping in most water year types. In the north Delta, flow patterns will "change" from increased diversions to Yolo Bypass with the proposed modifications to Fremont Weir. BDCP states:

> These changes in flow patterns in the north Delta present ecosystem-level tradeoffs between habitat in the Yolo Bypass and the Sacramento River during the winter-spring migration period, resulting in both positive and negative effects on the migration and passage of fish through and within the Delta...[43]

This year, the Tunnels Project, freed from habitat and ecosystem restoration encumbrances, is touted to accomplish what BDCP apparently could not:

> The ecological problems with the current system could be greatly reduced by the construction and use of new north Delta intake structures with state-of-the-art fish screens.[44]
>
> Although Alternatives 4A, 2D, and 5A comprise only the conveyance facilities and operations that formerly constituted [Conservation Measure 1] under BDCP alternatives, and no longer include habitat restoration beyond what is needed to provide full mitigation under CEQA and NEPA, habitat restoration is still recognized as a critical component of the state's long-term plans for the Delta.

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[40] As reflected by U.S. EPA in its comments on these discussions: "[a]lthough there is no statutory requirement that the NEPA document prepared for an HCP under the Endangered Species Act be used as the basis for permits and certifications required under CWA §404 to authorize and implement the project, EPA recognizes the importance of coordination in federal review. Toward this end, EPA and the Corps have met with the project proponent on numerous occasions over the past several years in the interest of using the BDCP EIS/EIR to inform the Corps' 404 regulatory decisions. Despite these efforts, significant unresolved issues remain about the scope of analysis for the proposed project, the level of detail required to trigger the consultation process and federal permitting, and the structure of a comprehensive permitting framework for the proposed project." U.S. EPA, "EPA's Comments on BDCP ADEIS," p. 6 (July 03, 2013), available at: www2.epa.gov/sites/production/files/documents/july3-2013-epa-comments-bdcp-adeis.pdf.

[41] Administrative Draft of the Bay Delta Conservation Plan, March 2013, Chapter 5, *Effects Analysis*, p. 5.3-2, line 23. Emphasis added.

[42] Bay Delta Conservation Plan, November 2013, Chapter 5, *Effects Analysis*, p. 5.3-2, line 23.

[43] *Ibid.*, p. 5.3-2, lines 34-37.

[44] RDEIR/SDEIS, Executive Summary, p. ES-2, lines 1-2.

> Habitat restoration in the Delta beyond these alternatives' mitigation requirements will occur separately through implementation of California EcoRestore, and these activities will be further developed and evaluated independent of the water conveyance facilities.[45]

These stated rationales attributing ecological and biological benefits to fish from the Tunnels Project ***are, like last year's BDCP Conservation Measure 1, still claptrap.*** On one hand, the Tunnels Project will increase exports and the Delta's loss of outflow at the same time, both wet and above normal years.[46] (Moreover, in drought years, the Bureau and the Department typically petition the State Water Board to have Delta water quality objectives waived, and the Board grants this request. There is little reason to believe the Tunnels Project would change the outcome.)

The project reduces Delta freshwater flow conditions in violation of CWA requirements to fully protect the most sensitive beneficial uses. The inadequate flow proposals of the Tunnels Project EIR/EIS alternatives will ensure that its implementation trips over mandatory compliance with the CWA. Flow regimes that fully protect Delta ecosystems and aquatic species are necessary to avoid this result.

CWA regulations dictate that adopted criteria must protect the "most sensitive" beneficial use.[47] Instead of improving flow conditions in the Delta that would do that, the Tunnels Project will actually *increase* average exports[48] and *reduce* already inadequate Delta outflow in many months. Specifically, on average for February through June, the Tunnels Project would *decrease* Delta outflow by about 1,000 cubic feet per second and also *decrease* the median Delta outflow by about 2,000 cfs.[49] For the period of January through June (the time period during which the August 2010 Flow Criteria from the SWRCB called for an increase of outflow to 75 percent of unimpaired Delta outflow), the BDCP *decreases* outflow. Tunnels Project modeling (Figure 1) shows that long-term monthly average Sacramento River flows below the north Delta intake diversions would *decrease* between 6 to 38 percent from current and future flows without the Tunnels project, and in wet years river flows would decrease between 7 and 42 percent (Tables 1

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[45] RDEIR/SDEIS, Executive Summary, p. ES-8.

[46] We take up the matter of BDCP's unacknowledged purpose of expanding opportunities for cross-Delta water market transfers in Section VI of this comment letter.

[47] 40 CFR § 131.11 ("For waters with multiple use designations, the criteria shall support the most sensitive use"); see also 40 CFR §131.6.

[48] *See* Public Draft Plan, App. 5B, Fig. 5.B.4-4, available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_EIREIS_Appendix_5B_-_Responses_to_Reduced_South_of_Delta_Water_Supplies.sflb.ashx. See also BDCP/California WaterFix, RDEIR/SDEIS, 2015, Section 4.3.1, Figures 4.3.1-15, -16, -18, -19, -20, and -21.

[49] *See* Public Draft Plan, App. 5C, Attachment 5.C.A, Table C.A-41, available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Appendix_5C_-_Part_5_-_Flow_Passage_Salinity_and_Turbidity.sflb.ashx.

and 2). Overall, monthly lower Sacramento River flows are projected by "California WaterFix" to decrease between 20 and 24 percent, and flows in the Sacramento River at Rio Vista are expected to decrease significantly (Figures 2 and 3).[50]

These tables and figures show that most changes are colored in red enabling the eye to see the preponderance of *decreases* in flow of 5 percent or more compared with Existing Conditions ***and*** the No Action Alternative (especially along the Sacramento River downstream of the north Delta intakes).[51] The vast majority of differences reported in these two tables are decreases in average flows across all water year types. Most of the decreases are of 10 percent or more and many of these are of 20 to 30 percent or more. Only slight improvements occur in just a handful of months and water year types. (Most San Joaquin River flows at Vernalis between February and September in most water year types decrease greater than 5 percent relative to existing conditions as well.)

Reducing flows in the Sacramento River is not a "waterfix," certainly not for the Bay-Delta Estuary. This will increase residence time of water in the Bay-Delta Estuary relative to existing conditions and to a future without the Tunnels (Figure 4); salinity violations and will increase with the Tunnels Project as well.[52] DWR and its partners opted not to model residence time behavior for Alternative 4A and the other RDEIR/SDEIS alternatives (2D and 5A). However, the water source "fingerprinting" analyses in interior and western Delta water ways in both last year's and this year's modeling appendices show replacement of good quality Sacramento River water with lower-flow and poorer quality San Joaquin River water, so it is reasonable, in the absence of more definitive modeling, that relative to existing conditions residence times will increase with the Tunnels Project under both Alternatives 4 and 4A (Figures 4 and 5).

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[50] Estimates derived by Restore the Delta from graphical analysis interpolating data in Figures 4.3.2-7 and 4.3.2-8 from the Recirculated Draft EIR/EIS, Section 4.3.

[51] See also Appendix B, Tables B.7-28 (downstream of north Delta intakes), B.7-30 (Sacramento River at Rio Vista), B.7-32 (Delta outflow), and B.7-34 (San Joaquin River at Vernalis), pp. B-357 to B-370.

[52] RDEIR/SDEIS, Section 4.3.4, p. 4.3.4-67, lines 4-12.

Figure꿯□ηΙ
Sacramento꿯□ηRiver꿯□ηFlow꿯□ηDownstream꿯□ηof꿯□ηNorth꿯□ηDelta꿯□ηIntakes꿯□ηfo
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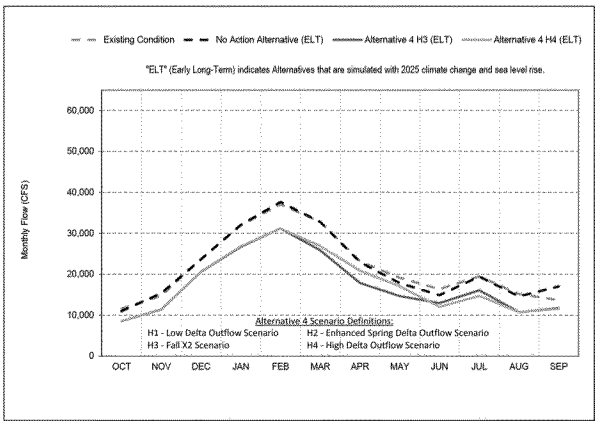

Figure 4.3.2-8
Sacramento River Flow downstream of North Delta Intakes for Alternative 4A, Long-Term Average

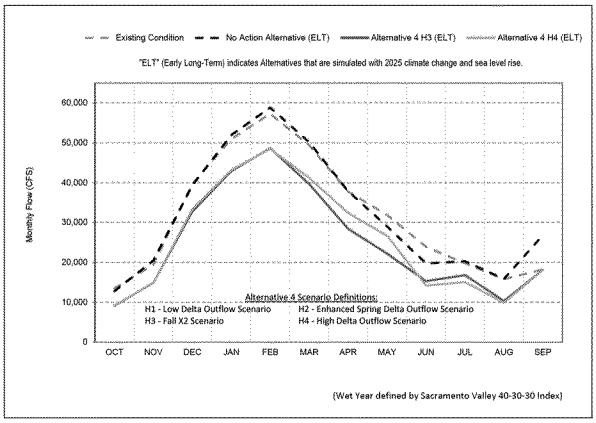

Figure 4.3.2-7
Sacramento River Flow downstream of North Delta Intakes for Alternative 4A, Average Wet Years

Source:꿯□ηRDEIR/SDEIS,꿯□ηSection꿯□η4.3.

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꿯□ηMonthly꿯□ηLong┐□Term꿯□ηAverage꿯□ηEstimates꿯□ηof꿯□ηFlow꿯□ηfor꿯□ηLower꿯
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꿯□ηOctober	11,667	11,333	8,667	8,667	-□26%	-□26%	-□24%	-□24%
November꿯	15,333	16,000	11,667	11,667	-□24%	-□24%	-□27%	-□27%
December꿯	23,333	23,333	20,667	20,667	-□11%	-□11%	-□11%	-□11%
꿯□ηJanuary	36,000	36,000	25,667	25,667	-□29%	-□29%	-□29%	-□29%
꿯□ηFebruar	37,000	37,667	31,333	31,333	-□15%	-□15%	-□17%	-□17%
꿯□ηMarch꿯	33,000	33,000	26,333	27,333	-□20%	-□17%	-□20%	-□17%
꿯□ηApril꿯	23,333	23,667	14,667	21,000	-□37%	-□10%	-□38%	-□11%
꿯□ηMay꿯	19,000	18,000	14,667	17,000	-□23%	-□11%	-□19%	-□6%
꿯□ηJune꿯	16,667	15,000	13,000	12,000	-□22%	-□28%	-□13%	-□20%
꿯□ηJuly꿯	19,333	19,333	16,000	14,667	-□17%	-□24%	-□17%	-□24%
꿯□ηAugust꿯	15,333	15,000	11,000	11,000	-□28%	-□28%	-□27%	-□27%
September꿯	14,000	17,000	11,667	11,667	-□17%	-□17%	-□31%	-□31%
꿯□ηAverag	**22,000**	**22,111**	**17,111**	**17,722**	**┐□22%**	**┐□20%**	**┐□23%**	**┐□20%**

Table꿤□ɳ1
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Delta꿤□ɳIntakes꿤□ɳInterpolated꿤□ɳfrom꿤□ɳFigure꿤□ɳ4.3.2┐□8꿣

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Source:꿤□ɳBay꿤□ɳDelta꿤□ɳConservation꿤□ɳPlan/California꿤□ɳWaterFix꿤□ɳRecirculated꿤□ɳDraft꿤□ɳEIF
Restore꿤□ɳthe꿤□ɳDelta.꿤□ɳ

Table꿤□ɳ2
꿤□ɳMonthly꿤□ɳWet꿤□ɳYear꿤□ɳAverage꿤□ɳEstimates꿤□ɳof꿤□ɳFlow꿤□ɳfor꿤□ɳLower
Delta꿤□ɳIntakes꿤□ɳInterpolated꿤□ɳfrom꿤□ɳFigure꿤□ɳ4.3.2┐□7꿣

	꿤□ɳExisti Conditions꿣	꿤□ɳNo꿤□ Alternative꿣	꿤□ɳAlt꿣 Scenario꿣 H3꿤□	꿤□ɳAlt꿣 Scenario꿣 H4꿤□	%꿤□ɳ Change꿤 from꿤□ɳ to꿤□ɳH	%꿤□ɳCha from꿤□ɳ to꿤□ɳH	%꿤□ɳCha from꿤□ɳ to꿤□ɳH	%꿤□ɳCha from꿤□ɳ to꿤□ɳH
꿤□ɳOctobe	13,333	12,667	9,000	9,000	-□33%	-□33%	-□29%	-□29%
November꿣	20,000	21,000	14,667	14,667	-□27%	-□27%	-□30%	-□30%
꿤□ɳDecem	40,000	40,000	33,333	34,000	-□17%	-□15%	-□17%	-□15%
꿤□ɳJanuar	51,333	52,000	42,667	43,333	-□17%	-□16%	-□18%	-□17%
꿤□ɳFebru	56,667	55,333	48,000	48,000	-□15%	-□15%	-□13%	-□13%
꿤□ɳMarch	49,333	50,000	39,333	41,333	-□20%	-□16%	-□21%	-□17%
꿤□ɳApril꿣	38,333	38,333	28,667	32,667	-□25%	-□15%	-□25%	-□15%
꿤□ɳMay꿤	32,000	28,667	22,000	26,667	-□31%	-□17%	-□23%	-□7%
꿤□ɳJune꿤	24,000	20,000	14,667	14,000	-□39%	-□42%	-□27%	-□30%
꿤□ɳJuly꿤	20,000	20,333	16,667	15,000	-□17%	-□25%	-□18%	-□26%
꿤□ɳAugust	16,000	16,000	10,667	10,000	-□33%	-□38%	-□33%	-□38%
September꿣	18,000	25,333	18,000	18,000	0%	0%	-□29%	-□29%
꿤□ɳAvera	**31,583**	**31,639**	**24,806**	**25,556**	**┐□23%**	**┐□21%**	**┐□24%**	**┐□22%**

꿤□ɳSource:꿤□ɳBay꿤□ɳDelta꿤□ɳConservation꿤□ɳPlan/California꿤□ɳWaterFix꿤□ɳRecirculated꿤□ɳDraft꿤
Restore꿤□ɳthe꿤□ɳDelta.꿤□ɳ

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Flow꿿□ηηDifferences꿿□ηηin꿿□ηηthe꿿□ηηSacramento꿿□ηηRiver꿿□ηηBelo
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Supplemental Modeling Results for New Alternatives

Table B.7-28. Differences[a] (Percent Differences) between Pairs of Model Scenarios for the Sacramento River Downstream of the North Delta Diversion Facility, Year-Round

		Alternative 4A_ELT: In Delta—Sacramento River Downstream of North Delta Diversion Facility			
Month	Water Year Type	EXISTING CONDITIONS vs. H3_ELT	NAA_ELT vs. H3_ELT	EXISTING CONDITIONS vs. H4_ELT	NAA_ELT vs. H4_ELT
JAN	W	-8,039 (-15.8%)	-9,041 (-17.4%)	-7,770 (-15.2%)	-8,772 (-16.9%)
	AN	-7,749 (-19.4%)	-6,852 (-17.6%)	-7,426 (-18.6%)	-6,529 (-16.8%)
	BN	-5,110 (-21.5%)	-4,441 (-19.2%)	-4,881 (-20.5%)	-4,211 (-18.2%)
	D	-2,362 (-13.5%)	-2,338 (-13.4%)	-2,271 (-13%)	-2,247 (-12.9%)
	C	-1,489 (-10.4%)	-1,724 (-11.9%)	-1,583 (-11.1%)	-1,818 (-12.5%)
	All	-5,292 (-16.6%)	-5,393 (-16.8%)	-5,114 (-16%)	-5,215 (-16.3%)
FEB	W	-8,645 (-15.1%)	-10,210 (-17.3%)	-8,794 (-15.3%)	-10,359 (-17.6%)
	AN	-6,358 (-13.9%)	-7,592 (-16.2%)	-6,933 (-15.2%)	-8,168 (-17.4%)
	BN	-6,730 (-21.1%)	-6,501 (-20.5%)	-6,073 (-19%)	-5,844 (-18.4%)
	D	-3,911 (-18.4%)	-3,727 (-17.7%)	-3,914 (-18.5%)	-3,730 (-17.7%)
	C	-1,457 (-9.9%)	-1,171 (-8.1%)	-1,498 (-10.2%)	-1,212 (-8.4%)
	All	-5,892 (-15.9%)	-6,448 (-17.1%)	-5,918 (-15.9%)	-6,474 (-17.2%)
MAR	W	-9,752 (-19.7%)	-10,534 (-21%)	-8,204 (-16.6%)	-8,987 (-17.9%)
	AN	-9,309 (-20.9%)	-9,918 (-22%)	-8,600 (-19.3%)	-9,209 (-20.4%)
	BN	-7,841 (-31.2%)	-6,162 (-26.8%)	-5,674 (-23.2%)	-4,195 (-18.2%)
	D	-4,605 (-22.3%)	-4,232 (-20.9%)	-4,019 (-19.5%)	-3,646 (-18%)
	C	-1,286 (-9.7%)	-1,086 (-8.3%)	-1,437 (-10.8%)	-1,237 (-9.5%)
	All	-6,958 (-21.2%)	-6,932 (-21.1%)	-5,921 (-18%)	-5,895 (-18%)
APR	W	-9,336 (-24.7%)	-9,411 (-24.8%)	-5,368 (-14.2%)	-5,443 (-14.4%)
	AN	-8,102 (-31.2%)	-7,516 (-29.6%)	-3,656 (-14.1%)	-3,070 (-12.1%)
	BN	-3,943 (-22.2%)	-3,449 (-19.9%)	2,028 (11.4%)	2,531 (14.7%)
	D	-1,713 (-13.2%)	-1,559 (-12.1%)	-1,296 (-10%)	-1,142 (-8.9%)
	C	-594 (-5.8%)	-398 (-4%)	-772 (-7.5%)	-576 (-5.7%)
	All	-5,282 (-22.8%)	-5,071 (-22.1%)	-2,288 (-9.9%)	-2,078 (-9.1%)
MAY	W	-9,729 (-30.5%)	-6,842 (-23.5%)	-5,259 (-16.5%)	-2,372 (-8.2%)
	AN	-4,709 (-22.8%)	-3,475 (-17.6%)	-852 (-4.1%)	462 (2.3%)
	BN	-2,653 (-18.6%)	-1,429 (-11%)	-301 (-2.1%)	923 (7.1%)
	D	-832 (-7.6%)	-478 (-4.5%)	-733 (-6.7%)	-379 (-3.6%)
	C	-319 (-4.1%)	-706 (-8.7%)	-390 (-5%)	-777 (-9.6%)
	All	-4,468 (-23.3%)	-3,130 (-17.5%)	-2,062 (-10.8%)	-724 (-4.1%)
JUN	W	-8,590 (-35.9%)	-4,448 (-22.5%)	-9,667 (-40.4%)	-5,525 (-28%)
	AN	-3,291 (-20.2%)	-2,146 (-14.2%)	-4,474 (-27.4%)	-3,328 (-22%)
	BN	-576 (-4.2%)	-131 (-1%)	-1,672 (-12.3%)	-1,228 (-9.3%)
	D	-114 (-0.9%)	-430 (-3.4%)	-997 (-8.2%)	-1,313 (-10.5%)
	C	-698 (-7.3%)	-643 (-6.5%)	-901 (-9.1%)	-846 (-8.6%)
	All	-3,431 (-20.9%)	-1,935 (-13%)	-4,356 (-26.5%)	-2,860 (-19.2%)

Supplemental Modeling Results for New Alternatives

		Alternative 4A_ELT: In Delta—Sacramento River Downstream of North Delta Diversion Facility			
Month	Water Year Type	EXISTING CONDITIONS vs. H3_ELT	NAA_ELT vs. H3_ELT	EXISTING CONDITIONS vs. H4_ELT	NAA_ELT vs. H4_ELT
JUL	W	-3,039 (-13.3%)	-3,493 (-17.2%)	-4,796 (-24.1%)	-5,250 (-25.8%)
	AN	-2,622 (-12.2%)	-3,234 (-14.6%)	-4,724 (-21.9%)	-5,335 (-24%)
	BN	-2,676 (-12.8%)	-2,676 (-12.8%)	-4,181 (-20%)	-4,180 (-20%)
	D	-3,793 (-19.7%)	-3,190 (-17.1%)	-5,186 (-26.9%)	-4,583 (-24.5%)
	C	-5,314 (-34.5%)	-4,065 (-28.7%)	-5,041 (-32.7%)	-3,793 (-26.8%)
	All	-3,414 (-17.5%)	-3,333 (-17.1%)	-4,802 (-24.6%)	-4,720 (-24.3%)
AUG	W	-5,461 (-34.5%)	-5,527 (-34.8%)	-5,917 (-37.4%)	-5,983 (-37.7%)
	AN	-3,225 (-20.3%)	-3,934 (-23.7%)	-4,922 (-31%)	-5,630 (-33.9%)
	BN	-3,142 (-20.1%)	-2,743 (-18%)	-3,208 (-20.5%)	-2,809 (-18.4%)
	D	-6,927 (-40.8%)	-4,466 (-30.8%)	-5,173 (-30.5%)	-2,711 (-18.7%)
	C	-1,311 (-13%)	-514 (-5.5%)	-986 (-9.8%)	-188 (-2%)
	All	-4,453 (-29.3%)	-3,852 (-26.4%)	-4,424 (-29.1%)	-3,823 (-26.2%)
SEP	W	-122 (-0.7%)	-8,712 (-52.5%)	-146 (-0.8%)	-8,736 (-52.5%)
	AN	-842 (-6.4%)	-8,871 (-41.8%)	-1,937 (-14.7%)	-9,965 (-46.9%)
	BN	-4,050 (-32.6%)	-4,406 (-34.5%)	-4,555 (-36.7%)	-4,911 (-38.4%)
	D	-4,443 (-36.6%)	-2,036 (-20.9%)	-4,329 (-33.6%)	-1,922 (-19.7%)
	C	-1,024 (-12.1%)	-227 (-3%)	-715 (-8.4%)	83 (1.1%)
	All	-1,979 (-14.4%)	-5,293 (-31%)	-2,162 (-15.7%)	-5,477 (-32.1%)
OCT	W	-4,396 (-32.5%)	-3,674 (-28.7%)	-4,299 (-31.8%)	-3,576 (-28%)
	AN	-2,898 (-26.1%)	-2,207 (-21.2%)	-2,925 (-26.3%)	-2,234 (-21.4%)
	BN	-3,116 (-27%)	-2,141 (-20.2%)	-3,186 (-27.6%)	-2,210 (-20.9%)
	D	-1,948 (-18.9%)	-1,898 (-18.6%)	-1,995 (-19.4%)	-1,945 (-19%)
	C	-2,003 (-19.9%)	-1,319 (-14%)	-1,966 (-19.5%)	-1,282 (-13.6%)
	All	-3,071 (-26.4%)	-2,463 (-22.4%)	-3,061 (-26.4%)	-2,453 (-22.3%)
NOV	W	-4,552 (-23.4%)	-5,584 (-27.3%)	-4,621 (-23.8%)	-5,654 (-27.6%)
	AN	-3,008 (-19.6%)	-4,562 (-27.1%)	-2,841 (-18.6%)	-4,395 (-26.1%)
	BN	-3,226 (-25.7%)	-4,198 (-31%)	-3,301 (-26.3%)	-4,273 (-31.5%)
	D	-3,394 (-26.4%)	-3,025 (-24.2%)	-3,607 (-28%)	-3,238 (-25.9%)
	C	-1,380 (-14.3%)	-1,196 (-12.7%)	-1,529 (-15.9%)	-1,345 (-14.2%)
	All	-3,381 (-22.9%)	-3,994 (-25.9%)	-3,460 (-23.4%)	-4,073 (-26.4%)
DEC	W	-6,980 (-17.6%)	-6,607 (-16.8%)	-6,348 (-16%)	-5,975 (-15.2%)
	AN	-1,498 (-6.9%)	-2,533 (-11.2%)	-1,314 (-6.1%)	-2,349 (-10.3%)
	BN	-1,109 (-6.7%)	-1,603 (-9.3%)	-1,423 (-8.5%)	-1,916 (-11.2%)
	D	-1,378 (-8.9%)	-1,320 (-8.6%)	-1,662 (-10.8%)	-1,604 (-10.4%)
	C	-1,157 (-9.8%)	-181 (-1.7%)	-1,511 (-12.8%)	-534 (-4.9%)
	All	-3,094 (-13%)	-3,055 (-12.9%)	-3,034 (-12.8%)	-2,996 (-12.6%)

[a] Red boxes indicate that flows under the alternative are more than 5% lower than flows under the baseline; green boxes indicate that flows under the alternative are more than 5% greater than flows under the baseline.

Source:꿿□ηηRDEIR/SDEIS,꿿□ηηAppendix꿿□ηηB.

Figure 3
Flow Differences in the Sacramento River by Water Year Type and Month

Table B.7-30. Differences[a] (Percent Differences) between Pairs of Model Scenarios in the Sacramento River at Rio Vista, Year-Round

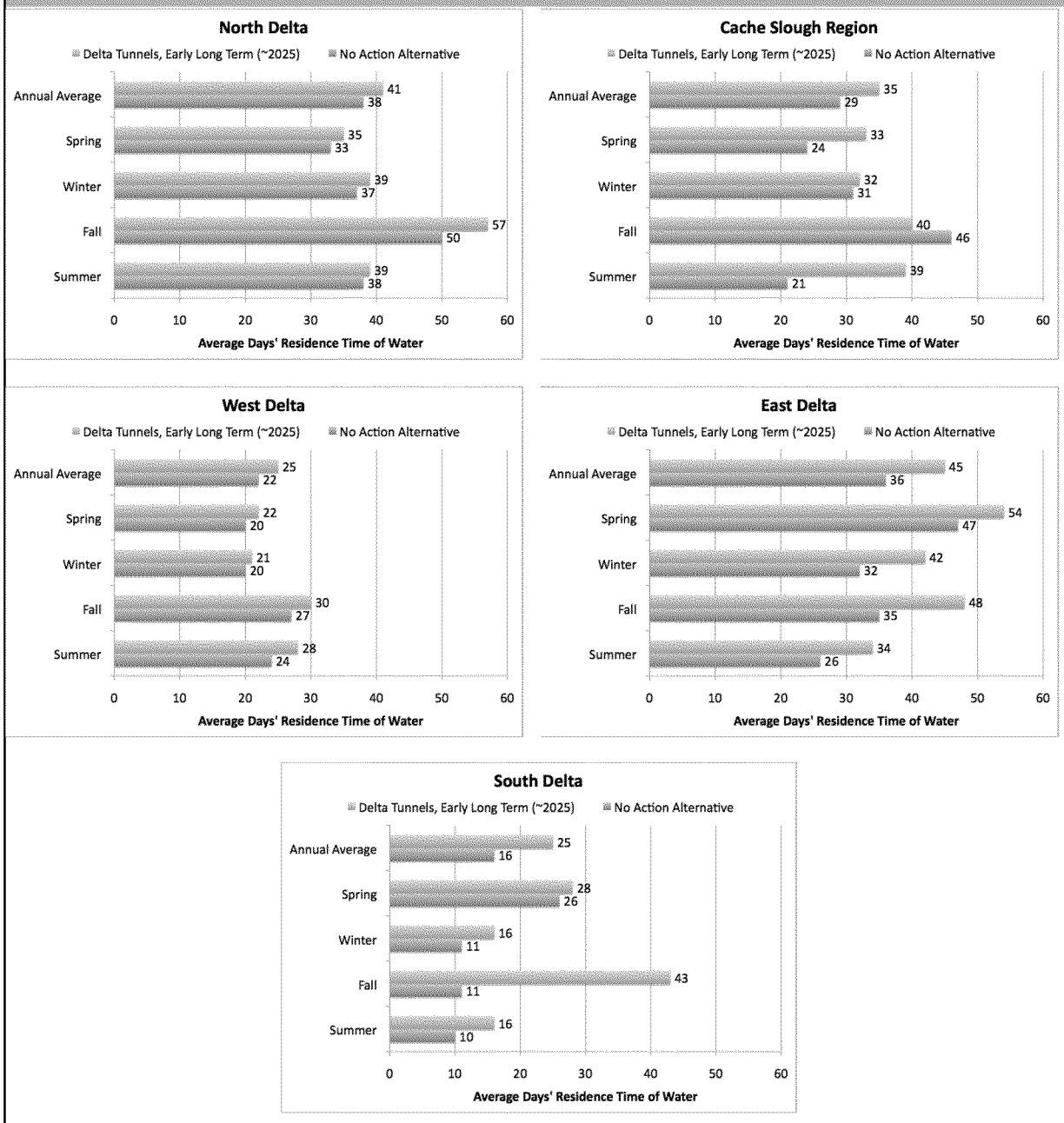
Alternative 4A_ELT: In Delta—Sacramento River at Rio Vista					
Month	Water Year Type	EXISTING CONDITIONS vs. H3_ELT	NAA_ELT vs. H3_ELT	EXISTING CONDITIONS vs. H4_ELT	NAA_ELT vs. H4_ELT
JAN	W	-1,351 (-1.9%)	-5,751 (-7.9%)	-1,083 (-1.5%)	-5,482 (-7.3%)
	AN	-4,656 (-11.1%)	-4,109 (-9.9%)	-3,691 (-8.8%)	-3,144 (-7.6%)
	BN	-2,635 (-12.6%)	-2,080 (-10.2%)	-2,422 (-11.6%)	-1,867 (-9.2%)
	D	-1,259 (-8.5%)	-1,396 (-9.3%)	-1,175 (-7.9%)	-1,312 (-8.7%)
	C	-837 (-7.1%)	-1,098 (-9.1%)	-917 (-7.7%)	-1,179 (-9.7%)
	All	-1,959 (-5.3%)	-3,247 (-8.4%)	-1,689 (-4.5%)	-2,978 (-7.7%)
FEB	W	-444 (-0.5%)	-6,718 (-7.7%)	-998 (-1.2%)	-7,272 (-8.3%)
	AN	-1,957 (-3.7%)	-3,029 (-5.6%)	-3,235 (-6.2%)	-4,307 (-8%)
	BN	-3,701 (-12.3%)	-3,773 (-12.5%)	-2,624 (-8.7%)	-2,696 (-8.9%)
	D	-2,287 (-11.8%)	-2,286 (-11.8%)	-2,332 (-12.1%)	-2,331 (-12.1%)
	C	-759 (-6.2%)	-586 (-4.9%)	-786 (-6.4%)	-613 (-5.1%)
	All	-1,672 (-3.8%)	-3,805 (-8.2%)	-1,865 (-4.2%)	-3,998 (-8.6%)
MAR	W	-4,683 (-7.3%)	-7,195 (-10.9%)	-3,278 (-5.1%)	-5,790 (-8.7%)
	AN	-4,854 (-10.4%)	-6,077 (-12.7%)	-3,888 (-8.3%)	-5,111 (-10.7%)
	BN	-5,390 (-25.7%)	-4,039 (-20.6%)	-3,495 (-16.7%)	-2,144 (-10.9%)
	D	-2,885 (-16.3%)	-2,570 (-14.8%)	-2,397 (-13.6%)	-2,082 (-12%)
	C	-644 (-6%)	-536 (-5.1%)	-770 (-7.2%)	-662 (-6.2%)
	All	-3,843 (-10.7%)	-4,503 (-12.3%)	-2,844 (-7.9%)	-3,504 (-9.5%)
APR	W	-5,365 (-14%)	-5,844 (-15.1%)	-1,274 (-3.3%)	-1,753 (-4.5%)
	AN	-5,540 (-24.4%)	-5,048 (-22.7%)	-917 (-4%)	-425 (-1.9%)
	BN	-2,808 (-19.2%)	-2,450 (-17.1%)	3,375 (23%)	3,733 (26.1%)
	D	-1,250 (-12.1%)	-1,134 (-11.1%)	-704 (-6.8%)	-589 (-5.8%)
	C	-382 (-5%)	-237 (-3.2%)	-543 (-7.1%)	-398 (-5.3%)
	All	-3,322 (-15.6%)	-3,294 (-15.5%)	-196 (-0.9%)	-168 (-0.8%)
MAY	W	-8,550 (-31.7%)	-5,837 (-24.1%)	-4,668 (-17.3%)	-1,955 (-8.1%)
	AN	-4,082 (-24%)	-2,931 (-18.5%)	-655 (-3.9%)	496 (3.1%)
	BN	-2,210 (-20.2%)	-1,148 (-11.6%)	-159 (-1.5%)	903 (9.2%)
	D	-609 (-7.8%)	-314 (-4%)	-512 (-6.3%)	-217 (-2.8%)
	C	-159 (-3%)	-510 (-9%)	-221 (-4.2%)	-571 (-10.1%)
	All	-3,843 (-24.9%)	-2,619 (-18.4%)	-1,748 (-11.3%)	-524 (-3.7%)
JUN	W	-7,622 (-46%)	-4,059 (-31.2%)	-8,393 (-50.7%)	-4,830 (-37.2%)
	AN	-3,222 (-32.6%)	-1,969 (-22.9%)	-4,056 (-41%)	-2,803 (-32.5%)
	BN	-349 (-5%)	-26 (-0.4%)	-1,129 (-16.1%)	-806 (-12.1%)
	D	-14 (-0.2%)	-244 (-3.9%)	-640 (-10.6%)	-870 (-13.9%)
	C	-393 (-9.1%)	-365 (-8.5%)	-534 (-12.3%)	-506 (-11.7%)
	All	-3,009 (-30.6%)	-1,687 (-19.8%)	-3,666 (-37.2%)	-2,344 (-27.5%)

Alternative 4A_ELT: In Delta—Sacramento River at Rio Vista					
Month	Water Year Type	EXISTING CONDITIONS vs. H3_ELT	NAA_ELT vs. H3_ELT	EXISTING CONDITIONS vs. H4_ELT	NAA_ELT vs. H4_ELT
JUL	W	-2,201 (-19.8%)	-2,283 (-20.4%)	-3,633 (-32.7%)	-3,715 (-33.1%)
	AN	-1,893 (-15.6%)	-2,309 (-18.4%)	-3,337 (-27.5%)	-3,753 (-29.9%)
	BN	-1,907 (-16.3%)	-1,887 (-16.2%)	-2,952 (-25.3%)	-2,932 (-25.1%)
	D	-2,369 (-22.5%)	-1,950 (-19.3%)	-3,633 (-34.5%)	-3,215 (-31.8%)
	C	-3,633 (-47%)	-2,764 (-40.2%)	-3,328 (-43%)	-2,458 (-35.8%)
	All	-2,352 (-21.9%)	-2,216 (-20.9%)	-3,429 (-31.9%)	-3,293 (-31.1%)
AUG	W	-3,911 (-46%)	-3,922 (-46.1%)	-4,218 (-49.6%)	-4,239 (-49.7%)
	AN	-2,332 (-27.3%)	-2,808 (-31.2%)	-3,504 (-41%)	-3,979 (-44.1%)
	BN	-2,225 (-26.6%)	-1,916 (-23.8%)	-2,292 (-27.4%)	-1,983 (-24.6%)
	D	-4,890 (-52.8%)	-3,151 (-41.9%)	-3,631 (-39.2%)	-1,892 (-25.1%)
	C	-680 (-15.5%)	-113 (-3%)	-562 (-12.8%)	5 (0.1%)
	All	-3,134 (-38.9%)	-2,693 (-35.4%)	-3,121 (-38.8%)	-2,679 (-35.2%)
SEP	W	-361 (-3.4%)	-10,311 (-49.8%)	-335 (-3.1%)	-10,285 (-49.6%)
	AN	-913 (-7.6%)	-6,686 (-51.6%)	-1,224 (-18%)	-7,398 (-57.1%)
	BN	-2,770 (-44.1%)	-3,025 (-46.3%)	-3,116 (-49.6%)	-3,371 (-51.6%)
	D	-3,102 (-50.7%)	-1,417 (-32%)	-3,004 (-49.1%)	-1,320 (-29.8%)
	C	-568 (-15.8%)	-195 (-6.1%)	-425 (-11.8%)	-51 (-1.6%)
	All	-1,427 (-19.4%)	-5,104 (-46.3%)	-1,539 (-20.9%)	-5,216 (-47.3%)
OCT	W	-3,775 (-43.3%)	-2,923 (-37.2%)	-3,637 (-41.7%)	-2,786 (-35.4%)
	AN	-2,527 (-40.9%)	-1,861 (-33.7%)	-2,415 (-39.1%)	-1,749 (-31.7%)
	BN	-2,340 (-37.4%)	-1,498 (-27.7%)	-2,419 (-38.6%)	-1,577 (-29.1%)
	D	-1,511 (-28.5%)	-1,420 (-27.2%)	-1,468 (-27.6%)	-1,377 (-26.4%)
	C	-1,410 (-27%)	-880 (-18.8%)	-1,495 (-28.7%)	-964 (-20.6%)
	All	-2,504 (-37.6%)	-1,896 (-31.3%)	-2,461 (-36.9%)	-1,852 (-30.6%)
NOV	W	-3,511 (-22.2%)	-4,866 (-28.3%)	-3,632 (-22.9%)	-4,987 (-29%)
	AN	-2,379 (-21%)	-4,148 (-31.7%)	-2,086 (-18.4%)	-3,856 (-29.4%)
	BN	-2,415 (-29.5%)	-3,679 (-38.9%)	-2,409 (-29.4%)	-3,673 (-38.9%)
	D	-2,803 (-32.1%)	-2,609 (-30.6%)	-2,944 (-33.7%)	-2,750 (-32.2%)
	C	-897 (-16.4%)	-1,010 (-18.1%)	-1,041 (-19%)	-1,154 (-20.6%)
	All	-2,620 (-24.3%)	-3,498 (-30%)	-2,667 (-24.7%)	-3,545 (-30.4%)
DEC	W	-2,736 (-6.3%)	-3,662 (-8.3%)	-1,504 (-3.5%)	-2,429 (-5.5%)
	AN	-156 (-0.8%)	-1,491 (-7.3%)	22 (0.1%)	-1,313 (-6.4%)
	BN	-105 (-0.7%)	-1,217 (-8.1%)	-183 (-1.3%)	-1,295 (-8.6%)
	D	-873 (-7.3%)	-742 (-6.3%)	-1,153 (-9.6%)	-1,022 (-8.6%)
	C	-760 (-9.3%)	31 (0.4%)	-1,085 (-13.3%)	-294 (-4%)
	All	-1,211 (-5.3%)	-1,749 (-7.5%)	-917 (-4%)	-1,451 (-6.2%)

[a] Red boxes indicate that flows under the alternative are more than 5% lower than flows under the baseline; green boxes indicate that flows under the alternative are more than 5% greater than flows under the baseline.

Source: RDEIR/SDEIS, Appendix B.

Figure꿯□ŋ4
Average꿯□ŋResidence꿯□ŋTime꿯□ŋof꿯□ŋWater꿯□ŋin꿯□ŋDelta꿯□ŋRegions,꿯 and꿯□ŋNo꿯□ŋAction꿯□ŋAlternative,꿯□ŋ2015꿯□ŋAnalysis



Source:꿯□ŋBay꿯□ŋDelta꿯□ŋConservation꿯□ŋPlan꿯□ŋRDEIR/SDEIS,꿯□ŋ2015,꿯□ŋTable꿯□ŋ8-□

Figure꿿□ŋ5

Share꿿□ŋof꿿□ŋDelta꿿□ŋLocation꿿□ŋRiver꿿□ŋSources꿿□ŋfrom꿿□ŋ"Fingerprin No꿿□ŋAction꿿□ŋAlternative,꿿□ŋ2013꿿□ŋBDCP꿿□ŋConservation꿿□ŋMe 꿿□ŋand꿿□ŋ2015꿿□ŋTunnels꿿□ŋProject

Sacramento꿿□ŋRiver **San꿿□ŋJoaquin꿿□ŋRiver**

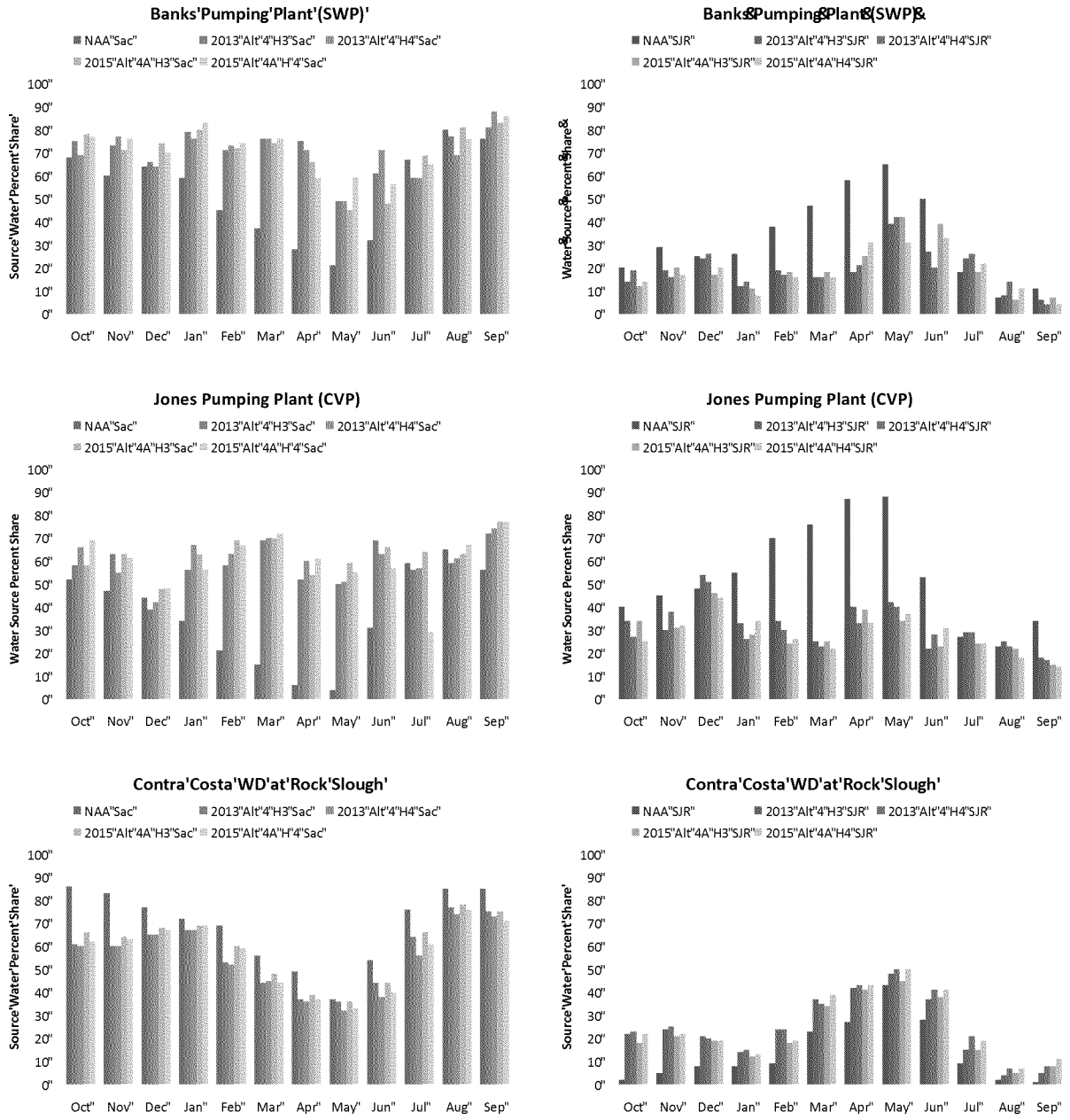
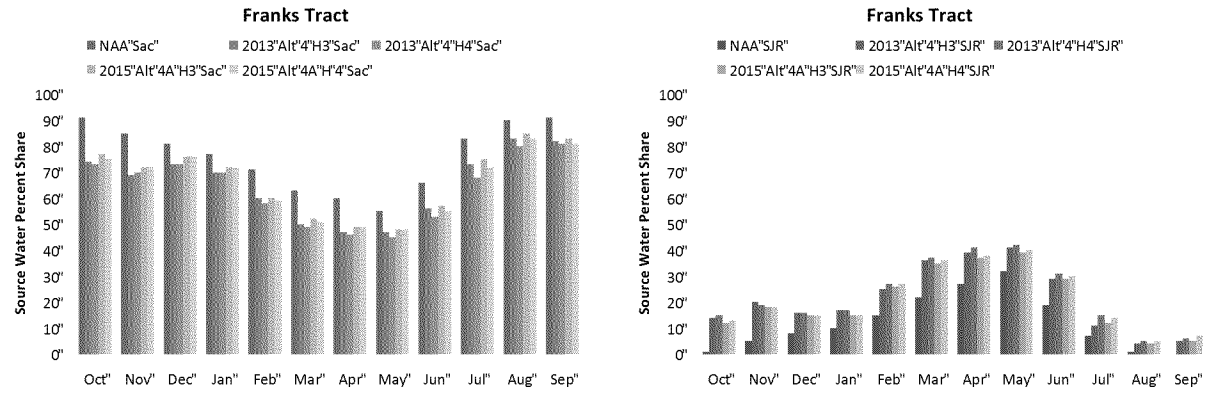


Figure 5

Share of Delta Location River Sources from "Fingerprin No Action Alternative, 2013 BDCP Conservation Me and 2015 Tunnels Project

Sacramento River **San Joaquin River**



Sources: BDCP Draft EIR/EIS, Appendix 8D (Yigures for Alternative California WaterFix, Recirculated Draft EIR/Supplemental Draft EIS, App No Action Alternative, Alternative 4A, Scenarios H3 and H4); F

The lower-flowing and more polluted San Joaquin River will make up greater fractions of water flowing into the western Delta, Franks Tract, and at Contra Costa Water District's Rock Slough intakes.[53] Meanwhile, better quality Sacramento River water diverted into the Tunnels will improve state and federal export water quality, making Delta water quality elsewhere the poorer.[54]

Decreased flows and increased residence times will cause the designated beneficial uses of migratory and rare fish species to decline, according to Tunnels Project RDEIR/SDEIS modeling results. Through-Delta survival rates of the juvenile and smolt life stages of winter-run, spring-run, fall-run and late-fall-run Chinook salmon are ***all expected to decrease relative to both existing conditions and the No Action Alternative*** (Figure 6). These fish species are "rare and endangered species" beneficial uses as well as "migration of aquatic organisms" beneficial uses. These reduced flows will decrease the size of critical open water estuarine habitat beneficial uses

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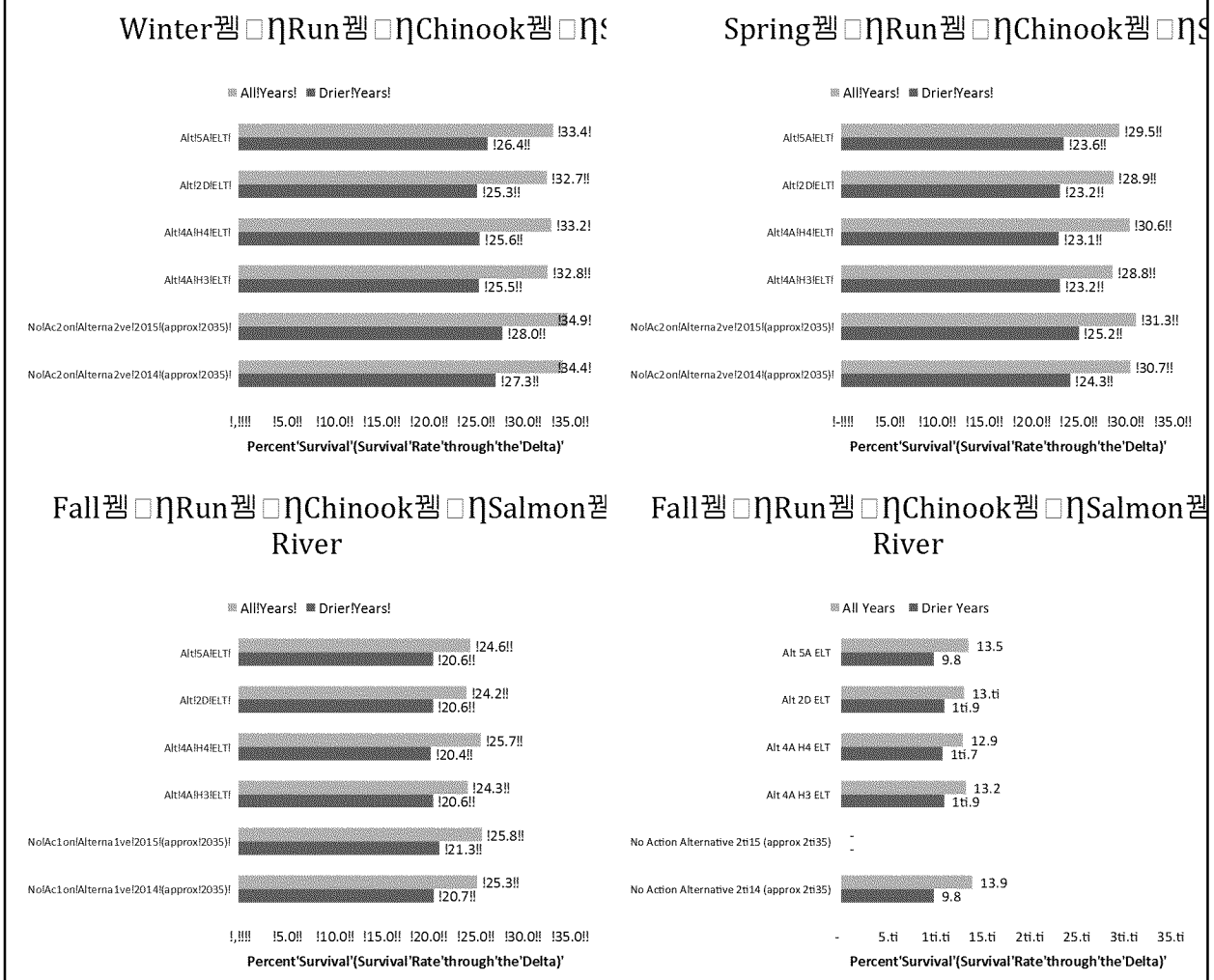
[53] This reasoning is confirmed by source-water fingerprint modeling provided in both the 2013 Draft EIR/EIS and the 2015 RDEIR/SDEIS. The source water fingerprint modeling results are found in Bay Delta Conservation Plan, Draft EIR/EIS/ November 2013, Appendix 3D, pp. 147-168, 8D-171 to 8D-192; and in Bay Delta Conservation Plan, Recirculated Draft EIR/Supplemental Draft EIS, Appendix B, pp. B-191 to B-256.

[54] Bay Delta Conservation Plan Draft EIR/EIS, November 2013, Appendix 8D (figures for Alternative 4, Scenarios H3 and H4), 2013; BDCP/California WaterFix, Recirculated Draft EIR/Supplemental Draft EIS, Appendix B, Section B.4.2 (figures for No Action Alternative, Alternative 4A, Scenarios H3 and H4), 2015; analyzed by Restore the Delta.

for state and federally-listed species like Delta smelt and longfin smelt, both of which count also as rare and endangered beneficial uses under the current Bay-Delta Water Quality Control Plan.[55]

Figure꿹□ŋ6
Through┐□Delta꿹□ŋSurvival꿹□ŋRates꿹□ŋof꿹□ŋEmigrating꿹□ŋJuvenile
Alternative꿹□ŋ4A꿹□ŋ(California꿹□ŋWaterFix)



Source:꿹□ŋBay꿹□ŋDelta꿹□ŋConservation꿹□ŋPlan/California꿹□ŋWaterFix꿹□ŋRDEIR/SDEIS,꿹□ŋ
-□51,꿹□ŋand꿹□ŋ-□74;꿹□ŋSection꿹□ŋ4.4,꿹□ŋTables꿹□ŋ11-□2D-□16,꿹□ŋ-□31,꿹□ŋand꿹□ŋ-
Environmental꿹□ŋWater꿹□ŋCaucus.

The U.S. EPA expressed serious concerns about the EIR/EIS Administrative Draft's (ADEIS) proposed decrease in outflow "despite the fact that several key scientific evaluations by the federal and State agencies indicate that *more* outflow is necessary to protect aquatic resources

[55] State Water Resources Control Board, *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*, December 13, 2006, p. 9.

and fish populations."[56] The Tunnels Project's flow regime will violate the beneficial uses of affected waterways and therefore violate water quality objectives. In order to receive the Section 404 permit, DWR and the Bureau of Reclamation must revise the Tunnels Project to ensure that it fully protects all designated beneficial uses.

We agree with USEPA's recent comment letter that the RDEIR/SDEIS is crucially incomplete by failing to address flow issues of the Tunnels Project adequately. The EPA stated,

> ...the most essential decision for achieving the desired balance wbetween water reliability and restoration of the Bay Delta ecosystem is how freshwater flows through the Delta will be managed. This key decision is not described in the SDEIS ad is, instead, deferred to future regulatory processes administered by the Stat of California in consultation with federal resource and regulatory agencies. The decision by the State of California and Reclamation to defer these decisions means that the impacts of the WaterFix project on the Delta ecosystem cannot be fully evaluated at this time, and that any attempt to descxribe the environmental impacts of the project is necessarily incomplete. Once those decisions...are concluded, the evaluation of possible impacts and consideration of alternatives can be completed.[57]

We are deeply concerned that the Corps will participate in what the Applicant hopes will be a set of permit and planning processes that abdicate state and federal responsibility to put state and federal water policy, the state constitutional prohibition on waste and unreasonable use of water, and the public trust doctrine first, before plumbing decisions like the Tunnels Project described in the Corps' Notice, when it comes to these flow issues.

The project increases concentrations of several Delta pollutants, resulting in violations of pollutant criteria. Reduced through-Delta flows will stagnate water conditions and cause Delta water quality to deteriorate badly. RDEIR/SDEIS modeling results reveal that the project will degrade water quality for boron, bromide, chloride, electrical conductivity, dissolved organic carbon, nitrate, mercury, pesticides, and selenium.[58] (See details below.) Harmful algal blooms are expected to worsen under Tunnels Project operational regimes relative to the No Action Alternative as well as existing conditions. While these constituents' concentrations will *increase* in western and central Delta locations, as well as Contract Costa Water District's Pumping Plant No. 1, their concentrations are expected to *decrease* in export waters of the North Bay Aqueduct in Barker Slough, and Jones Pumping Plant and Banks Pumping Plant in the south Delta. These

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[56] U.S. EPA, "EPA Comments on Administrative Draft EIR/EIS, III Aquatic Species and Scientific Uncertainty, Federal Agency Release," p. 4 (July 18, 2013) (emphasis added), available at: http://www2.epa.gov/sites/production/files/documents/july3-2013-epa-comments-bdcp-adeis.pdf.

[57] Letter of Jared Blumenfeld, Region IX Administrator, US Environmental Protection Agency, to David Murillo, Regional Director, Bureau of Reclamation, Mid-Pacific Region, *Supplemental Draft Environmental Impact Statement, Bay Delta Conservation Plan/California WaterFix CEQ #20150196*, October 30, 2015, p. 2. Hereafter cited as USEPA Letter.

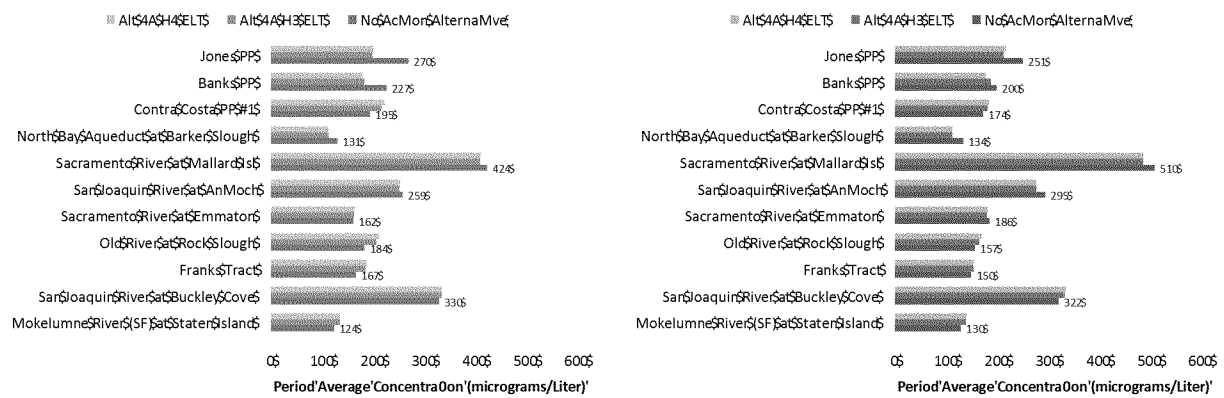
[58] RDEIR/SDEIS, Appendix B.

results hold for both changes compared with existing conditions as well as the No Action Alternative, the latter of which factors out most sea level rise and climate change impacts.

Boron

Although period average concentrations decrease with Tunnels operations (except for Sacramento River at Emmaton and Contra Costa Water District's Pumping Plant No. 1), agricultural (that is, crop sensitivity) threshold of 500 micrograms per liter (μg/L) would see exceedances a substantial percentage of the time at San Joaquin River at Antioch and Sacramento River at Mallard Island.[59] The Tunnels Project will increase boron concentrations throughout the year at the south fork of the Mokelumne River, as well as at Franks Tract and Old River at Rock Slough, relative to both existing conditions and No Action Alternative.[60] In the western Delta, boron concentrations increase with Tunnels operation relative to existing conditions and No Action Alternative between February and September, most months of the year. Finally, boron concentrations increase at the Contra Costa Water District's Pumping Plant No. 1, while boron concentrations decrease the North Bay Aqueduct intakes at Barker Slough and at Banks and Jones pumping plants of the state and federal water projects.

Figure 7
Period Average Boron Concentrations of Various



All Years Drought Years

Source: RDEIR/SDEIS, Appendix B, Table Bo-3, p. B-71. Data for comparison purposes.

Bromide

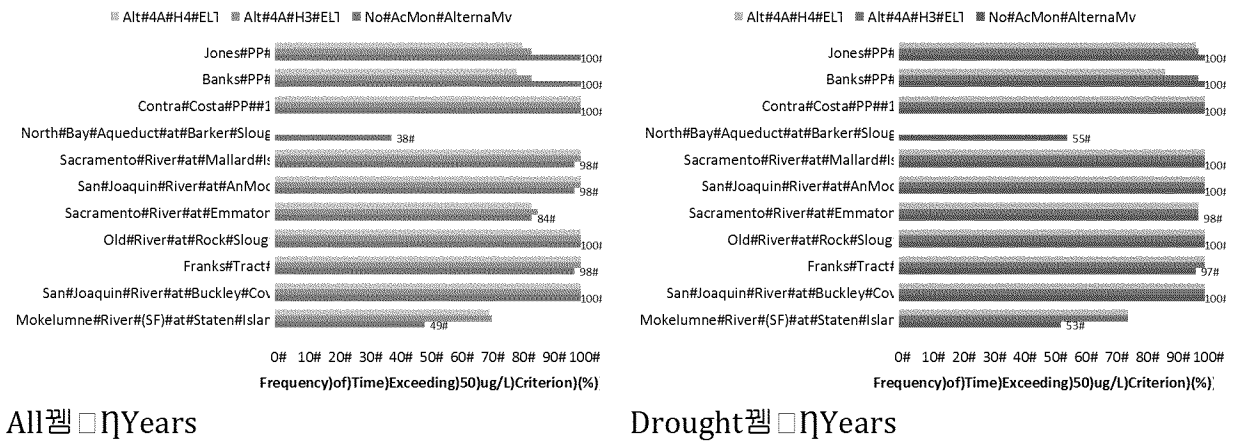
For both human health and aquatic life criteria, the Tunnels Project would increase the frequency of criteria violations in the interior and western Delta, but would decrease bromide violations 25

[59] RDEIR/SDEIS, Appendix B, Table Bo-3, p. B-71.

[60] RDEIR/SDEIS, Appendix B, Table Bo-4 and Bo-5, pp. B-73 and B-74.

to 30 percent of the time at Banks and Jones pumping plants. Western Delta bromide concentrations are a problem for Antioch diversions as well. One method of evaluating the Tunnels Project's bromide concentrations suggests that wet years may see increases rather than decreases.[61] (Figures 8, 9, and 10.)

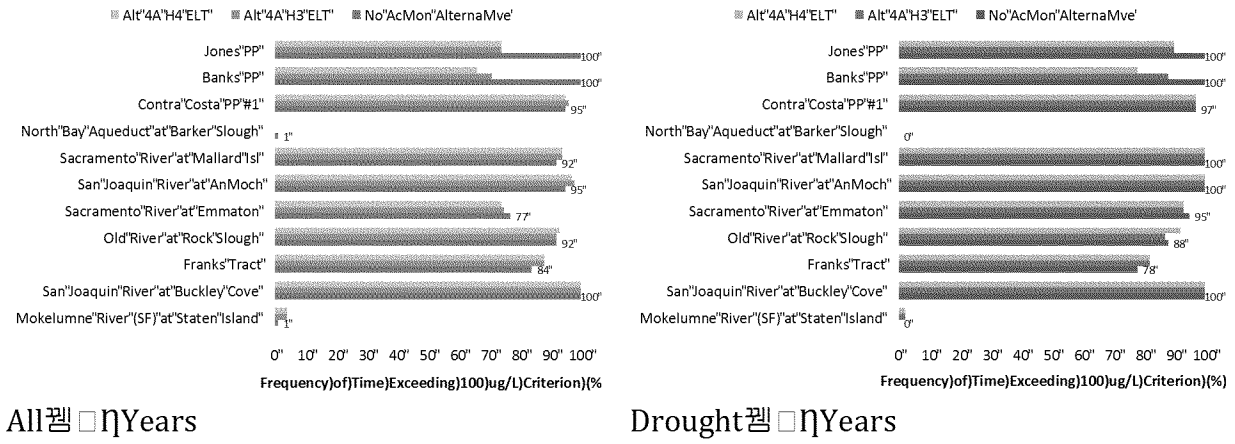
Figure 8
Frequency Percentage of Exceedances of Bromide Human Health Criterion



All Years Drought Years

Source: RDEIR/SDEIS, Appendix B, Table Br-1, p. B-83. Data for comparison purposes.

Figure 9
Frequency Percentage of Exceedances of Bromide Aquatic Life Criterion



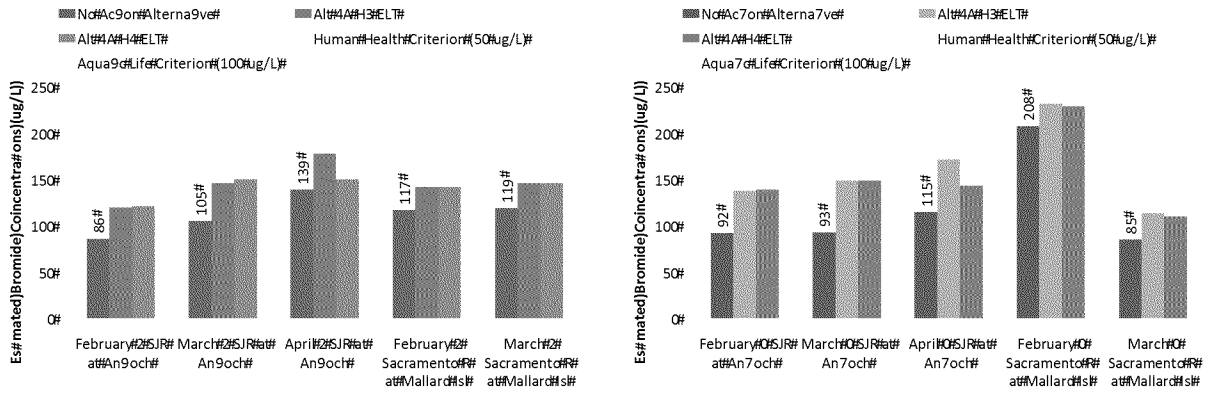
All Years Drought Years

[61] RDEIR/SDEIS, Appendix B, Table Br-1 and Table Br-2, pp. B-84, and Tables Br-5 and Br-6, p. B-87.

Figure 9
Frequency Percentage of Exceedances of Bromide Aquatic Life Criterion

Source: RDEIR/SDEIS, Appendix B, Table Br-1, p. B-83. Data for comparison purposes.

Figure 10
Estimated Concentrations of Bromide in Wet and Above Normal Water (Periods of Normally Acceptable Water Quali



Wet Years Above Normal Years

Source: RDEIR/SDEIS, Appendix B, Table Br-5, p. B-87. Data for comparison purposes.

Chloride

The Mokelumne River south fork at Staten Island sees significant increases in chloride concentrations all year, every year. This is closely influenced by reduced flow through Georgiana Slough downstream of the north Delta intakes. Other interior and western Delta areas will see increased chloride concentrations relative to both existing conditions and No Action Alternative by the Tunnels during March through June (for interior locations) and March through August for Sacramento River at Emmaton, San Joaquin River at Antioch and Sacramento River at Mallard Island.[62]

Salinity

The Tunnels Project will more than triple the number of spikes in excess of salinity objectives along the Sacramento River downstream of the Tunnels, and along the San Joaquin River at Prisoners Point. Outright violations of salinity objectives are expected to more than double with

[62] RDEIR/SDEIS, Appendix B, Tables Cl-6 through Cl-9 for two estimation methods and the two operational scenarios (H3 and H4), pp. B-93 and B-96.

the Tunnels in place.[63] These violations will degrade water quality for Delta agriculture and for fish and wildlife beneficial uses. This means that the State Water Resources Control Board cannot issue a 401 certification regardless of whether it has adequately assessed the project's propensity to degrade water quality.

Along the lower Sacramento River, salinity violations will more than double, and will occur about a quarter of the time that salinity objectives are in effect, up from about 11 percent of the time now and with the Tunnels Project in place. These conditions will worsen relative to current and future conditions between May and September, especially in drought years (which are expected to increase in frequency). Interior Delta salinity will also worsen between March and September (such as along the South Mokelumne River and at San Andreas Landing on the San Joaquin), as well as between February and June at Prisoners Point along the San Joaquin.[64] (Figure 11)

The Tunnels will be the opposite of a "WaterFix" for Suisun Marsh. "California WaterFix" modeling results show that every month's average salinity will increase about 56 percent over present conditions and about 60 percent over future conditions in the Beldon Landing area, 28 percent over present conditions and 27 percent over future conditions near Sunrise Duck Club, and 27 percent over present conditions and 26 percent over future conditions along Suisun Slough near Volanti Slough.[65] This altered salinity regime will result in less habitat for fish and other aquatic species native to the Bay-Delta Estuary, as well as affect agricultural soils and vegetation in Suisun Marsh.

USEPA's recent comment letter on the Tunnels Project RDEIR/SDEIS confirms this point:

> The modeling results presented in the SDEIS show predicted exceedances of a salinity standard at both Prisoner's Point and Emmaton. The water quality modeling predicts that the Western Delta and Suisun Marsh will become saltier over time, which is likely to cause increased exceedances of chloride criteria near municipal water supply intakes. Mitigation actions are identified in the SDEIS to prevent exceedances, and the compliance history shows that salinity standards have rarely been exceeded in non-drought years. Nevertheless, if the proposed project operations contribute to a general increase in salinity in the Delta, the flexibility that Reclamation and DWR have to operate the system to ensure that water quality criteria are met will be seriously diminished, and the two agencies will have little room for error in operating the system to protect beneficial uses and achieve the co-equal goals.[66]

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[63] RDEIR/SDEIS, Appendix B, Table EC-1, p. B-129. "Spikes" here means daily exceedances of a salinity objective, while compliance with objectives is determined by comparing multi-day running averages with an objective. When the running average is exceeded, a violation is then deemed to occur by regulators.

[64] RDEIR/SDEIS, Appendix B, Tables EC-8A and EC-8B, pp. B-134 to B-135.

[65] RDEIR/SDEIS, Appendix B, Tables EC-5, EC-6, and EC-7, pp. B-131 to B-132.

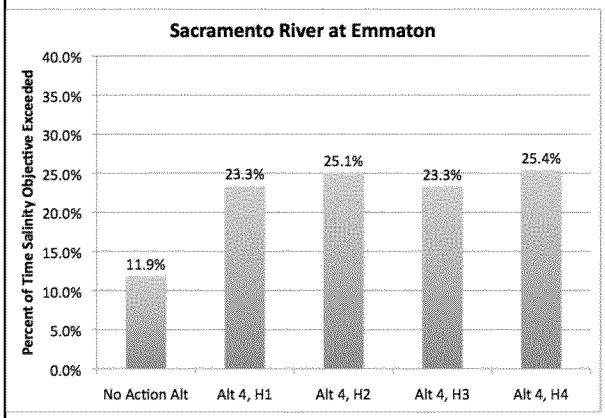
[66] USEPA Letter, October 30, 2015, p. 3.

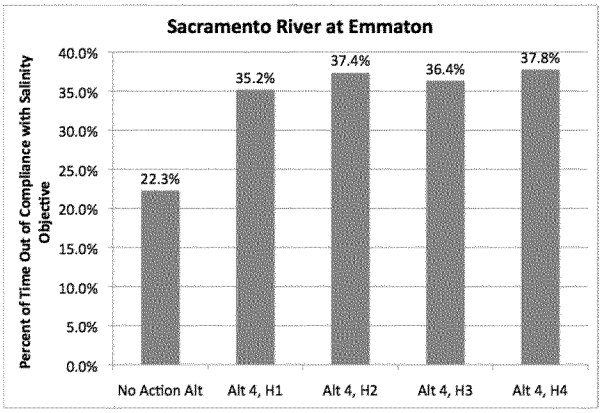
In other words, the vaunted "flexibility" the Tunnels Project is believed to provide DWR, the Bureau of Reclamation and their water contractors for fish protection would be undermined by the water quality detriment the Tunnels Project can be reasonably expected to cause, given RDEIR/SDEIS modeling results, generating detrimental effects for listed fish species, local municipal water supplies, and resident hunan users of the Delta region (including agriculture and subsistence fishers).

Figure뀀□ŋ11
Projected뀀□ŋSalinity뀀□ŋEffects뀀□ŋby뀀□ŋ2060
of뀀□ŋthe뀀□ŋTunnels뀀□ŋProject/Bay뀀□ŋDelta뀀□ŋConservati
Percentage뀀□ŋof뀀□ŋTime뀀□ŋSalinity뀀□ŋExceedances뀀□ŋand뀀□ŋVi

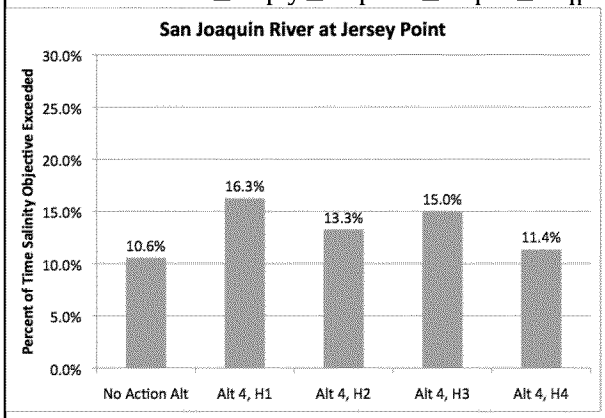
Exceeding뀀□ŋWater뀀□ŋQuality뀀□ŋObj Out뀀□ŋof뀀□ŋCompliance뀀□ŋwith뀀□ŋWater

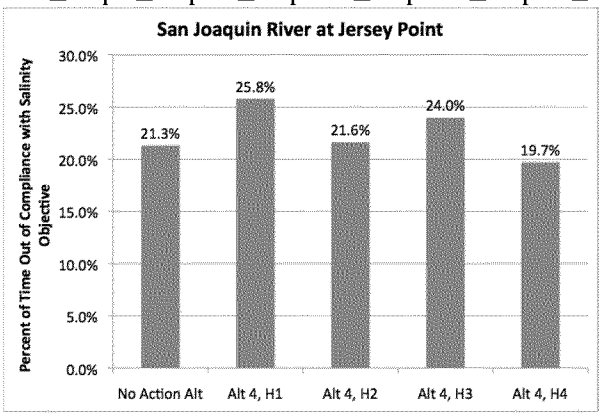
Delta뀀□ŋAgricultural뀀□ŋBenebicial뀀□ŋUse뀀□ŋWater뀀□ŋQuality뀀□ŋOI





- **Sacramento뀀□ŋRiver뀀□ŋat뀀□ŋEmmaton:**ces뀀□ŋincrease뀀□ŋover뀀□ŋthe뀀□ŋNo뀀□ŋA over뀀□ŋ100뀀□ŋpercent뀀□ŋof뀀□ŋthe뀀□ŋtime뀀□ŋin뀀□ŋthe뀀□ŋAlt뀀□ŋ4뀀□ŋscenari increases뀀□ŋby뀀□ŋover뀀□ŋ50뀀□ŋpercent뀀□ŋof뀀□ŋthe뀀□ŋtime뀀□ŋover뀀□ŋthe뀀□ŋ

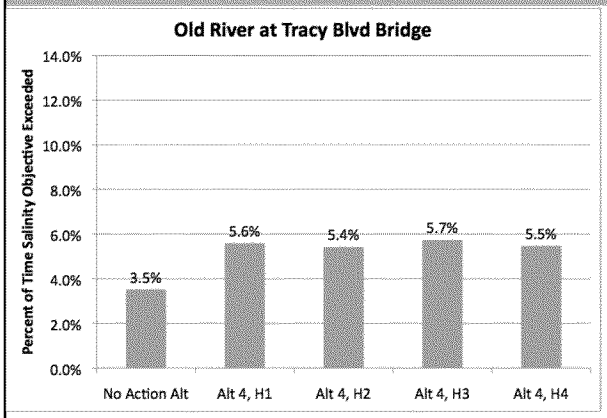


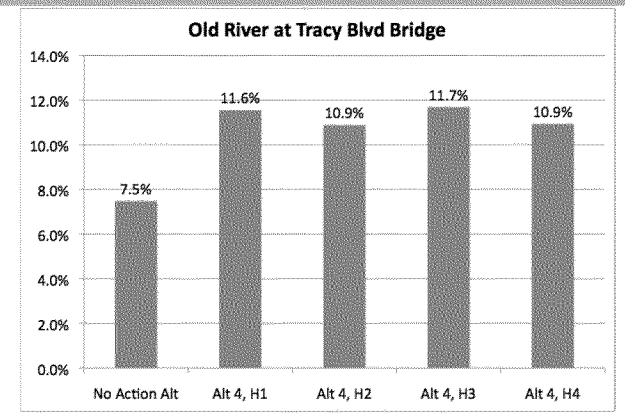


- **San뀀□ŋJoaquin뀀□ŋRiver뀀□ŋat뀀□ŋJersey뀀□ŋPoint:**increase뀀□ŋover뀀□ŋthe뀀□ŋNo뀀□ŋ percent,뀀□ŋwhile뀀□ŋnon뀀□ŋcompliance뀀□ŋwith뀀□ŋthe뀀□ŋobjective뀀□ŋincreases뀀□ŋ High뀀□ŋOutYlow뀀□ŋScenario뀀□ŋ(where뀀□ŋboth뀀□ŋSpring뀀□ŋand뀀□ŋFall뀀□ŋX2뀀□

Figure꿯□ŋ11
Projected꿯□ŋSalinity꿯□ŋEffects꿯□ŋby꿯□ŋ2060
of꿯□ŋthe꿯□ŋTunnels꿯□ŋProject/Bay꿯□ŋDelta꿯□ŋConservat
Percentage꿯□ŋof꿯□ŋTime꿯□ŋSalinity꿯□ŋExceedances꿯□ŋand꿯□ŋVi

Exceeding꿯□ŋWater꿯□ŋQuality꿯□ŋObj Out꿯□ŋof꿯□ŋCompliance꿯□ŋwith꿯□ŋWater





- **Old꿯□ŋRiver꿯□ŋat꿯□ŋTracy꿯□ŋBlvd꿯□ŋBridge:** increase꿯□ŋby꿯□ŋabout꿯□ŋtwo-□thi Action꿯□ŋAlternative.꿯□ŋNoncompliance꿯□ŋwith꿯□ŋthe꿯□ŋobjective꿯□ŋwould꿯□ŋinc These꿯□ŋpercents꿯□ŋare꿯□ŋlower꿯□ŋbecause꿯□ŋas꿯□ŋshown꿯□ŋabove꿯□ŋ(Table꿯 high.

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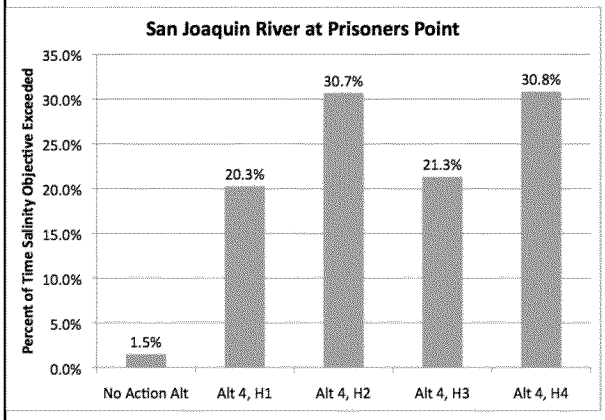
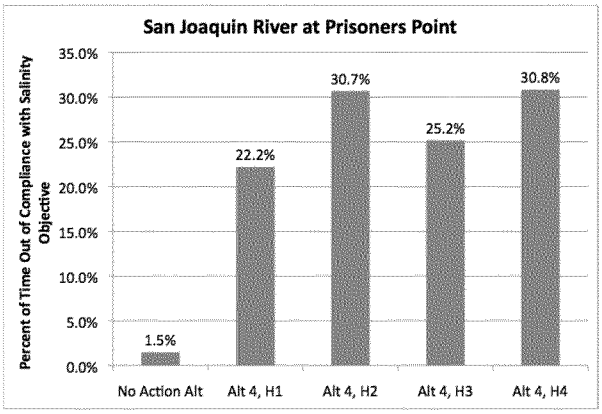
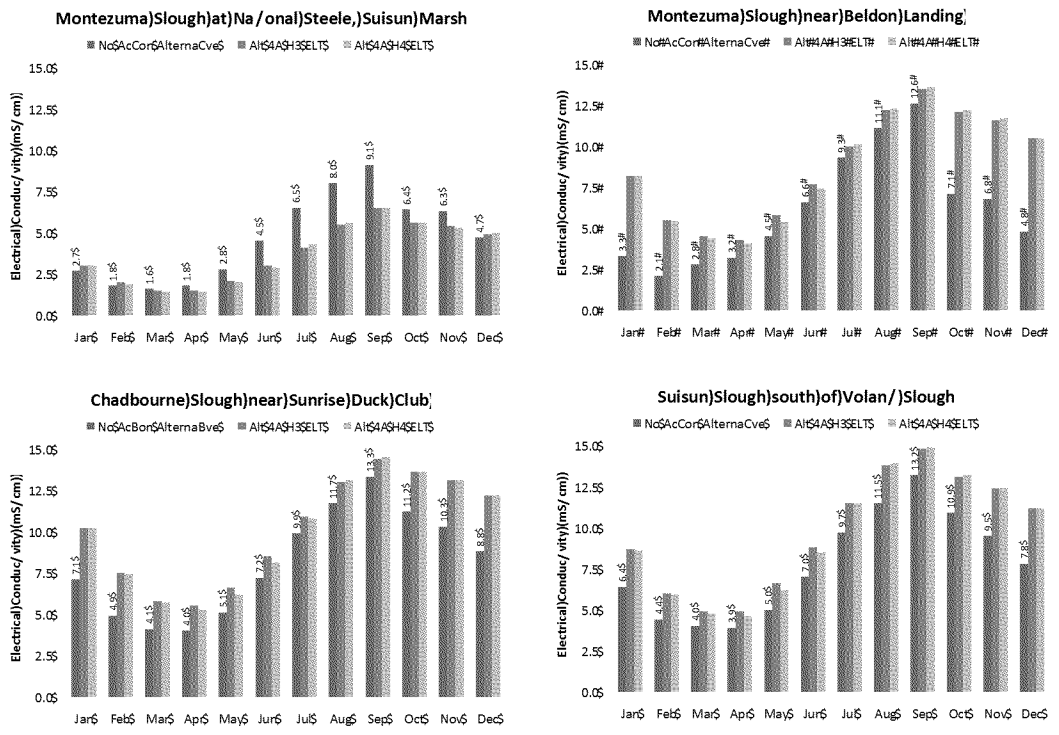




- **San꿯□ŋJoaquin꿯□ŋRiver꿯□ŋat꿯□ŋPrisoners꿯□ŋPoint:** □ŋof꿯□ŋtime꿯□ŋexceedances꿯 sharply—1200꿯□ŋto꿯□ŋ1900꿯□ŋpercent꿯□ŋincrease꿯□ŋin꿯□ŋexceedances꿯□ŋand꿯□ noncompliance.꿯□ŋThis꿯□ŋis꿯□ŋa꿯□ŋYish꿯□ŋand꿯□ŋwildlife-□related꿯□ŋsalinity꿯□ agricultural꿯□ŋbeneYicial꿯□ŋuse꿯□ŋsalinity꿯□ŋobjectives.

Source:꿯□ŋBay꿯□ŋDelta꿯□ŋConservation꿯□ŋPlan꿯 *Draft EIR/EIS, Appendix E*, □ŋ4꿯□ŋp. Percentage꿯□ŋof꿯□ŋtime꿯□ŋis꿯□ŋbased꿯□ŋon꿯□ŋa꿯□ŋ16-□year꿯□ŋhydrology꿯□ŋmodeled compliance"꿯□ŋis꿯□ŋthe꿯□ŋnumber꿯□ŋof꿯□ŋdays꿯□ŋthat꿯□ŋthe꿯□ŋ30-□day꿯□ŋrunning꿯 violations꿯□ŋof꿯□ŋthe꿯□ŋsalinity꿯□ŋobjective.꿯□ŋ"Exceeding꿯□ŋWater꿯□ŋQuality꿯□ŋObject monitoring꿯□ŋequipment꿯□ŋactually꿯□ŋregisters꿯□ŋsalinity꿯□ŋexceeding꿯□ŋthe꿯□ŋthreshol

Figure 12
Interior Suisun Marsh Waterways to See from Tunnels Operations



Sources: RDEIR/SDEIS, Appendix B, Tables EC-4 through No Action Alternative for comparison purposes.

Pesticides

The San Joaquin River is an impaired water body for chlorpyrifos, diazinon, diuron, DDT, and Group A pesticides (human carcinogens) under the Clean Water Act.[67] Increasing that river's fraction of water contributed to the Delta will result in more concentrated pesticides reaching central and western Delta water ways from the San Joaquin, and with longer residence times, its pesticide burdens stay longer. The Bay-Delta Estuary will be left with a worsening pesticide "cocktail" supplied by the San Joaquin River's agricultural effluent.

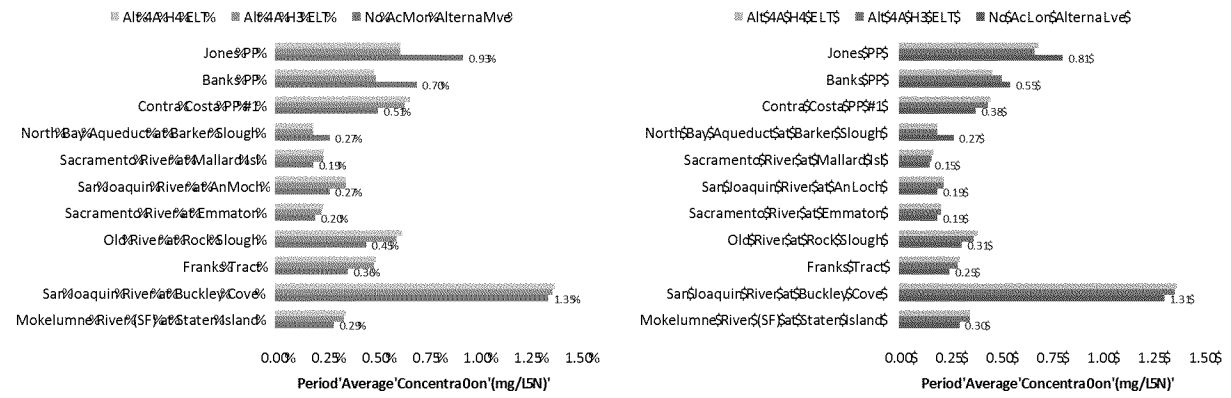
Nitrates

Tunnels Project modeling results indicate increases of nitrates relative to the No Action Alternative of 19 to 34 percent for interior Delta locations in all years (except for San Joaquin River at Buckley Cove near Stockton). Similar modeling results are shown for the western Delta as well, 16 to 30 percent increases in salinity (Figure 13). And Contra Costa Water District's Pumping Plant No. 1 is projected to see a 25 percent increase in nitrates. This would likely result

[67] US EPA, 2010 California California 303(d) List of Water Quality Limited Segments. Accessible online at http://gispublic.waterboards.ca.gov/pub/303d/2010_USEPA_approv_303d_List_Final_122311wsrcs.xls.

in significant increases in water treatment costs for the District. In all of these locations the monthly period average changes were almost all increases in the range of 10 to 30 percent. As with other pollutants, nitrate concentrations are expected in Tunnels modeling results to decrease significantly at Barker Slough, Jones and Banks.[68]

Figure 13
Period Average Nitrate (N) Concentrations



All Years Drought Years

Source: RDEIR/SDEIS, Appendix B, Tables N-4 and N-5, p. B-162 and B-163. Alternative 4A for comparison purposes.

Methyl Mercury

As shown in Figure 14, the ratio of mercury concentrations in largemouth bass tissue was for Alternative 4 Tunnels scenarios well over 1.5 to *twice or more* the toxicity threshold.[69] (DWR and its partners try to divert attention from the toxicity threshold by comparing these levels to continuation of the status quo No Action Alternative[70], but the important comparison is to the toxicity threshold for ecological and public health protection.) Alternative 4A modeling in 2015 shows that the Tunnels project despite having less habitat restoration and no Yolo Bypass improvements would have only slightly less effect on fish tissue concentrations of mercury. Moreover, fish tissue concentrations at several Estuary locations would still be more than 1.5 to 2 times the USEPA's mercury guidance concentration. This analysis, however does not reflect "California EcoRestore's" habitat restoration efforts, which cumulatively can be expected to

[68] RDEIR/SDEIS, Appendix B, Tables N-4 and N-5, pp. B-162 and B-163.

[69] Environmental Water Caucus, *Comment Letter on Bay Delta Conservation Plan and Draft Environmental Impact Report/Statement*, June 11, 2014, Figure 9, pp. 85-86. Accessible online at http://ewccalifornia.org/reports/bdcpcomments6-11-2014-3.pdf.

[70] Bay Delta Conservation Plan/California WaterFix, Recirculated Draft EIR/Supplemental EIS, 2015, Section 4.3.4, p. 4.3.4-33, lines 15-45.

have impacts similar to the Tunnels and the Bay Conservation Plan last year.[71] The Bay Delta Conservation Plan states that "at this time… there is no proven method to mitigate methylation and mobilization of mercury into the aquatic system resulting from inundation of restoration areas. *The mitigation measures...are meant to provide a list of current research that has indicated potential to mitigate mercury methylation."*[72]

The Tunnels Project provides no mitigation method at all, just a list of "adaptive management" research issues to be handled later.[73] *Calling the Tunnels project "California WaterFix" plus DWR's premature application to the Corps of Engineers are not real adaptive management, but political prejudging of scientific outcomes.* For both tunnels construction and habitat restoration work in and around the Bay-Delta Estuary, DWR and its partners would have to handle MeHg on a case by case basis.[74]

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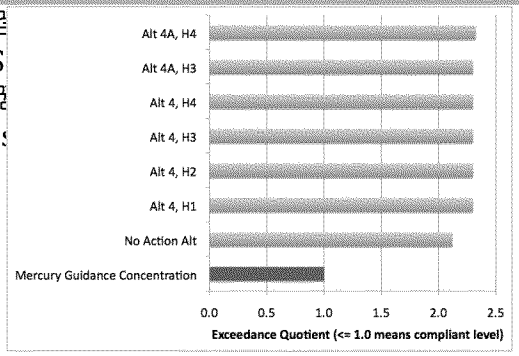
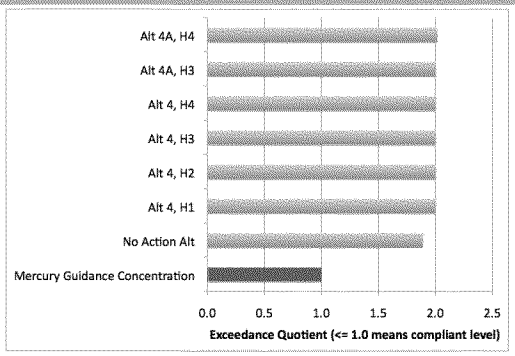
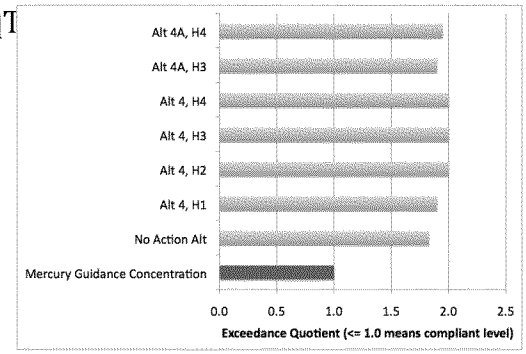
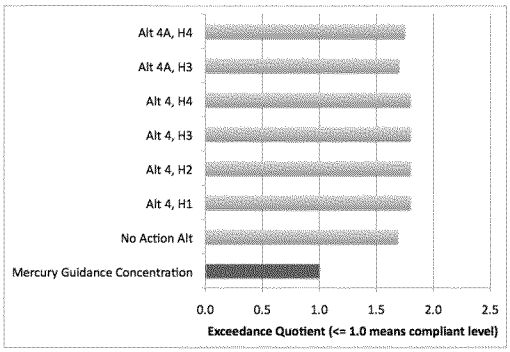
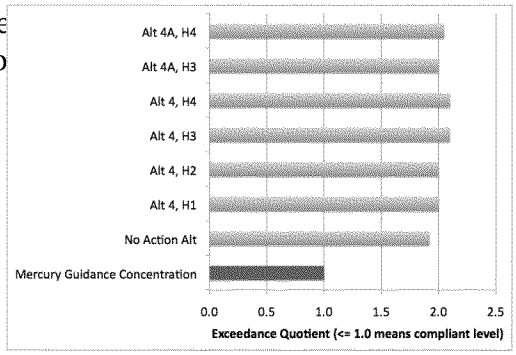
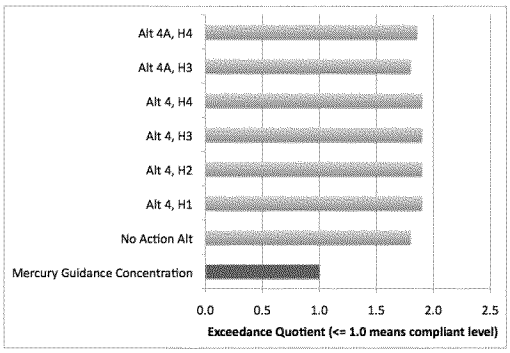
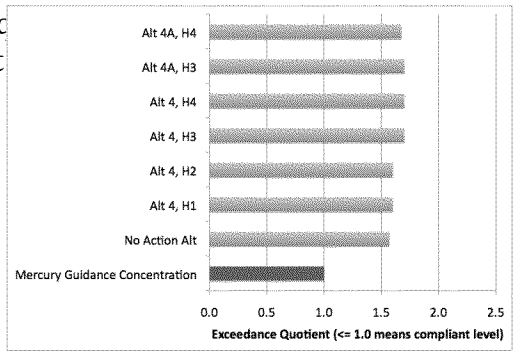
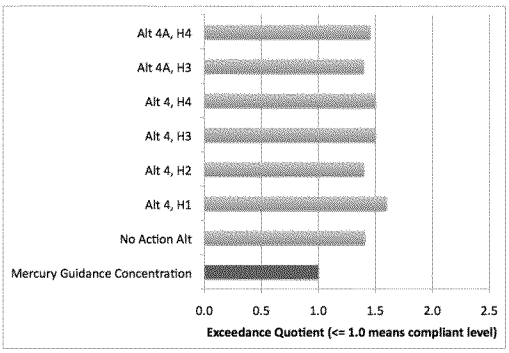
[71] Based on Equation 1 calculations according to Appendix 8I of the Bay Delta Conservation Plan Draft EIR/EIS in 2013-2014 and Appendix B (Tables Hg-5 and Hg-7) and Appendix 8I of the Recirculated Draft EIR/Supplemental EIS in 2015. See also Environmental Water Caucus, *Comment Letter*, June 11, 2014, above.

[72] Charles N. Alpers, et al, *Sacramento-San Joaquin Delta Regional Ecosystem Restoration Implementation Plan, Ecosystem Conceptual Model: Mercury*, prepared January 24, 2008, pp. 12-13. Accessible online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=6413.

[73] These research approaches include: Characterize soil mercury concentrations and loads on a project-by-project basis; sequester MeHg using low-intensity chemical dosing techniques using metal-based coagulants like ferric sulfide or poly-aluminum chloride. These floculants bind with dissolved organic carbon and MeHg to flocculate and deposit mercury out of solution; minimize microbial methylation activity in restored wetlands; design restored wetland habitat to enhance photodegradation of MeHg; remediate sulfur-rich sediments with iron to prevent the biogeochemical reactions that methylate mercury; cap mercury-laden sediments (essentially entomb and bury them permanently to keep from mobilizing and methylating mercury). The research "measures" that BDCP proposes do not include basic toxicological research into mercury's effects on these and other fish and aquatic species found in the Delta.

[74] Bay Delta Conservation Plan Environmental Impact Report/Environmental Impact Statement, Chapter 8, *Water Quality*, p. 8-260, lines 30-35; p. 8-446, lines 39-42, and p. 8-447, lines 1-2. "Because of the uncertainties associated with site-specific estimates of methylmercury concentrations and the uncertainties in source modeling and tissue modeling, the effectiveness of methylmercury management...would need to be evaluated separately for each restoration effort, as part of design and implementation. Because of this uncertainty and the known potential for methylmercury creation in the Delta this potential effect...is considered adverse."

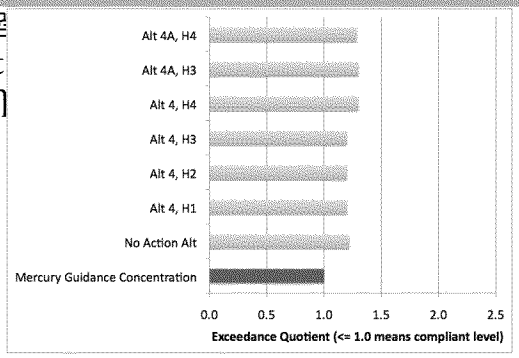
Figure꿹□ɳ14
Mercury꿹□ɳConcentrations꿹□ɳin꿹□ɳLargemouth꿹□ɳBass꿹□ɳ(350꿹□ɳm
Thresholds꿹□ɳin꿹□ɳFuture꿹□ɳCondition꿹□ɳwith꿹□ɳand꿹□ɳwith

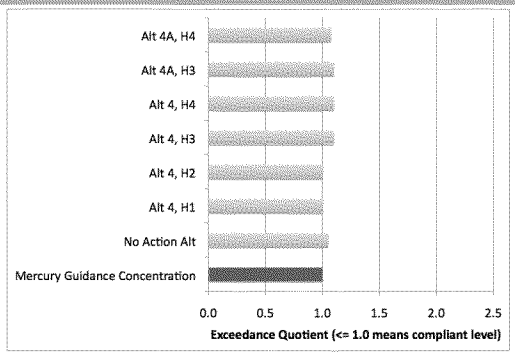
Location	Average꿹□ɳof꿹□ɳAll꿹□I	Average꿹□ɳof꿹□ɳDrought꿹
Mokelumne꿹 River꿹□ɳ(S Fork)꿹□ɳat꿹 Staten꿹□ɳIs		
Franks꿹□ɳT		
Old꿹□ɳRive Rock꿹□ɳSlo		
San꿹□ɳJoac River꿹□ɳat Antioch		

Figure뀀□ŋ14
Mercury뀀□ŋConcentrations뀀□ŋin뀀□ŋLargemouth뀀□ŋBass뀀□ŋ(350뀀□ŋm
Thresholds뀀□ŋin뀀□ŋFuture뀀□ŋCondition뀀□ŋwith뀀□ŋand뀀□ŋwith

Location **Average뀀□ŋof뀀□ŋAll뀀□I** **Average뀀□ŋof뀀□ŋDrought뀀**

Sacramento뀀
River뀀□ŋat
Mallard뀀□ŋ
Island





Notes:뀀□ŋ"Exceedence뀀□ŋQuotient"뀀□ŋis뀀□ŋthe뀀□ŋratio뀀□ŋof뀀□ŋestimated뀀□ŋconcentratio
the뀀□ŋDelta뀀□ŋTMDL뀀□ŋguidance뀀□ŋconcentration뀀□ŋof뀀□ŋ0.24뀀□ŋmg/kg뀀□ŋww뀀□ŋof
conditions,뀀□ŋ"Exceedance뀀□ŋQuotients"뀀□ŋare뀀□ŋgreater뀀□ŋthan뀀□ŋ1.0,뀀□ŋmeaning뀀□ŋt
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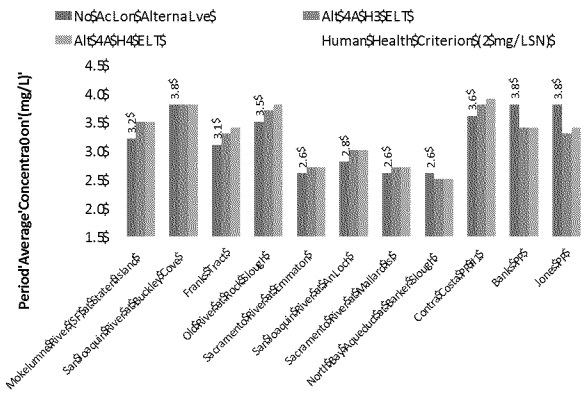
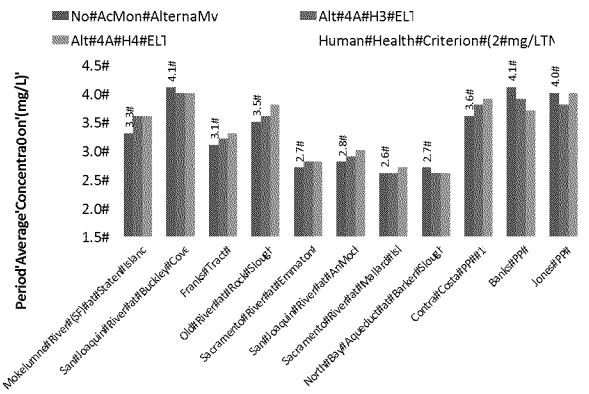
Equation뀀□ŋ1뀀□ŋcalculations뀀□ŋaccording뀀□ŋto뀀□ŋAppendix뀀□ŋ8I뀀□ŋof뀀□ŋthe뀀□ŋBay뀀
Appendix뀀□ŋB뀀□ŋ(Tables뀀□ŋHg-□5,뀀□ŋp.뀀□ŋB-□147,뀀□ŋand뀀□ŋHg-□7,뀀□ŋp.뀀□ŋB-□149)
Supplemental뀀□ŋEIS.뀀□ŋA뀀□ŋratio뀀□ŋof뀀□ŋ1.0뀀□ŋor뀀□ŋless뀀□ŋwould뀀□ŋmean뀀□ŋcom

Dissolved Organic Carbon (Figure 15)

Figure뀀□ŋ15
Period뀀□ŋAverage뀀□ŋDissolved뀀□ŋOrganic뀀□ŋCarbon뀀□ŋConc





All뀀□ŋYears Drought뀀□ŋYears

Source:뀀□ŋRDEIR/SDEIS,뀀□ŋAppendix뀀□ŋB,뀀□ŋTable뀀□ŋDOC-□1,뀀□ŋp.뀀□ŋB-□171.뀀□ŋData
Alternative뀀□ŋfor뀀□ŋcomparison뀀□ŋpurposes.

Selenium

The RDEIR/SDEIS errs in assuming decreasing selenium tissue loads. Selenium concentrations in water are expected to change only slightly under the Tunnels Project's flow regimes, annual average selenium concentrations in whole-body sturgeon are expected to increase substantially, according to Tunnels Project modeling results in the RDEIR/SDEIS. These results are summarized in Figures 16, 17, and 18. In addition, the RDEIR/SDEIS reports that protective toxicity thresholds recommended by Presser and Luoma will be exceeded under Tunnels Project flow regimes relative to No Action Alternative conditions. In particular, their "low" threshold of 5 mg/kg, dry weight would see an exceedance quotient of 1.1 for both operational scenarios of the Tunnel Project, relative to the No Action Alternative condition of 0.95 for the San Joaquin River at Antioch. Under the higher protective threshold they recommend, the exceedance quotient would not rise above 1.0, but would nonetheless increase from 0.59 to about 0.7. For Sacramento River at Mallard Island, average annual exceedance quotients under Tunnels Project flow conditions would increase over the No Action Alternative from 0.88 to 0.99, very close to exceedance. Modeling results do not report the error rate for the modeling here performed, so these results could represent exceedance, since they are so close to 1.0.[75]

The USEPA, in its recent comments on the Tunnels Project RDEIR/SDEIS, notes that the document "also predicts that selenium concentreations in sturgeon would increase by 12-19% as a result of the proposed project, and would exceed the FWS and NMFS benchmark for adverse impacts to sensitive species."[76]

Retirement of the drainage impaired lands of the western San Joaquin Valley has been found time and again to be the most cost-effective solution to the problem of selenium-tainted irrigation drainage.[77] Land retirement is the best and cheapest option for slowing the rate at which selenium loads and concentrations reach the Delta, and for sequestering selenium in its source rock and soils longer into the future. The natural reservoir of selenium has been documented to hold up to at least another 300 years' worth of tainted drainage at current rates.[78] The National Research Council's 2012 report on Bay-Delta sustainable water management cited this selenium reservoir as well, stating in part:

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[75] RDEIR/SDEIS, Appendix B, Table Se-7, p. B-186.

[76] USEPA Letter, October 30, 2015, p. 3.

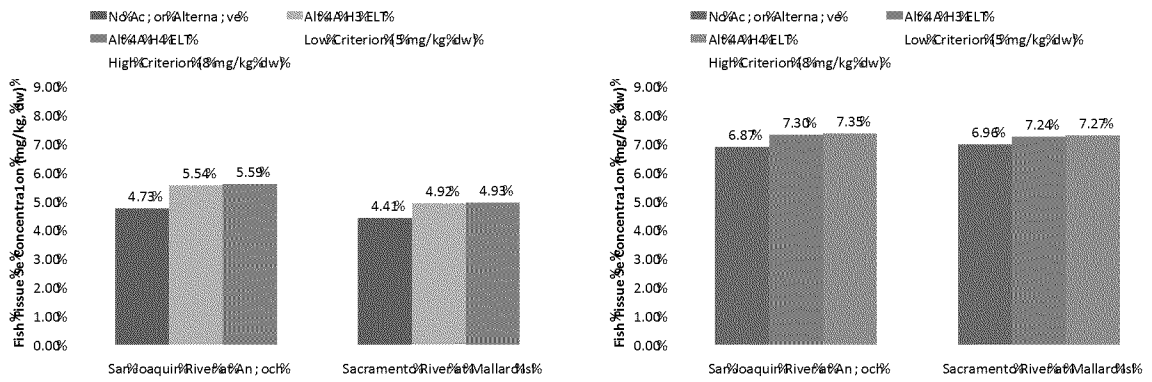
[77] Presser, T.S. and S.E. Schwarzbach. 2008. *Technical Analysis of In-Valley Drainage Management Strategies for the Western San Joaquin Valley,* US Geological Survey Open File Report 2008–1210. Accessible online at http://pubs.usgs.gov/of/2008/1210/.

[78] T.S. Presser and S.N. Luoma, 2006. *Forecasting Selenium Discharges to the San Francisco Bay-Delta Estuary: Ecological Effects of a Proposed San Luis Drain Extension,* United States Geological Survey Professional Paper 1646, cited in: T. Stroshane, *Testimony on Recent Salinity and Selenium Science and Modeling for the Bay-Delta Estuary*, plus appendices, prepared for the California Water Impact Network, August 17, 2012, for Workshop #1, Ecosystem Changes and the Low Salinity Zone, before the State Water Resources Control Board.

Irrigation drainage, contaminated by selenium from those soils, is also accumulating in western San Joaquin Valley groundwaters. The problem is exacerbated by the recycling of the San Joaquin River when water is exported from the delta. While control of selenium releases has improved, how long those controls will be effective is not clear because of the selenium reservoir in groundwater.

...Other aspects of water management also could affect selenium contamination. For example, infrastructure changes in the delta such as construction of an isolated facility could result in the export of more Sacramento River water to the south, which would allow more selenium-rich San Joaquin River water to enter the bay. The solutions to selenium contamination must be found within the Central Valley and the risks from selenium to the bay are an important consideration in any infrastructure changes that affect how San Joaquin River water gets to the bay.[79]

Figure 16
Period Average Whole Body Sturgeon Selenium

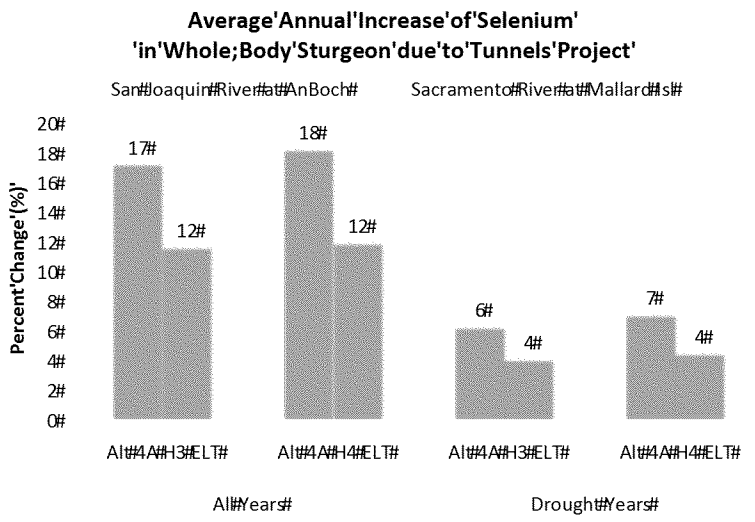


All Years Drought Years

Source: RDEIR/SDEIS, Appendix B, Table Se-5, p. B-185.

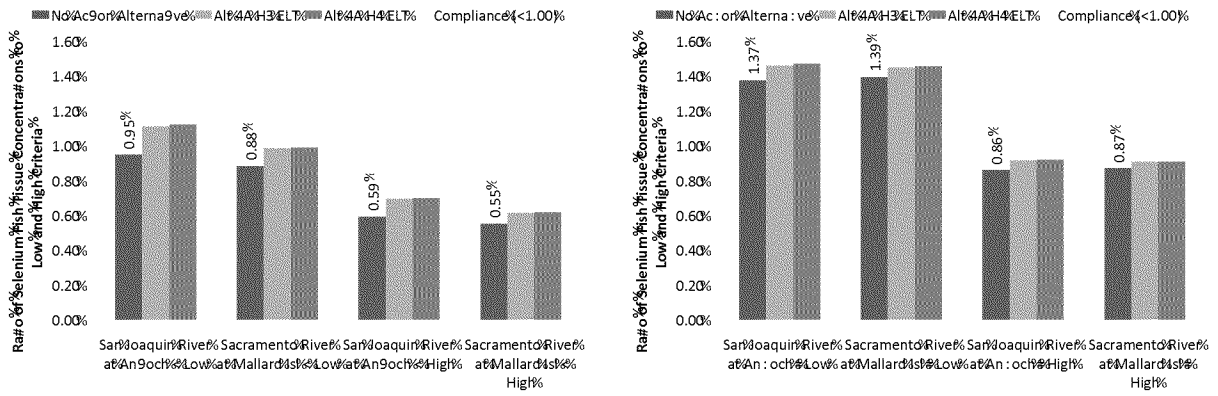
[79] National Research Council, Committee on Sustainable Water and Environmental management in the California Bay-Delta, *Sustainable Water and Environmental Management in the California Bay-Delta*, Washington, DC: The National Academies Press, 2012, p. 94. Accessible online 8 May 2014, at http://www.nap.edu/catalog.php?record_id=13394.

Figure 17



Source: RDEIR/SDEIS, Appendix B, Table Se-

Figure 18
Comparison of Annual Average of Selenium in Whole Body Sturgeon with Toxicity



All Years

Drought Years

Source: RDEIR/SDEIS, Appendix B, Table Se- 7, p. B- 186. Data Alternative for comparison purposes.

Of course, ending application of Delta waters to irrigate western San Joaquin Valley drainage impaired lands could reduce the need for deliveries to the San Luis Unit of the Central Valley Project by up to a million acre-feet per year. ***This reduction could provide by itself dramatically***

improved reliability for all other CVP contractors' allocations, without the investment of billions for the Tunnels project.

Harmful Algal Blooms

Algae occur naturally in all fresh and marine water environments. Most species are harmless under normal circumstances, but some "cyanobacteria" (also known as "blue-green algae") which use photosynthesis can "bloom" or undergo a rapid population boom during periods of slack flow, nutrient pollution conditions (such as from nitrates, nitrogen and phosphorus), and rising temperatures. Their sheer biomass can cause, according to the USEPA, a dramatic reduction or complete consumption of all dissolved oxygen in the water, suffocating oxygen-respiring organisms like fish, and can produce "cyanotoxins" that pose a significant potential threat to human and ecological health and affect taste, odor and safety of drinking water. They can degrade water ways used for recreation and as drinking water supplies.[80]

When these conditions combine, harmful algal blooms can result. These conditions are ripest in August and September in the Estuary, but drought can increase harmful algal bloom activity. The most common blue-green algae species in the Bay-Delta Estuary is called *Microcystis*. In 2014, *Microcystis* algal blooms lasted beyond October into December due to low flows and warm temperatures—water residence time was that long.[81] Its toxin is deadly to wildlife, dogs, and human beings, and exposure can cause liver cancer in humans. It is a dangerous ecological and public health threat.

The Tunnels are likely to increase residence times and slow flows in the western and central Delta. The recirculated Draft EIR/S this year acknowledges that "it is possible that increases in the frequency, magnitude, and geographic extent of of *Microcystis* blooms in the Delta would occur relative to Existing Conditions" [82]as well as compared with the "no action alternative" (or the future condition of the Delta without "California WaterFix" Tunnels).

Because it cannot meet water quality standards, the Tunnels Project cannot obtain the required Clean Water Act 401 Certification it needs for a 404 permit to build the project. To obtain CWA Section 401 certification, the project at issue must meet several CWA requirements,

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[80] USEPA Region 9, *Frequently Asked Question and Resources for Harmful Algal Blooms and Cyanobacterial Toxins*, Version 1, July 2015. Accessible at http://www2.epa.gov/sites/production/files/2015-07/documents/habs_faqs-and-resources_v1-july2015.pdf.

[81] Peggy Lehman, Staff Environmental Scientist, California Department of Water Resources, presentation to IEP 2015 Workshop, Folsom, California, "Response of Microcystis to Drought," , March 20, 2015.

[82] RDEIR/SDEIS, Section 4.3, p. 4.3.4-67.

including the requirement to meet water quality standards under CWA Section 303.[83] If these requirements are met, then either the Regional Water Quality Control Boards (RWQCB) or the SWRCB may grant Section 401 certification.[84]

As implementing U.S. EPA regulations assert[85], Section 401 certification "shall" include "a statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards." [86]In other words, the state *cannot* grant Section 401 certification to a project if there is no reasonable assurance that it will meet water quality standards. The examination of whether a project violates water quality standards does not include "balancing" factors such as economic considerations – a project either meets water quality standards, or it does not.[87] Furthermore, as confirmed by the 1994 U.S. Supreme Court decision in *PUD No. 1 of Jefferson County v. Washington Department of Ecology* (*PUD No. 1)*, CWA Section 401 certification considers the impacts of the *entire* activity – not just impacts of any particular discharge that triggers Section 401.[88] For the Tunnels Project to receive Section 401 certification, the *entire project* must show it can be built and operated so as to meet all water quality standards. This it will not do, as we show in this letter and its attachments, because water quality standards cannot be met under the currently-proposed Tunnels Project flow regimes and related effects on estuarine water quality and beneficial uses.

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[83] 33 U.S.C. § 1341(a)(1), (d). A state agency may also condition, deny or waive certification under certain circumstances. See also 33 U.S.C. § 1341(a)(1)–(2), and 33 U.S.C. § 1341(d). According to § 401(d), certification "*shall* set forth any effluent limitations and other limitations … necessary to assure that any applicant"complies with certain provisions of the CWA. The Supreme Court in *PUD No. 1 of Jefferson County v. Washington Department of Ecology* held that this includes CWA §303, since § 301 incorporates it by reference. *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, at 713–715 (1994) (PUD No. 1).

[84] In California, the Regional Water Quality Control Boards are responsible for granting water quality certification, unless the project occurs in two or more regions, in which case the SWRCB is responsible. *See* SWRCB, "Instructions for Completing the Clean Water Act Section 401 Water Quality Certification Application" (Jan. 2005), available at:www.swrcb.ca.gov/centralcoast/water_issues/programs/401wqcert/docs/instruct_401_wq_cert_app.pdf.

[85] The Supreme Court held that the EPA's interpretation is consistent with the CWA in*PUD No. 1*.

[86] 40 CFR § 121.2(a)(3); *PUD No. 1* at 712.

[87] 40 CFR § 131.11 ("For waters with multiple use designations, the criteria shall support the most sensitive use"); see also 40 CFR §131.6. As noted by the state Supreme Court, Porter–Cologne "cannot authorize what federal law forbids"; that is, California cannot allow for the "balancing away" of the most sensitive beneficial uses in a reliance on Porter–Cologne rather than the Clean Water Act. *City of Burbank v. State Water Resources Control Bd*, 35 Cal. 4th 613, 626, 108 P.3d 862 (2005).

[88] *PUD No. 1*, 511 U.S. 700 (1994). *PUD No. 1* established that so long as there is a discharge, the state can regulate an activity as a whole under §401. *PUD No. 1* at 711–712.

The CWA states that water quality standards "shall consist of the designated uses of the navigable waters involved *and* the water quality criteria for such waters based upon such uses."[89] In other words, "a project that does not comply with a designated [*i.e.*, beneficial] use of the water does not comply with the applicable water quality standards."[90] This fundamental CWA mandate does not change when the impact on beneficial uses arises from altered flow. The CWA was established specifically to "restore and maintain the chemical, *physical*, and biological integrity of the Nation's waters"—not solely to regulate "pollutants."[91] The U.S. Supreme Court addressed this issue directly in *PUD No. 1*, stating that:

> Petitioners also assert more generally that the Clean Water Act is only concerned with water 'quality,' and does not allow the regulation of water 'quantity.' This is an artificial distinction?[92]

The Court specifically took note of CWA Sections 101(g) and 510(2), which address state authority over the allocation of water as between users. The Court found that these provisions "do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation."[93] This conclusion is supported by the "except as expressly provided in this Act" language of Section 510(2), which conditions state water authority; and by the legislative history of Section 101(g), which allows for impacts to individual water rights as a result of state action under the CWA when "prompted by legitimate

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[89] 33 U.S.C. 1313(c)(2)(A) (emphasis added); *PUD No. 1* at 704. In addition to the uses to be protected and the criteria to protect those uses, water quality standards include an antidegradation policy to ensure that the standards are"sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation." *PUD No. 1* at 705; 33 U.S.C. 1313(d)(4)(B); 40 CFR § 131.6. EPA regulations add that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 CFR §131.12.

[90] *PUD No. 1,* 511 U.S. at 715. *See also* 40 CFR § 131.3(b) (U.S. EPA stating that "[w]hen criteria are met, water quality will *generally* protect the designated use," [emphasis added] indicating that numerical criteria do not always by themselves protect a designated use). Recognized beneficial uses in the Bay-Delta Estuary include, but are not limited to, agricultural supply (AGR), groundwater recharge (GWR), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Estuarine Habitat (EST), and Rare, Threatened, or Endangered Species (RARE).

[91] 33 U.S.C. § 1251(a). Emphasis added.

[92] *PUD No. 1,* 511 U.S. at 719. In *PUD No. 1*, the U.S. Supreme Court took up the question of whether Washington state had properly issued a CWA Section 401 certification imposing a minimum stream flow requirement to protect fish populations. The Supreme Court held that conditioning the certification on minimum stream flows was proper, as the condition was needed to enforce a designated use contained in a state water quality standard. *Id.* at 723. In reaching this decision, the court noted that the project as proposed did not comply with the designated use of "[s]almonid [and other fish] migration, rearing, spawning, and harvesting," and so did not comply with the applicable water quality standards. *Id.* at 714.

[93] *Id.* at 720.

and necessary water quality considerations."[94] Accordingly, these CWA provisions are not impediments to California's implementation of its CWA mandate to ensure compliance with water quality standards, *including* within the context of flows.

As noted above, in its August 2010 flow criteria report, the Water Board found that "[t]he best available science suggests that current flows are insufficient to protect public trust resources," and that "[r]ecent Delta flows are insufficient to support native Delta fishes for today's habitats."[95] However, flow regimes proposed by the current Tunnels Project rely on water quality (including flow) objectives that have been failing to protect Delta ecosystem and aquatic species beneficial uses for the last 15 years or more. These include: Water Right Decision 1641 (D-1641)[96]; the 2006 San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan; the 2009 NMFS Biological Opinion (BiOp); and the 2008 USFWS BiOp.

Further, the Tunnels Project notably incorporates "bypass flows" that ostensibly establish the minimum amount of water that must flow downstream of the planned north Delta intake. Rather than protecting Delta flow, the Tunnels Project reduces average annual Sacramento River flow downstream of the North Delta intakes.[97] Reduced flows downstream of the north Delta intakes extend all the way past Rio Vista as well.[98] Because it fails to put needed flows back into failing waterways, the Tunnels Project will violate water quality standards by failing to protect sensitive beneficial uses. These include "rare, threatened or endangered species habitat," "estuarine habitat," "spawning, reproduction, and/or early development," and other sensitive beneficial

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[94] *Id.* "See 3 Legislative History of the Clean Water Act of 1977 (Committee Print compiled for the Committee on Environment and Public Works by the Library of Congress), Ser. No. 95–14, p. 532 (1978) ('The requirements [of the Act] may incidentally affect individual water rights. . . .It is not the purpose of this amendment to prohibit those incidental effects. It is the purpose of this amendment to insure that State allocation systems are not subverted and that effects on individual rights, if any, are prompted by legitimate and necessary water quality considerations')." *See also* Memorandum from U.S. EPA Water and Waste Management and General Counsel to U.S. EPA Regional Administrators, "StateAuthority to Allocate WaterQuantities – Section 101(g) of the Clean Water Act" (Nov. 7, 1978), available at: http://water.epa.gov/scitech/swguidance/standards/upload/1999_11_03_standards_waterquantities.pdf.

[95] SWRCB, 2010 Delta FlowCriteria Report, pp. 2, 5. Accessible at http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/final_rpt080310.pdf.

[96] D–1641 requires the SWP and CVP to meet flow and water quality objectives, including specific outflow requirements, an export/import ratio, spring export reductions, salinity requirements, and, in the absence of other controlling restrictions, a limit to Delta exports of 35 percent total inflow from February through June and 65 percent inflow from July through January.

[97] See Attachment 1 in this letter, above, and Public Draft Plan § 5.3.1.1, available at: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_5_-_Effects_Analysis.sflb.ashx. See Also BDCP Draft EIR/EIS Chapter 3, *Description of Alternatives*, Table 3-17, p. 3-186.

[98] See RDEIR/SDEIS, 2015, Appendix B, Table B.7-30, pp. B-361 to B-362.

uses.[99] Chinook salmon, Central Valley steelhead, sturgeon and lamprey all migrate and spawn in this area, with Delta smelt and longfin smelt likely spawning in the lower Sacramento River, or in hydraulically connected adjacent channels. Factoring out climate change effects, juvenile and salmon smolt survival rates through the Delta to Chipps Island decrease for each run of salmon under the flow regimes put forward by proponents of the Tunnels Project.[100] The Tunnels Project will thus fail as a set of flow regimes that could support Section 401 certification for necessary Section 404 permits.

Actions that "reasonably protect" [101] rather than "protect" the beneficial use are insufficient. If multiple beneficial uses are at stake, adopted flow criteria must protect the *most sensitive* beneficial use (*i.e.*, they cannot "balance" away uses) and must be based on science.[102] As the state Supreme Court found, Porter-Cologne balancing provisions[103] that provide only "reasonable" protection "cannot authorize what federal law forbids." [104] The more protective CWA water quality standard requirements take precedence over weaker Porter-Cologne language; ecosystem and species needs cannot—and must not—be balanced away.

USEPA commented last year on the Bay Delta Conservation Plan and its draft EIR/EIS that "[b]ecause the location of X2 [the estuarine habitat water quality objective] is closely tied to freshwater flow through the Delta, the proposed project would have a strong influence on this parameter, yet the Draft EIS does not analyze each alternative's impacts on aquatic life in the

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[99] State Water Resources Control Board, *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta*, December 13, 2006, p. 9.

[100] By "factoring out climate change effects," we refer to the Tunnels Project proponents' preference for environmental impact comparisons between the No Action Alternative and Alternative 4A (either Scenarios H3 or H4). This comparison reflects the future migration prospects of these fish with and without the proposed Tunnels Project. Even by their preferred comparison of the Tunnels Project with the No Action Alternative, juveniles and smolts have lower survival rates through the Delta to Chipps Island.

[101] SWRCB, "Comments on the Second Administrative Draft Environmental Impact Report/Environmental Impact Statement for the Bay Delta ConservationPlan," p. 1 (July 05, 2013), available at: baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/State_Water_Resouces_Control_Board_Comments_on_BDCP_EIR-EIS_7-5-2013.sflb.ashx. Emphasis added.

[102] EPA regulations state that "criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use." *See* 40 CFR §131.11; *see also* 40 CFR §131.6.

[103] Calif. Water Code § 13000.

[104] *City of Burbank v. State Water Resources Control Bd*, 35 Cal.4th 613, 626, 108 P.3d 862 (2005) (citing the Supremacy Clause).

context of this relationship."[105] The Bay-Delta Water Quality Control Plan's estuarine habitat water quality objective will likely be violated by the Tunnels Project as well. In the RDEIR/SDEIS nor the Draft EIR/EIS there is no modeling of how changes in X2, the Delta's estuarine habitat water quality objective may affect a variety of estuarine species. X2, which measures the approximate center of the estuary's low salinity zone relative to the Golden Gate, was shown last year in BDCP modeling to migrate upstream under the Tunnels' influence relative to existing conditions and the No Action Alternative.[106] The modeled upstream migration of X2 means that critical habitat for estuarine species will shrink, especially relative to the No Action Alternative (Figure 19). Species abundance and X2 are negatively correlated: when X2 moves further from the Golden Gate, species abundances typically decrease as the size of the Low Salinity Zone decrease (with lower flows), with few exceptions.[107] This apparently remains true of the RDEIR/SDEIS, in which no new modeling is conducted.

The State Water Board has indicated tentative interest in designating subsistence fishing as a beneficial use statewide, including in the Delta.[108] Our organizations and others would certainly welcome such a beneficial use designation in the Delta as elsewhere because protection of the most sensitive ecological and estuarine beneficial uses will also protect subsistence fishing as a beneficial use. Humans are connected to these other beneficial uses, no less so in the Bay-Delta Estuary.

The Tunnels Project will also violate numerous pollutant criteria mentioned above with drastic consequences for public health and vitality of the region's ecosystems and water-dependent economic sectors like tourism, recreation, agriculture, and subsistence fishing. On this score, the Tunnels Project will further violate water quality standards, precluding the State Water Resources Control Board from certifying the project under Clean Water Act Section 401.

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[105] USEPA, "Draft Environmental Impact Statement for the Bay Delta Conservation Plan, San Francisco Bay Delta, California (CEQ# 20130365), August 26, 2014, p. 5. Accessible at http://www.friendsoftheriver.org/site/DocServer/8-26-14_EPA_Cmmnt_on_BDCP.pdf?docID=9539.

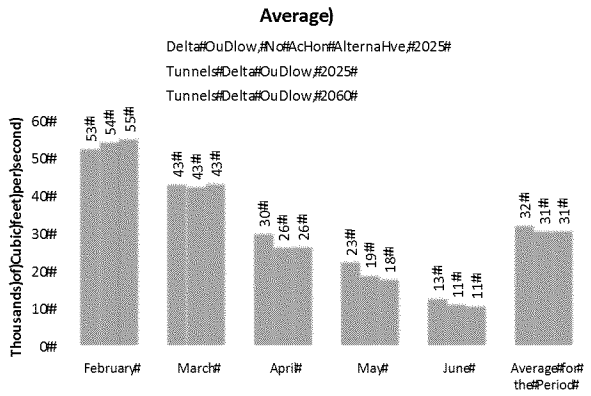
[106] See Figure 7, p., 66 of Environmental Water Caucus comments on Bay Delta Conservation Plan, June 11, 2014; accessible online at http://ewccalifornia.org/reports/bdcpcomments6-11-2014-3.pdf.

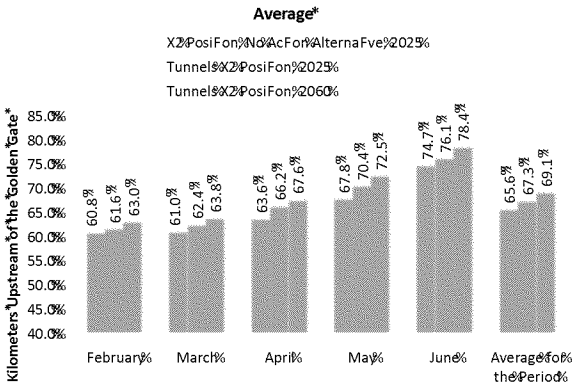
[107] Panel Summary Report on Workshop on Delta Outflows and Related Stressors, May 5, 2014. Accessible online at http://deltacouncil.ca.gov/sites/default/files/documents/files/Delta-Outflows-Report-Final-2014-05-05.pdf. This report identifies "key papers" in which the relationships of X2, Delta outflow, and species abundances are anchored.

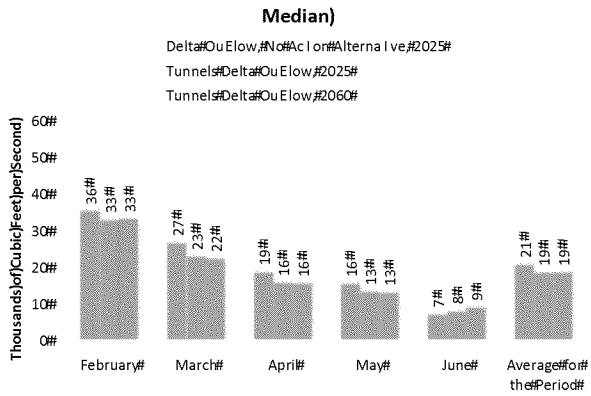
[108] Email from Esther Tracy of State Water Resources Control Board, Office of Public Participation, to Andria Ventura, Clean Water Action, "State Water Resources Control Board Beneficial Uses," May 6, 2014, forwarded to Colin Bailey of Environmental Justice Coalition for Water, thence to Tim Stroshane, Environmental Water Caucus consultant. Tracy's message primarily concerns subsistence fishing by California Indian Tribes.

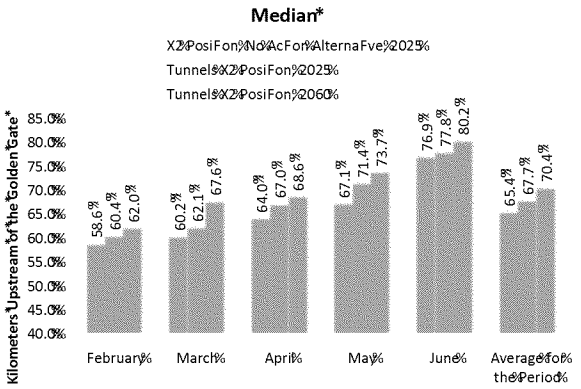
Figure 19
Delta Outblow to Decrease in Future Scenarios with Average X2 Position to Move Eastward with Tu

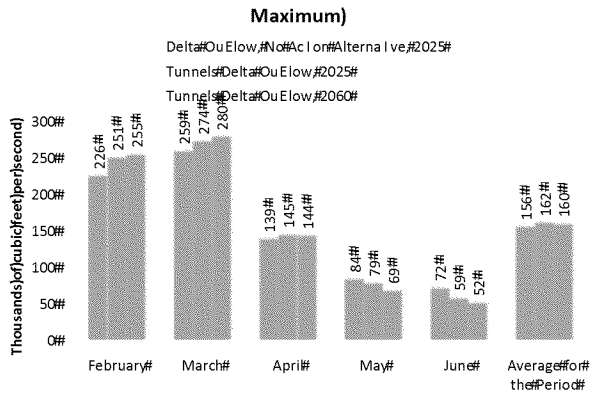
Delta Outblow **X2 Position**

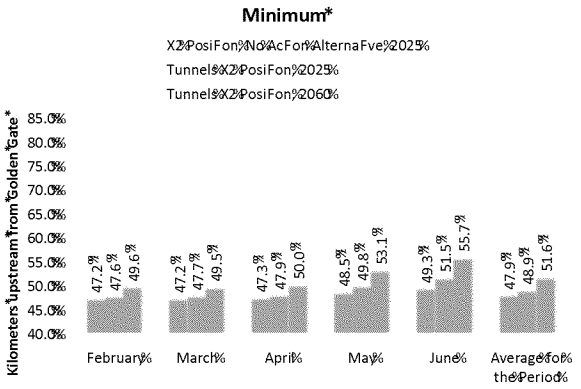












Figure꿹□ηη19
Delta꿹□ηηOutblow꿹□ηηto꿹□ηηDecrease꿹□ηηin꿹□ηηFuture꿹□ηηScenarios꿹□ηηwitl
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Delta꿹□ηηOutblow **X2꿹□ηηPosition**

Sources:꿹□ηηBay꿹□ηηDelta꿹□ηηConservation꿹□ηηPlan,꿹□ηηAppendix꿹□ηη5.C.,꿹□ηηAttachment꿹□ηη5(
C.A-□42,꿹□ηηp.꿹□ηη5C.A-The꿹□ηηAverage꿹□ηηNOTE꿹□ηηvalue꿹□ηηis꿹□ηηskewed꿹□ηηsomewhat꿹□ηηby꿹□ηηpr
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In summary: implementation of the Tunnels Project will require a CWA Section 404 permit from the Army Corps of Engineers, which it cannot receive unless the state issues a CWA Section 401 certification. The certification in turn cannot be legally issued unless the project as a whole (*i.e.*, rather than the individual discharge mandating the 404 permit) meets water quality standards, which includes meeting beneficial uses designed to protect Delta species and ecosystems. The Tunnels Project will fails across the board; we provide more details of this failure in Attachment 5 to this letter.

There is no defensible anti-degradation analysis. A cornerstone of the State Water Board and Regional Water Board's regulatory authority is the Antidegradation Policy (Resolution 68-16), which is included in the Basin Plans as an appendix. However, the Tunnels Project Draft EIR/ EIS and RDEIR/SDEIS fail to discuss or analyze constituents which will "degrade" water quality. These documents do not evaluate whether the designated beneficial use is degraded and what it means for Clean Water Act compliance.

Section 101(a) of the Clean Water Act (CWA), the basis for the antidegradation policy, states that the objective of the Act is to "restore and maintain the chemical, biological and physical integrity of the nation's waters." Section 303(d)(4) of the CWA carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR § 131.12 before taking action to lower water quality. These regulations (40 CFR § 131.12(a)) describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy and implementing procedures.

The CWA requires the *full* protection of identified beneficial uses. The Federal Antidegradation Policy, as required in 40 CFR 131.12 states, "The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following: (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The Delta is classified as a Tier II, "high quality," waterbody by US EPA and the SWRCB. EPA Region 9's guidance on implementing antidegradation policy states, "All actions that could lower water quality in Tier II waters require a determination that existing uses will be fully maintained and protected." [109]

[109] EPA, Region 9, Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12, page 7.

California's antidegradation policy is described in the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 ("APU 90-004") and USEPA Region IX, ("Region IX Guidance"), as well as Water Quality Order 86-17. [110]

California's Antidegradation Policy (Resolution 68-16) requires that:

- Existing high quality water will be maintained until it has been demonstrated that any change will be with the maximum benefit to the people of the State.
- The change will not unreasonably affect present and anticipated beneficial uses.
- The change will not result in water quality less than prescribed in the policies.
- Any activity which produces a waste or increased volume or concentration will be required to meet waste discharge requirements using the best practicable treatment or control of the discharge necessary to assure that neither pollution nor nuisance will occur and the highest water quality with maximum benefit to the people of the state will be maintained.

While California's Antidegradation Policy requires that, "[t]he change will not unreasonably affect present and anticipated beneficial uses and the change will not result in water quality less than prescribed in the policies," the Federal Antidegradation Policy requires a "determination that existing uses will be fully maintained and protected." [111]

The Tunnels Project will reduce flows and result in poorer water quality for a number of constituents, including boron, bromide, chloride, electrical conductivity, nitrate, organic carbon, some pesticides, mercury and selenium. The Delta is currently impaired for many of the constituents that will increase under the proposed alternative. Several water quality constituents are detailed in Attachment 5 where degradation is expected should the Tunnels Project be constructed and operated.

Even if DWR and the Bureau of Reclamation provide an adequate antidegradation analysis of the Tunnels Project, the point remains that they cannot move forward on a 401 certification from the State Water Resources Control Board if any water quality standards are not met. The antidegradation analysis is supposed to ensure they comply with any and all water quality standards, but there is clear evidence that cannot and will not.

The Proposed Project is not the Least Environmentally Damaging Practicable Alternative (LEDPA). Finally, the Tunnels Project also fails to meet another Section 404 requirement, "[t]he requirement [under CWA § 404(b)(1)...that the project proponent must demonstrate that the

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[110] "Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12" (3 June 1987).

[111] Draft BDCP EIR/EIS, 2013, page 8-408.

project is the [Least Environmentally Damaging Practicable Alternative] LEDPA."[112] "A proposed action is not the LEDPA simply because a federal agency is a partner and chooses that proposed action as its preferred alternative."[113] The Tunnels Project appears to be the *most* environmentally damaging alternative possible. It most definitely is not the least damaging, and therefore, it is not the LEDPA.

Over two years ago, EPA pointed out that "Chapter 8 of the [Administrative Draft EIS] ADEIS indicates that, as proposed, all project alternatives of the BDCP would result in adverse effects to one or more beneficial uses within the affected water bodies."[114] EPA also explained that "The DEIS should sharply distinguish between alternatives and evaluate their comparative merits, consistent with 40 CFR 1502.14(b)."[115] Over one year ago, EPA explained to state agencies that:

> Other reasonable alternatives could be developed by incorporating a suite of measures, including water conservation, levee maintenance, and decreased reliance on the Delta. Such alternatives would be consistent with the purpose and need for the project, as well as with the California Bay-Delta Memorandum of Understanding among Federal Agencies and the Delta Reform Act of 2009.[116]

The "alternatives" of the Tunnels Project presented in the Draft EIR/EIS and the RDEIR/SDEIS are nothing more than peas out of the same pod.[117] There has also been a complete failure on the part of Tunnels Project proponents to obtain and present the Reasonable and Prudent Alternatives (RPA) required under the Endangered Species Act in the RDEIR/SDEIS.[118]

Under the NEPA Regulations, "This [alternatives] section is the heart of the environmental impact statement." The alternatives section should "sharply" define issues and provide a clear basis for choice among options by the decision-maker and the public. 40 C.F.R. § 1502.14. Moreover, if "a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion."[119]

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[112] USEPA, Preliminary Administrative Draft Comments for the Bay Delta Conservation Plan DEIR/S p. 2, April 26, 2012.

[113] EPA, BDCP DEIS Corrections and Additional Editorial Recommendations, p. 1, August 27, 2014.

[114] EPA's Comments on BDCP ADEIS, p. 3, July 3, 2013.

[115] *Id.* p. 2.

[116] EPA Detailed Comments on the Draft Environmental Impact Statement for the Bay Delta Conservation Plan; August 26, 2014, p. 13.

[117] http://restorethedelta.org/wp-content/uploads/2015/09/7-22-15-BDCP-alts-ltr-pdf.pdf.

[118] http://restorethedelta.org/wp-content/uploads/2015/09/9-9-15-BDCP-final-ltr-pdf.pdf.

[119] 40 C.F.R. § 1502.9(a).

Operation of the Tunnels Project would have enormous adverse environmental impacts causing and worsening violations of water quality standards. We understand that the exporters and their supporters wish to take enormous quantities of water away from the lower Sacramento River. But we have a government of laws, not of men and women. It is time either to drop this horrendously damaging and expensive project or follow the law whether certain interests want to do so or not. If the project is not dropped, it will be necessary to recirculate another Draft EIR/ EIS for public and decision-maker review that presents a reasonable range of alternatives that would not include the Tunnels Project and that would finally began to increase flows through the Delta. The range of reasonable alternatives required by NEPA must include the Reasonable and Prudent Alternatives (RPA) produced pursuant to the Endangered Species Act and the Least Environmentally Damaging Practicable Alternative (LEDPA) pursuant to the Clean Water Act.

The RDEIR/SDEIS is deficient for purposes of processing Corps permit applications.

We note that data provided on Tunnels Project impacts to waters of the United States in Appendix E of the RDEIR/SDEIS is anticipated to involve 595.3 acres of "impact acreages" facing permanent impacts, another 179 acres of temporarily impacted acreage to be treated as permanent (and therefore compensated through No Net Loss policy) and a total of 1,931 acres of temporary impact acreage. Total permanently impacted acreage is reported by the Corps of Engineers' description at its web site concerning the Tunnels Project proponents' 404 permit application as 284.03 acres and 490.98 acres of non-wetland waters. It is unclear how these two methods of accounting for permanent versus temporary impacts with wetland and non-wetland water bodies given what is found in Appendix E.

The RDEIR/SDEIS fails to disclose the location or resource description of those water bodies in relation to project features.

The Clean Water Act 404 program requires that the Least Environmental Damaging Project Alternative (LEDPA) be identified. The RDEIR/SDEIS fails to disclose which, if any, of the alternatives (or any of those from the Draft EIR/EIS last year) is or should be considered the LEDPA.

The RDEIR/SDEIS, as we pointed out earlier in these comments, incorporates no findings of jeopardy/no jeopardy to listed species, reasonable and prudent alternatives, or incidental take statement and so is incomplete and therefore inadequate for evaluating dredge and fill permit application information and water quality certification needs.

Restore the Delta incorporates by reference in these comments and supports the contentions of Local Agencies of the North Delta (LAND)'s recent letter to the Corps of Engineers:

- The Tunnels Project would at a minimum result in changes to water levels, flow patterns and associated tides in relation to levee elevations;
- Increase salinity in the north Delta;
- Impair flood management operations of local reclamation districts;

- Interfere with water and land-based recreation along Delta water ways intersected by the Tunnels Project's alignment and surface facility element;
- Destroy cultural resources, and imperil state and federally listed plant and wildlife species.[120]

Moreover, LAND notes that the application was incomplete and had not received benefit of an officially authorized signature. In addition, wetland delineations included in the application were apparently mapped remotely and figures included in the application were completed without authorization for entry by landowners that would be affected by these delineations.

According to the Delta Independent Science Board's September 30, 2015, final review, the RDEIR/SDEIS fails to state clearly the sequence and provide detail of wetlands delineation for a 404 permit application: avoid wetland loss, because it is easier to protect existing wetlands than it is to produce successful new ones; if loss cannot be avoided, the minimize its loss through project siting and design; and finally, if loss cannot be minimized sufficiently, then plan for and provide compensation of wetlands (the No Net Loss policy).[121] A logical place to have provide a full and complete analysis of the status of waters of the United States in relation to Tunnels Project facilities in the Delta would have been the "Surface Waters" sections of the RDEIR/ SDEIS. They are located in the legal Delta and the Plan Area of the proposed Tunnels Project. Alternative descriptions of the location of intakes, intermediate forebay, vertical shafts, control buildings, power facilities, levee work, and other aspects of wetland delineation are not found in this section. The current RDEIR/SDEIS surface waters sections cover only state and federal water project reservoir operations, river flows, and reverse flows in relation to flood potential and south Delta pumping operations. There is no discussion of impacts of project construction, and dredge and fill management and disposal on wetlands of the Delta. ***Appendix E of the RDEIR/ SDEIS fails to provide this information as well, and is therefore inadequate. The RDEIR/ SDEIS should be recirculated with updated and accurate information concerning efforts by the Tunnels Project proponents to avoid, minimize and, if necessary, compensate for wetlands impacts.***

In addition to the 404 permit application, the Tunnels Project must seek and obtain permission to affect navigable waters of the United States, either in, under or over the water. Neither Appendix E nor Chapter 19 of Appendix A of the RDEIR/SDEIS lack sufficient information showing locations, sizes and uses of these waters and where and how Tunnels Project design, construction and operation would affect navigable waters of the United States. ***The RDEIR/SDEIS is therefore inadequate. It should be updated with information that is understandable by the***

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[120] Letter of Osha R. Meserve, representing Local Agencies of the North Delta, to Michael S. Jewell, Chief, Regulatory Branch, US Army Corps of Engineers, Sacramento District, *Comments on Department of Water Resources' 2015 California Water Fix Project Section 404/10 Application*, September 24, 2015, p. 2.

[121] Delta Independent Science Board, *Review of environmental documents for California WaterFix*, September 30, 2015, p. 6. Accessible online at http://deltacouncil.ca.gov/docs/final-delta-isb-comments-partially-recirculated-draft-environmental-impact-reportsupplemental.

public and that conforms to law, and another draft EIR/EIS should be recirculated. It is deficient for supporting the Tunnels Project Application for Corps permits.

Section 4.3.2 of the RDEIR/SDEIS addresses "surface waters." Its subjects include flood potential of CVP-SWP reservoir flood storage capacity, highest monthly river flows on the Sacramento and San Joaquin Rivers related to flood potential, and reverse flows in Old and Middle Rivers (including construction activity impacts on runoff and flooding potential in this corridor of the Delta. No baseline or existing conditions information about flood control facilities in the Plan Area of the Delta and Tunnels Project is provided in this section, nor is there a reference to baseline information provided to Chapter 6 of the Draft EIR/EIS last year where some of this information is provided. The RDEIR/SDEIS in Section 4.3.2 does not state that this analysis is somehow relevant to the 404 permit, nor does it attempt to provide any analysis or findings from the alternative description that would support the Tunnels Project application to the Corps for a 404 permit. No attempt is made to relate the change in reverse flow conditions, changes to or increases in runoff patterns from Tunnels Project construction or implementation of Environmental Commitments 3, 4, and 6-11, the potential to create or contribute polluted runoff water or exceed stormwater facilities' capacity, or expose people or structures to significant risks of loss, injury or death from flooding due to construction of the Tunnels Project to specific affected levee systems or deep water ship channels or navigable streams or dredge/fill disposal sites in this Section. The impact discussion is unconnected to the concerns of the Corps of Engineers in evaluating the potential impacts of the proposed Tunnels Project on Delta levees (levees that comprise state, federal and locally maintained operated levees that make up flood protection throughout the Delta), navigable water ways, and dredge/fill disposal options for the project.

Moreover, Mitigation Measure SW-4, "Implement Measures to Reduce Runoff and Sedimentation," states that "proponents will implement measures to prevent an increase in runoff volume and rate from land-side construction areas and to prevent an increase in sedimentation in the runoff from the construction area as compared to Existing Conditions." There is no project-level disclosure in the RDEIR/SDEIS as to where, when, and how such mitigations will be handled. Such information should already be in-hand for the RDEIR/SDEIS since such mitigations are necessary for project-level review by permitting agencies (for Section 401 water quality certification, 404 dredge/fill permitting, navigable waters and federal facilities impacts review). Project level analysis is deferred to "drainage studies" to be prepared for each construction site later.

There is no connection of this mitigation to the actual construction schedule described elsewhere in the Draft EIR/EIS or the RDEIR/SDEIS.[122] Moreover, it is clear that while project-level information is needed by the Corps of Engineers to process the 404 permit, Tunnels Project proponents fail to provide it in this RDEIR/SDEIS. The RDEIR/SDEIS is thus inadequate as a CEQA and NEPA document, and inadequate for the purpose of fully disclosing project-level impacts and mitigation measures at specific locations, at specific times, and under specific

[122] Draft EIR/EIS, Chapter 6, p. 6-59 to 6-60.

conditions of runoff and flood control capacity, needed to comply with Corps regulations governing permit issuance.

The handling of these matters strongly suggests that the Tunnels Project proponents want on one hand to have the RDEIR/SDEIS represent a project-level review for permitting purposes (so it can "jump-start" construction and still try to comply with Delta Reform Act limitations on construction); and on the other hand, they have only program-levels of description and analysis (where available) implying that, as much as possible, they hope to comply with CEQA and NEPA using a "program" level of evaluation and review rather than a project-level document with its necessarily greater level of detail, and hoping that such level of analysis and mitigation will be legally sufficient. This approach is as hasty as it appears wasteful.

The ambiguity and tension between project-level and program-level review in the RDEIR/SDEIS is also visible in the analysis of "wind fetch." Mitigation Measure SW-8 addresses "wind fetch" mitigation to reduce potential damage from wind-driven waves across expanded open water areas at habitat restoration locations. Once again, no project-level specifics are provided in the Draft EIR/EIS. Instead, the Draft EIR/EIS states that "these measures will be designed based upon wind fetch studies that will be completed prior to construction of habitat restoration areas with increased open water in the Delta." [123] This mitigation applied to last year's preferred alternative, the conservation strategy of Bay Delta Conservation Plan and its Alternative 4 configuration at that time. The RDEIR/SDEIS continues to rely on this mitigation measure as mitigation for the Tunnels Project this year, without acknowledging the nearly entire deletion of BDCP related habitat restoration work. Will that create more or less need for wind fetch studies? ***Whatever the case, it is another instance of an unlawful approach to CEQA mitigation. It should be corrected and a new EIR/EIS recirculated.***

These same comments apply to Sections 4.4.2, addressing Alternative 2D, and 4.5.2, addressing Alternative 5A since the same project-level / program-level impact analysis and mitigation problems exist there.[124]

In addition, these sections refer at Impact SW-7 in Sections 4.3.2, 4.4.2, and 4.5.2 to a Mitigation Measure SW-7 in Alternative 1A that is supposed to be described under Alternative 1A in the Draft EIR/EIS. We referred back to Impact SW-7 and find no such Mitigation Measure SW-7 narrative provided there.[125] ***The RDEIR/SDEIS and the Draft EIR/EIS are both deficient for reliance on a phantom flood control-related mitigation measure, and are therefore inadequate. The Tunnels Project RDEIR/SDEIS must be revised, corrected, and recirculated again. This is also deficient for permit processing purposes.***

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[123] Draft EIR/EIS, Chapter 6, p. 6-63.

[124] RDEIR/SDEIS, Section 4.4.2, pp. 4.4.2-6 to 4.4.2-10 for Alternative 2D; and Section 4.5.2, pp. 4.5.2-6 to 4.5.2-10 for Alternative 5A.

[125] Draft EIR/EIS, Chapter 6, p. 6-62.

The Section 14 review by the Corps need only focus on Tunnels Project's effects on the Sacramento and San Joaquin River flood control projects and the Stockton Deep Water Ship Channel, but the RDEIR/SDEIS is thoroughly deficient for purposes of understanding the Tunnels Project's on the entire spectrum of flood control facilities in the Delta. A logical place to provide a full and complete analysis of the status of flood control facilities in relation to Tunnels Project facilities in the Delta would have been the "Surface Waters" sections of the RDEIR/ SDEIS. There is no mention in Appendix E of the Delta Stewardship Council's current process of evaluating and developing its Delta Levee Investment Strategy. There is no data provided in the RDEIR/SDEIS or Appendix E on levee mileage operation and maintenance responsibilities for state, federal and local agencies with levee responsibilities. There is no effort in the RDEIR/ SDEIS or its Appendix E to analyze which entities' levees would be directly affected by Tunnels Project design, construction, and operational activities. ***These omissions render the RDEIR/ SDEIS incomplete and therefore inadequate for Corps permit processing. It should be updated with information that is understandable by the public and that conforms to law, and another draft EIR/EIS should be recirculated.***

Appendix E acknowledges that additional historic preservation and flood risk analysis must be performed under National Historic Preservation Act Section 106 (including programmatic agreement execution and Native American tribal consultation) and Executive order 11988 concerning floodplain modification and development. None of these sections of Appendix E provide substantive analysis and evidence of compliance with these important federal environmental review requirements. What is provided is little more than a glorified checklist: "yes we need to do these things." These things must be done in public and they are required to be done through established public processes that must be completed in draft environmental documents circulated to the public prior to issuance of the Final EIR/EIS on the Tunnels Project. Chapter 19 merely states that no Tunnels Project facilities intersect at the surface with any transport or navigation-related facilities in the Delta, without demonstrating it. ***Absence of evidence that these processes have been completed and their analysis and findings put to use means the current RDEIR/SDEIS is inadequate. It should be updated with evidence that these two processes have been complied, and another draft EIR/EIS should be recirculated. Without having completed these analyses and processes, DWR's application is incomplete and deficient for permit processing purposes.***

We reiterate that the Tunnels Project is not the Least Environmentally Damaging Practicable Alternative (LEDPA). Finally, the Tunnels Project also fails to meet another Section 404 requirement, "[t]he requirement [under CWA § 404(b)(1)...that the project proponent must demonstrate that the project is the [Least Environmentally Damaging Practicable Alternative] LEDPA."[126] "A proposed action is not the LEDPA simply because a federal agency is a partner and chooses that proposed action as its preferred alternative."[127] The Tunnels Project appears to

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[126] USEPA, Preliminary Administrative Draft Comments for the Bay Delta Conservation Plan DEIR/S p. 2, April 26, 2012.

[127] EPA, BDCP DEIS Corrections and Additional Editorial Recommendations, p. 1, August 27, 2014.

be the *most* environmentally damaging alternative possible. It most definitely is not the least damaging, and therefore, it is not the LEDPA.

The Corps in its March 2013 paper states that once DWR submits information to the Corps on "practicable alternatives, the Corps "intends to make a preliminary determination regarding the Least Environmentally Damaging Practicable Alternative (LEDPA) under the 404(b)(1) for CM1 that meets its overall project purpose. Project phases and related timing of the 404/10 and Section 408 authorizations will be acknowledged in this step." [128] We respectfully request detailed clarification of the LEDPA process in the next recirculated Draft EIR/EIS. What is to be the scope of these alternatives aiming to arrive at a LEDPA? How do they relate, if at all, to CEQA and NEPA alternatives analysis and the need for the range of alternatives to be reasonable? What avenues are available to the public for participating in the review, analysis and evaluation of the LEDPA?

Finally, we recall that the Army Corps of Engineers stated in March 2013, when the Tunnels Project was still expected to be a habitat conservation plan, that the Tunnels Project proponents "intend for the BDCP EIR/EIS to be a project level document for the purpose of supporting the issuance of state and federal fish and wildlife agencies of take authorizations….It will also serve as a programmatic document for the actions set out in the BDCP and provide project-level detail for the proposed construction of a new SWP north of Delta intake facilities and conveyance and the operations of new intakes and existing SWP facilities, known as Conservation Measure 1…" [129] The Corps then provided a proposed schedule that one year later had already slipped substantially from its anticipated issuance of Corps issuing Section 408 (RHA Section 14) permissions and 404/10 permits for all CM1 phases in "late 2015 through 2018." It is now late 2015 and the Tunnels Project still does not have project-level information needed by the Corps of Engineers in the RDEIR/SDEIS.

We understand that the Corps, as a cooperating agency, "will provide input" to the Tunnels Project proponents so that the EIR/EIS can be used by the Corps "to the maximum extent possible to make future permit decisions." We observe there is much work left to do in that regard, because the Tunnels Project is so fundamentally unlawful, flawed, and poorly organized that it will be a monumental task to take this sow's ear and render it a silk purse—let alone permit its construction and operation.

Neither the RDEIR/SDEIS nor DWR's permit application provide a clear basis for each delineated wetland.

We were unable to find in DWR's permit application information clear explanation for how each wetland identified was delineated. What criteria applied in each case? How was the determination made? Did DWR staff follow a particular method, since they apparently relied

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[128] *Ibid.*, p. 3.

[129] US Army Corps of Engineers, "BDCP: Permit Application Approach for Conservation Measure 1," March 2013, p. 1.

almost exclusively on remote sensing data consisting of aerial photographs or Google Earth imagery.

Which determinations apply to the 404 component of the application and which apply to the RHA Section 14 and 10 compoents of the application? Different criteria apply, of course. At this stage the public has no assurance from either DWR or the US Army Corps of Engineers that proper procedures for wetland delineation of waters of the United States were followed.

This is important not only for the Delta landowners whose lands have been remotely designated as waters of the United States. It is important for determining the validity of which waters really deserve such designation and what the nexus of this designation is to the Clean Water Act's and case law requirement that the designation serve some purpose related to interstate commerce. Were migratory bird or fish species involved? If so, which wetlands serve as habitat or food source?

Also related to the basis for wetland delineation is which regulatory rule for determining waters of the United States is used as the basis for finalizing the Corps' permit for the Tunnels Project. Other states have enjoined the Corps and EPA's issuance of the final rule in 2015, leaving the 1986 rule to apply in their states, but California is not among them. Is it definite that the Corps will apply the 2015 final rule to the Tunnels Project?

The Tunnels Project application does not meet Environmental Justice legal standards.

The State of California defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.[130] Federal and state laws require agencies to consider environmental justice and to prohibit discrimination in their decision-making processes. The Presidential Memorandum accompanying the Federal Executive Order (EO) 12898 (1994) singles out NEPA and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices. The Tunnels Project fails to meet these legal requirements, including:

1. ***CEQA participation requirements***— CEQA requires a process that provides an opportunity for meaningful participation of the public. According to Public Resources Code Section 21061: "The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project can be minimized; and to indicate alternatives to such a project." Public Resources Code section 21003(b) provides: "Documents prepared pursuant to [CEQA] should be organized and written in such a manner that will be meaningful and useful to decision makers and to the public." CEQA Guidelines section

[130] California Government Code § 65040.12(c).

15201 explains that "Public participation is an essential part of the CEQA process. Each public agency should include provisions in its CEQA procedures for wide public involvement . . . in order to receive and evaluate public reactions to environmental issues relating to the agency's activities." RDEIR/SDEIS fail to meet the purpose of CEQA and has obstructed meaningful and useful means to public participation. Lead agencies fail to translate critical documents and conduct sufficient outreach to affected communities to facilitate their meaningful participation.

2. ***NEPA participation requirements and Equal Justice Executive Order 12898***: Federal Executive Order (EO) 12898 (1994), Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires Federal agencies to make environmental justice part of their mission and to develop environmental justice strategies. The Presidential Memorandum accompanying the Executive Order specifically singles out NEPA, and states that "[e]ach Federal agency must provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices." [131] RDEIR/SDEIS fail to meet NEPA participation requirements and the Presidential Memorandum for effective community participation in consultation with affected communities and improving the accessibility of public meetings, crucial documents, and notices.

3. ***Title VI of the Civil Rights Act of 1964*** provides: "No Person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." [132] RDEIR/SDEIS fails to meet Title VI of the Civil Rights Act of 1964, by failing to provide sufficient documents for information affecting limited English speaking communities, thus excluding them from participation.

4. ***California Government Code section 11135 (a) and implementing regulations in the California Code of Regulations Title 22 Sections 98211 (c) and 98100.*** Government Code 11135(a) provides: "No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, genetic information, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded

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[131] Memorandum from President Clinton, March 1994, available at http://www.epa.gov/fedfac/documents/executive_order_12898.htm.

[132] Executive Order 13166 "Improving Access to Services for Persons with Limited English Proficiency," See 65 Fed. Reg. 50,121 (Aug. 16, 200). EPA "Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 69 Fed. Reg, 39602. (June 25, 2004). Lau v. Nichols, 414 U.S. 563 (1974) providing that National Origin Discrimination to Limited English Speakers. See also Executive Order 13166, 65 Fed. Reg. 50,121 121 (Aug. 16, 200), and 69 Fed. Reg, 39602 (June 25, 2004).

directly by the state, or receives any financial assistance from the state." RDEIR/SDEIS fails to meet California Government Code section 11135 (a) and California Code of Regulations Title 22 Sections 98211 (c) and 98100 by unlawfully denying full and equal access to documents for EJ communities.

5. ***The Dymally-Alatorre Bilingual Services Act***—Government Code Sections 7290-7299.8 requires that, when state and local agencies serve a "substantial number of non-English speaking people," they must (among other things) translate documents explaining available services into their clients' languages. RDEIR/SDEIS fails to meet the Dymally-Alatorre Bilingual Services Act by not providing at minimum the Executive Summary in languages other than English.[133]

Language Accessibility and Public Participation. Tunnels Project proponents have still failed to respond adequately to requests for materials and outreach in Spanish and other languages. Currently, only some documents (e.g., Fast Facts) are available in five languages other than English, but they only present promotional information that is too limited in scope for use by the target audience to engage meaningfully in the decision-making process. Moreover, the promotional narrative is misleading about impacts of the Tunnels Project.

The Fast Facts documents issued this summer at the July open house events claim to address certain issues raised in comments received on last year's Draft EIR/EIS. However, nowhere in this four-page document are negative impacts of the tunnels mentioned—on public health, health of communities, water quality and subsistence fishing, impact on small communities, air quality, etc. RDEIR/SDEIS documents are still not available in other languages, thus making them inaccessible not just to individuals, but to many communities as a whole which have a high percentage of limited English speakers.

In addition, when environmental justice community members and partners have called the contact number for more information in Spanish, they are prompted to leave a message. After leaving a message, our colleagues reported that the messages were returned only after a week had passed. Immediate questions or concerns were left unanswered or referred to the Fast Fact sheet for answers that do not exist on those sheets.

As noted in a joint May 28, 2014, letter regarding the lack of access for limited English speakers, the environmental justice survey completed to support Chapter 28 of the EIS/EIR (Environmental Justice) excluded non-English speakers within the Delta. Since then, no efforts by Tunnels Project proponents. Thus, EJ legal standards concerning language accessibility are ignored have been made to publish even the Executive Summary in languages other than in English.

Last year, we also commented that the closing of the BDCP forum to critical comment is contrary to the promise of encouraging public participation. This year, the two open house sessions held on July 28, 2015, in Sacramento and the second on July 29, 2015, in Walnut Grove

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[133] California Government Code Sections 7290-7299.8.

were ostensibly conducted for the purpose of collecting public feedback on the then-current status of the BDCP and Tunnels Project. The open house process once again avoided meaningful public participation and a traditional public hearing process by presenting a "science fair" style open house. In addition, the open house was hosted during typical working hours, which, while convenient for the agencies which staffed the event, did not allow many community members to participate (and contrary to the open house's very purpose: to elicit and capture public comments on the BDCP and Tunnels Project). Attendees of these open house meetings conveyed to us that no interpretive services were advertised at these meetings for hearing impaired persons.

Land Use, Flood Risk, and Affordable Housing. As we mentioned last year, the Tunnel Project still fails to consider how to maintain affordable housing opportunities in the Delta region as land use changes are implemented. Impacts on low-income home owners, such as threats to public safety and lowered home value must be addressed as part of any proposed land use changes for which the RDEIR/SDEIS call.

Disproportionate impacts of flooding on renters must be mitigated for all residents of the Delta. The impacts on existing communities of alterations in land use plans must be evaluated, particularly the potential for increased vulnerability to flooding.

A sustainable Delta will require dramatic changes in land use decisions. The Delta is already over-developed, thereby limiting choices for flood attenuation and increasing the potential for catastrophic damage associated with a seismic event. As those choices are made, the potential exists to provide equitable benefits in planning for EJ communities, but there is also the threat of disproportionate impacts on those same communities. For this reason, a sustainable vision for the Delta must identify and account for the particular impacts on EJ communities.

We are deeply concerned that the Tunnel Project facilities and alignments may foreclose otherwise viable options for improving land use and affordable housing for the Delta's poorest residents. A disproportionate number of the developments the Tunnels Project would put at risk are populated by low-income, predominantly Latino residents. Changes in flood mapping and zoning will have a profound effect on these developments, while their ability to recover from a flood event is limited.

Moreover, these existing communities may be detrimentally impacted by the advent of upper scale developments protected by new "super levees," which have the potential to re-route flood waters in ways that may negatively impact lower income communities. The following figures taken from Draft EIR/EIS (Appendix: Figure 6-5 SPFC and Non-SPFC Levees, 6-6 Reported Delta Levee Problem Areas, 6-7 Effective Federal Emergency Management Agency Flood Zones, 28-1 Minority Populations in the Plan Area, and 28-2 Low-Income Populations in the Plan Area) demonstrate that FEMA flood zone encompasses much of the central, south, and western Delta as well as Suisun Marsh where many low-income and minority Delta residents live. RDEIR/SDEIS fail to analyze the impacts to communities whose transportation routes could be disrupted due to flood impacts.

At an even greater disadvantage are communities that reside in, but don't own property in, floodplains—including tenants and farmworkers. These communities receive less assistance than

property owners after a flood event and are more likely to be permanently displaced and suffer a total or near total loss of their movable property. Any emergency plan must target the special needs and vulnerabilities of these residents as well as their capacity to lead their own recovery effort, if it is, in fact, supported with resources.

As development becomes limited and/or more expensive in floodplains, the supply of low-income housing will be curtailed. Any land use changes must include a plan for provision of affordable housing for the current and expected population in the Delta Region. No such plan appears in the RDEIS/DEIR.

Public Health & Water Quality. The Tunnels Project degrades rather than protects or enhances the water quality in the Delta. In addition, water quality and other assessments in Chapter 25 Public Health are based on many decisions/papers published prior to our drought conditions and do not effectively consider public health impacts for environmental justice communities.

The Tunnels Project creates an overall pattern of inequitable and discriminatory water quality impacts, several of which would have public health implications. By diverting the Sacramento River right as it enters the Delta, the Tunnels diversions reduce flows and slows down water, which increases residence time, which, in turn, concentrates salinity and pollutants in the western and central Delta, while privileging export water quality south of the Delta over in-Delta beneficial uses. Over and over again in the RDEIR/SDEIS, modeling results for boron, bromide, chloride, salinity, nitrate, pesticides, mercury, selenium, and dissolved organic carbon show the maldistribution of water quality impacts from the Tunnels Project. (See our Section II comments on water quality above.) It also contributes to why harmful algal blooms will be significant and adverse impacts of the project down the road. These and other water quality constituents, which were not modeled for the RDEIR/SDEIS, all worsen for south and west Delta water ways and the Suisun Marsh and improve for the export pumps. This is a conscious decision to sacrifice in-Delta water quality and the environmental justice communities that rely on it; it is an integral part of the Project design and purpose and the water quality modeling, however incompletely done, bears that out.[134]

In addition, as noted in RDEIR/SDEIS Chapter 25-66, there are significant bromide effects on drinking water quality, which relate to precursors for carcinogenic disinfectant byproducts—a significant water supply treatment cost issue for both municipal exporters and in-delta municipal drinking water suppliers, such as Stockton, Walnut Grove, Isleton, Rio Vista, etc. Treatment plant upgrades would further increase the burden of water accessibility on small and low-income communities.

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[134] See Project Objectives at 1-8, Section 1.1.4.1, lines 18-21, stating "DWR's fundamental purpose in proposing the proposed project is to make physical and operational improvements to the SWP system in the Delta necessary to restore and protect ... water quality within a stable regulatory framework, consistent with statutory and contractual obligations" and Project Objectives at 1-8, Section 1.1.4.1, lines 34-37, stating project objectives include to "[r]estore and protect the ability of the SWP and CVP to deliver up to full contract amounts...". Emphasis added.

As noted in the RDEIR/SDEIS, public health impacts from *Microcystis* blooms have yet to be fully assessed.[135] As RDEIR/SDEIS state, public health impact would be significant and unavoidable. In addition, RDEIR/SDEIS still fails to comprehensively evaluate the public health impacts on small communities on fish consumption and exposure to methylmercury. Species of fish affected by the Tunnels project are pursued during subsistence fishing by populations already burdened with environmental injustice. Despite the RDEIR/SDEIS stating the adverse effects and negative health impacts of the Tunnels Project, more investigation and analysis needs to be completed.[136] Interior Suisun Marsh salinity is expected to increase substantially from operation of the Tunnels, according to data in the RDEIR/SDEIS (Figure 12 above, this letter). Reverse flows on the lower Sacramento River will increase, which may injure neighboring water right holders. Numerous water quality pollutant criteria and beneficial uses will be violated and conditions degraded. And subsistence fishers may be harmed by worsening mercury and selenium concentrations contaminating fish tissues in the long term, resulting from Tunnels operations.

BDCP's analysis of selenium as a water quality stressor is inadequate for failing to acknowledge or address uncertainties about the regulatory and technological setting of the Grassland Bypass Project and long term management and mitigation of selenium loading to the San Joaquin River in the western San Joaquin Valley. These projects indicate the ecological and public health risks of various scenarios of selenium loading to the Bay Delta Estuary. BDCP irresponsibly downplays the risks and foreseeable costs and circumstances involved.[137]

The RDEIR/SDEIS have conducted no analysis of in-Delta water demand and subsistence fishing patterns represented by these beneficial uses when it conducts its operational studies of the Tunnels Project. These uses are protected by, among other statutes, the Delta Protection Act of 1959. Additional evaluation must be conducted and allow for proper public participation to apply the precautionary principle (see our Section I and II comments above), rather than allowing real-time operational decisions to exacerbate environmental injustices for Delta-dependent communities.

To ensure that community and public health and the environment are protected by the Tunnels Project, we recommend that decisions on changes in conveyance and operation of Delta water infrastructure be incremental and reversible, dependent upon the measured impact on the ecosystem, essentially incorporated into the proposed Collaborative Science and Adaptive

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[135] RDEIR/SDEIS, Appendix A, Chapter 25.3.3.2.

[136] RDEIR/SDEIS, Appendix A, Chapter 28.5.8.7.

[137] California Water Impact Network testified to the State Water Resources Control Board about limitations of the Grassland Bypass Project and the challenges Grassland area farmers face in developing and implementing a cost-effective treatment technology for concentrating, isolating, managing and sequestering selenium. See: C-WIN, *Testimony on Recent Salinity and Selenium Science and Modeling for the Bay-Delta Estuary*, prepared by T. Stroshane and submitted to the State Water Resources Control Board Workshop #1, Ecosystem Changes and the Low Salinity Zone, September 5, 2012, 44 pages plus appendices. Accessible at http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/cmnt081712/tim_stroshane.pdf.

Management Program agenda. This can only be done by having habitat restoration proceed first, so that the public knows it will succeed. Success for the Delta common pool resources should be assured before any Tunnels Project project is deemed safe to develop. Agricultural and storm water discharges must be limited to protect water quality. Remediation of mine sites and stream beds must be prioritized and ecosystem restoration projects must be prioritized, sited, and designed so as to limit the potential for additional methylation of mercury and the related health impacts to wildlife and human health.

Violations of Civil Rights and Environmental Law. The lack of consideration for environmental justice communities, lack of proper assessment of public health impacts and mitigation efforts, lack of access to information regarding the project, lack of provision of adequate oral and written bilingual information, failure to notice meetings in various languages, and limited public access to the document through required computer access, exorbitant fees violate the below cited principles of environmental justice and constitutes violations of CEQA and NEPA, as well as federal and state civil rights of a significant population of the five Delta counties.

The RDEIR/SDEIS is incomplete for lack of other critical baseline data, which means the supporting documentation for the requested Corps permits is deficient at this time.

Last year, EWC commented that the Draft EIR/EIS and BDCP documents are incomplete because DWR has been unable to collect necessary environmental, cultural resource and geotechnical survey and field data from Delta lands along the Tunnels Project alignment related to habitat restoration and Conservation Measure 1 facilities.[138] Last year, we also noted that the Draft EIR/EIS failed to disclose adequately the cultural resource setting of the Delta Plan Area, and that the County of Sacramento's comments on the incomplete discussion of Chapter 18's regulatory setting section was inadequate for omitting special planning and neighborhood preservation areas of the County's zoning code.

This year, we note that the RDEIR/SDEIS fails to incorporate Sacramento County's comment as part of its RDEIR/SDEIS.[139] This year, the habitat restoration activities are now omitted from the preferred alternative and the other two sub-alternatives addressed in the RDEIR/SDEIS. This year, we find, however, that the same broad issues exist for the Tunnels Project: ***The inability of the California Department of Water Resources to gain access to Delta lands along the alignment of the Tunnels Project means that data necessary for cultural and biological resources, soils, and geotechnical matters is unavailable to adequately describe the Tunnels Project's environmental baseline.***

The lack of available data is acknowledged in the RDEIR/SDEIS.

> Although the majority of the footprint of the water conveyance facility has not been surveyed, sensitive resources have been located with and near the portions of the alignment that have been

[138] EWC Comments, June 11, 2014, pp. 133-135.

[139] RDEIR/SDEIS, Sections 4.3.14, 4.4.14, and 4.5.14.

> surveyed. For this reason, additional archaeological resources are likely to be found in the portion of the footprint where surveys have not yet been conducted.[140]

The RDEIR/SDEIS further acknowledges that there remain "unidentified and unevaluated historic architectural and built environment resources that could be affected by construction activities associated with the Tunnels Project.

> As described in detail for Alternative 4 [*sic*], although DWR does not have legal access to the majority of the footprint for the water conveyance, historical documentation suggests numerous additional resources occur in the footprint of the water conveyance facilities that have not been identified or which cannot currently be accessed and evaluated. Construction may result in direct demolition of these resources, damage through vibration, or indirect effects such as changes to the setting.[141]

Impact CUL-6 is not so much an impact discussion, but an admission that the RDEIR/SDEIS is incomplete. An adequate and complete CEQA/NEPA document is required to have benefited from full due diligence by the document preparers, and acknowledging its incompleteness does not resolve the RDEIR/SDEIS's defects in this area, nor does Mitigation Measure CUL-6 ("Conduct a survey of inaccessible properties to assess eligibility, determine if these properties will be adversely impacted by the Project and Develop treatment to resolve or mitigate adverse impacts.") provide mitigation for the incomplete "impact"; ***these are research agenda and methodology items for the next recirculated draft CEQA/NEPA document, not adequate treatments of these issues under CEQA and NEPA. They are a speculative to-do list, not analysis in and of themselves.***

In the area of geotechnical and soils matters, the Draft EIR/EIS and RDEIR/SDEIS attempt to evaluate the Tunnels Project's vulnerability to earthquake and ground-shaking risk, de-watering of groundwater from construction activities, ground settlement, potential slope failure, vibrations, fault rupture, liquefaction, and canal seepage. Each impact and mitigation is discussed as a matter of "could," rather than "would" or "will." This is because neither document's analyses of these various geotechnical issues is based on data from actual conditions along the Project's alignment. This is acknowledged implicitly when the RDEIR/SDEIS states:

> ***NEPA Effects:*** This potential effect *could* be substantial because settlement or collapse during dewatering *could* cause injury of workers at the construction sites as a result of collapse of excavations.
>
> The hazard of settlement and subsequent collapse of excavations *would* be evaluated by assessing site-specific geotechnical and hydrological conditions at intake locations, as well as where intake and forebay pipelines cross waterways and major irrigation canals. A California-registered civil engineer or California-certified engineering geologist *would* recommend measures in a geotechnical report to

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[140] RDEIR/SDEIS, Section 4.3.14, Impact CUL-2, p. 4.3.14-2, lines 15-19.

[141] RDEIR/SDEIS, Section 4.3.14, Impact CUL-6, p. 4.3.14-5, lines 25-30. The same is true for Impact CUL-6 in Section 4.4.14, pp. 4.4.14-5 to 4.4.14-6; and Section 4.5.14, pp. 4.5.14-5 to 4.5.14-6.

> address these hazards, such as seepage cutoff walls and barriers, shoring, grouting of the bottom of the excavation, and strengthening of nearby structures, existing utilities, or buried structures.[142]

Again, such prospective statements are due to the fact that DWR has not obtained entry to Delta lands along the alignment of the Tunnels Project or any of its potential sub-alternatives to conduct the drilling, boring, and petrologic and soils analyses needed to define the impacts of the Tunnels Project on geological and soils conditions. ***The passage in this NEPA conclusion, like's the cultural resources counterpart above, is not a valid NEPA conclusion, but a research design and methodology description for recirculating the next Draft EIR/EIS. It does not even accurately represent the extent, location or magnitude of project impacts. This kind of narrative is rife in the RDEIR/SDEIS's treatment of geology/seismicity issues, and is inadequate to the full disclosure purposes of CEQA and NEPA.***

DWR's difficulties obtaining entry continue.[143] In December of 2013, after five years of litigation, oral argument in the consolidated appeals in the Delta "access wars" finally took place at the Court of Appeal for the Third Appellate District in Sacramento. This was a milestone event in the legal battle spawned by the State's multi-billion dollar twin-tunnel project inappropriately named the Bay Delta Conservation Plan. Counsel for the State urged the court to reverse rulings that have prevented the Department of Water Resources from gaining access to Delta lands to conduct investigations they insisted were essential to complete planning for the BDCP. Counsel for the Delta landowners sought to affirm and strengthen the favorable rulings that had thus far stymied DWR's ambitious plans.

The argument before the Court of Appeal focused on whether DWR could lawfully acquire such access rights by proceeding under the "pre-condemnation entry" statute (Code Civ. Proc. §1245.010, et seq.). The entries DWR requested were prolonged and invasive. DWR claimed that the pre-condemnation entry statute allows it to obtain those entry rights without affording landowners the many rights and safeguards DWR would be required to give them if it proceeded under the more time-consuming procedure known as "eminent domain."

The landowners, on the other hand, argued that the requested "entries" were so prolonged and intrusive that they amounted to easements that could be lawfully obtained only by eminent domain. They contended that DWR's entry requests were not brief and innocuous "entries" contemplated by the pre-condemnation entry statute. By attempting to obtain these interests by way of an abbreviated pre-condemnation entry procedure, DWR tried to do an end-run around eminent domain laws and, in fact, sought an unconstitutional taking of private property.

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[142] RDEIR/SDEIS, Section 4.3.5, p. 4.3.5-2, lines 16-22. Similar narrative problems exist in Sections 4.4.5 and 4.5.5 as well.

[143] Restore the Delta is grateful to Thomas Keeling, Freeman Firm, Stockton, California, for this summary description of temporary and permanent entry litigation between the California Department of Water Resources and Delta land owners.

In March, 2014 the Court of Appeal issued its Decision. The Majority ruled in favor of the Delta landowners, holding that DWR could not proceed with "geotechnical" entries it sought by way of the pre-condemnation entry statute because that would effectuate an unconstitutional taking. On that point, the appellate court affirmed the Superior Court's ruling. The appellate court also ruled in favor of Delta landowners with respect to DWR's requested "environmental" entries, holding that they, too, amounted to unconstitutional takings. On this issue, the Court of Appeal reversed the trial court's ruling.

DWR petitioned the California Supreme Court for review of that decision, and that petition was granted. Briefing on the merits is now complete, and we expect oral argument in the Supreme Court sometime in 2016. We think that well-established case law, the statutory framework, and sound principles of judicial and public policy favor the Delta landowners in this proceeding.

However, regardless of the outcome in the Supreme Court, Delta landowner resistance has already successfully blocked DWR's effort to invoke a procedural "shortcut" to conduct prolonged and invasive "surveys" in the Delta to advance the pernicious twin tunnel scheme.

DWR's Eminent Domain Attempts. Frustrated by its failed effort to access Delta properties by way of the pre-condemnation entry statute, in mid-2011—even as the appeals from the Coordination Trial Judge's rulings were being perfected—DWR commenced eminent domain proceedings in four counties in order to condemn temporary easements to access its proposed drilling sites and stage its drilling operations. DWR also tried to condemn permanent easements, each approximately 4 feet by 4 feet, for each boring it intended to drill.

However, DWR made several serious missteps in its zeal to obtain the temporary and permanent easements it insisted it needed for BDCP-related geotechnical research. Over a two-year period, the landowners' counsel successfully resisted DWR's eminent domain efforts. As a result, DWR has since dismissed its eminent domain actions in San Joaquin, Yolo, Sacramento and Contra Costa Counties.

The gaps in setting/baseline, impact, and mitigation information render necessary analyses in the RDEIR/SDEIS of these issues incomplete. As a consequence, the RDEIR/SDEIS is inadequate and therefore the supporting documentation for DWR's permit application to the Corps is also deficient. It should be revised, updated with site-specific data on these matters, and recirculated for public review.

Conclusion

Restore the Delta requests that both Tim Stroshane and Barbara Barrigan-Parrilla be placed on the Corps mailing list for public noticing about SPK-2008-00861. Our contact information is provided below.

Restore the Delta is concerned that the Army Corps of Engineers appears to be well into the process to rush 404 permits by having this initial commenting period. We request that the Corps clarify whether it considers DWR's application SPK-2008-00861 complete or not for purposes of

processing permits, and that this comment period is not with reference to a completed application.

We also urge the Corps to publicly scope and publish a Draft Environmental Impact Statement focused on these and other related permit issues in the Corps' jurisdiction, issues that are posed by DWR's Tunnels Project application. As USEPA stated in its recent comments on the RDEIR/ SDEIS, several key decision processes are imporant before even a final EIR/EIS on the Tunnels can be legally sustained as a basis for decision-making:

- The change petition for new points of diversion and rediversion process before the State Water REsources Control Board will of necessity have to address "flow requirements that could modify proposed [Tunnels Project] operations sufficientlly to produce environmental and water supply effects" that are not yet analyzed in the SDEIS.

- The SWRCB is also supposed to update its Bay Delta water quality control plan, including flow requirements in its regulatory framework that are not yet analyzed in the SDEIS.

- Section 7 consultation under ESA, now under way, contains the likelihood, that "additional information is being generated to identify criteria for operating" the Tunnels Project, criteria that are not at present analyzed in the SDEIS.

- Finally, the Corps' 404 permit process is also expected to generate new information that is not at present anlayzed in the SDEIS.[144]

USEPA then states that, in its authoritative view, all of these processes are presently incomplete. Logically, this finding must include DWR's Tunnels Project applications to both the Corps and to the State Water Resources Control Board (for both the water rights change petition and the 401 certification).

> EPA understands that these as yet incomplete regulatory requirements will be addressed through the pending actions by the State Water Resources Control Board, FWS, NMFS, and Corps of Engineers. These key decisions, and the analysis that will support them, are not yet done….Because these subsequent regulatory processes are likely to generate real world operational scenarios that are significantly different from the operations proposed in the SDEIS, the information is not yet available to reach definitive conclusions concerning the environmental impacts of the proposed project.[145]

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[144] "Water quality and aquatic life analyses in the SDEIS show that the proposed project may cause or contribute to violationsof state water quality standards and significant degradation of waters of the U.S.; therefore, additional avoidance and minimization of environmental impacts and/or compensatorymitigation may be necessary in order to comply with CWA Section 404. It is also likely that additional information and analysis not included in the SDEIS will be required to support those permit decisions and that information and analysis will better inform the overall evaluation." USEPA Letter, October 30, 2015, p. 4.

[145] *Ibid.*

Restore the Delta contends at this stage that DWR's Tunnels Project application is far from complete. We respectfully request that a public comment and public hearing on the application be held once the Corps deems the application complete for processing its various permits.

We respectfully request that the US Army Corps of Engineers also publicly clarify its criteria for determining whether this application is complete or not, at least as part of the eventual notice of public comment and public hearing opportunity, if not sooner.

The State Water Resources Control Board's announced that its action on a 401 water quality certification will not be taken "earlier than late 2016 due to the complexity and magnitude of the Project, and pending items that will be needed before the State Water Board can take action (e.g., completion of a final Environmental Impact Report needed to comply with the California Environmental Quality Act)."[146] Given this timetable for the 401 certification, adoption of which by the state is necessary prior to issuance of the Corps' 404 permit to the Tunnels Project, what is the Corps' anticipated timetable for its permit processing efforts?

Finally, Restore the Delta requests that at the earliest possible time, the Army Corps of Engineers post to its web site on SPK-2008-00861 the various comments it has received from all interested parties concerning the Tunnels Project permit application. While we recognize this is probably an unusual request, the Corps' decision on DWR's permit application will be one of the most important about the wetland effects of a water project in the history of the State of California. The merits of the the proposed Tunnels Project contained in the application have undeniable statewide importance and necessarily involve broad questions of statewide water policy, wetland protection, as well as national significance for waters of the United States. Failure by the US Army Corps of Engineers to address these broader issues constructively, thoroughly, and realistically would impair the public interest, public health, the Delta's regional economy, San Francisco Bay-Delta estuary water quality, public trust values, the environment, and endangered and threatened fish species and their critical habitat.

Again, we thank you for the opportunity to comment on this important proposal. If you have questions or concerns about these comments, please feel free to contact Barbara Barrigan-Parrilla (barbara@restorethedelta.org) or Tim Stroshane (510.524.6313, or tim@restorethedelta.org).

Sincerely,

Tim Stroshane
Policy Analyst

Barbara Barrigan-Parrilla
Executive Director

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[146] State Water Resources Control Board, *Public Notice for California WaterFix Project, Clean Water Act 401 Water Quality Certification*, October 30, 2015, p. 2. Accessible at http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/docs/cwf_401_notice.pdf.

Attachment: Environmental Water Caucus Sustainable Water Plan for California, 2015

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