From: Keith Kiley <KKiley@hansonbridgett.com>
Sent: Friday, October 30, 2015 1:19 PM
To: BDCPcomments
Cc: Michael J. Van Zandt; Nathan A. Metcalf
Subject: Comments on Supplemental Draft Environmental Impact Report re; RD 501
Attachments: Comments on Supplemental Draft Environmental Impact Report re; Reclamation District 501.pdf

Please contact Michael Van Zandt with any questions or comments regarding the attached letter.

Keith Kiley
Legal Secretary
Hanson Bridgett LLP
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RE&RC 2591

HansonBridgett

MICHAEL J. VAN ZANDT
PARTNER
DIRECT DIAL (415) 995-5001
DIRECT FAX (415) 995-3566
E-MAIL mvanzandt@hansonbridgett.com

October 30, 2015

SENT VIA EMAIL AND FIRST CLASS MAIL
(BDCPcomments@icfi.com)

BDCP/California Water Fix
P.O. Box 1919
Sacramento, CA 95812

Re: Comments on Supplemental Draft Environmental Impact Report/Environmental Impact Statement

Dear Sir or Madam:

The law firm of Hanson Bridgett LLP represents Reclamation District 501 ("RD 501"), the public agency responsible for maintenance of levees and drains on Ryer Island in Solano County, near Rio Vista. We provide these comments for consideration of the decision makers on the supplemental environmental impact report ("SEIR") and environmental impact statement ("EIS"). RD 501 joins in the comments filed by Islands, Inc. and the North Delta Water Agency.

The water rights owners on Ryer Island own riparian water rights from the Sacramento River and have established these rights for over 100 years. There is considerable concern that the BDCP will increase the salinity for the Sacramento River as more and more fresh water is pumped from the Delta. There is a salinity monitoring station at the Rio Vista Bridge that must be maintained in order to ensure water quality for Ryer Island. Any interference with water quality must be evaluated as part of the EIS/EIR process and appropriate mitigation measures implemented.

RD 501 is also concerned with concentrations of selenium, chloride, mercury and other harmful substances increasing in the water as a result of the bypassing of large quantities of water from north to south in the pipeline. RD 501 requests that additional monitoring of these substances be included in any mitigation plans and that mitigation measures be in place to prevent these pollutants from interfering with the agricultural operations on Ryer Island.

RD 501 is also concerned about subsidence of the lands affected by the proposal. Ryer Island is already below sea level. It is an accepted fact that the groundwater beneath Ryer Island is hydrogeologically connected directly to the flows of the Sacramento River. As water is withdrawn from the Delta that otherwise would flow as part of the underground flow of the river, then subsidence of the overlying lands can occur. Any further subsidence of the lands would move the Ryer Island surface closer to the water table. It is important for the soils on Ryer Island remain at a sufficient depth above the water table so that seepage will not occur. If the land subsides as a result of the removal of water from the Delta through the tunnels, then there is a probability that the surface of the land will subside and expose the crops to saturation at the root level, causing root rot. Obviously, this will be highly detrimental to the growth and

sustainability of the crops. RD 501 is responsible for the drains and pumps on Ryer Island and this kind of subsidence could interfere greatly with RD 501's mission to remove excess water from the island.

Moreover, any subsidence of the overlying lands caused by the removal of water from the Delta will have an adverse impact on the levees surrounding Ryer Island. As the land subsides, the integrity of the foundation of these levees will be compromised. This in turn may cause the levees to crack or fail which will cause an inundation of the interior of the island. Not only will the farmers, be adversely affected by this, but RD 501's pumps, drains and infrastructure will also be adversely impacted. The roads around Ryer Island sit atop these levees and they will become impassable if the levees crack or fail. RD 501 would not be able to maintain its facilities if the levees fail. Mitigation plans must be in place to measure and prevent subsidence and to deal with emergencies if a levee failure occurs.

We understand that the proposed action will involve the protection of endangered species, limiting incidental takes, but also protecting the water rights of CVP and SWP members up to their contractual limits. There was no mention of protecting riparian water right owners in the project purposes and that protection must be included. The Delta is a large region and consists of many different interests. The interests of one of the largest agricultural producing regions in the world must be protected. Ryer Island is a significant contributor to the success of agriculture in the Delta, and its resources must be protected. Riparian water rights are the highest, protected type of water rights in California. Ryer Island water right owners have established these water rights as a result of the existence of the island immediately adjacent to the Sacramento River. The BDCP must ensure that no part of the project will interfere with these rights.

Not only is RD 501 concerned about water quality, it is also concerned about water quantity. As more and more water is shipped south and now with the two tunnels bypassing the region, there is considerable concern that the BDCP will result in less fresh water being available for farmers along the path of the San Joaquin and Sacramento Rivers. Steps must be taken to ensure that the quantity of water is maintained in the river to support agriculture.

Ryer Island is below sea level and must depend on Reclamation District 501's pumps to keep the island from flooding. However, Ryer Island also has a series of intake pumps and siphons to divert water from the river to the island for irrigation. These intakes are set at certain depths and a drop in the level of the river could mean that farmers would have to reset their intakes deeper into the river. Mitigation steps must be taken to ensure that water that bypasses Ryer Island does not cause a drop in the river that prevents the water right owners from diverting water onto the island.

Ryer Island was the subject of a temporary entry permit to investigate the feasibility of using the island as a route for the proposed tunnels. Although the route is not the preferred proposal, it is still an alternative analyzed in the EIS/EIR. RD 501 is adamantly opposed to the use of its levees and easements for use as a right of way for the tunnel. The disruption caused by the construction alone would destroy Ryer Island's viability as a farming operation.

RECIRC 2591

For the foregoing reasons, RD 501 asks that you reconsider the proposed project, that you not select Ryer Island as a site for the tunnels, that you protect riparian rights, and that you ensure that water quality and water quantity are maintained in the Delta.

Sincerely,

On behalf of

Michael J. Van Zandt

cc: RD 501

Central Valley Clean Water Association
Representing Over Fifty Wastewater Agencies

TERRIE MITCHELL – Chair, Sacramento Regional CSD **CASEY WICHERT – Vice Chair, City of Brentwood**
TERESA TANAKA – Secretary, Calaveras County WD **ROBERT GRANBERG – Treasurer, City of Stockton**

October 30, 2015

Via Electronic Mail

BDCP Comments
P.O. Box 1919
Sacramento, CA 95812
BDCPComments@icfi.com

SUBJECT: Comments on Bay Delta Conservation Plan Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement

Dear Sir/Madam:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to provide comments on the Bay Delta Conservation Plan (BDCP) Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). These comments supplement previous comments made by CVCWA on the BDCP and the BDCP EIR/EIS. Many of those comments remain applicable to the package defined by the BDCP, EIR/EIS, and RDEIR/SDEIS. We reiterate and incorporate those comments by reference.

CVCWA is a nonprofit association of Publicly Owned Treatment Works (POTWs) throughout the Central Valley whose primary mission is to represent wastewater agencies in regulatory matters while balancing environmental and economic interests. CVCWA members have a deep commitment to the protection of beneficial uses in the waters of the Central Valley, and have a special interest in the recovery of the Delta ecosystem. Many of CVCWA's members will be directly impacted by the BDCP and have a significant interest in its development and implementation.

Context for CVCWA Comments

CVCWA members are impacted by an impaired Delta ecosystem. Regulatory pressures on POTWs are intense because of the Pelagic Organism Decline (POD) and other ecosystem problems, many of

which are the result of historic water project operations. CVCWA therefore, has an interest in ensuring that the BDCP will remedy past impacts associated with the operations of the Central Valley Project and State Water Project that have contributed to a degraded Delta ecosystem. Further, CVCWA has an interest in ensuring that the proposed BDCP project will not, under any circumstances, make conditions in the Delta worse. CVCWA's comments on the RDEIR/SDEIS are intended to address this interest.

It is acknowledged in the BDCP EIR/EIS (Section 31, page 31-5) that current water project operations have caused "long standing adverse environmental consequences associated with . . . diversions from the South Delta, such as . . . fish losses from entrainment."

Facts that are commonly recognized are:

- Reduced exports from the South Delta result in reduced entrainment and reduced losses of fish during low flow conditions.
- Reduced use of the South Delta facilities during certain critical periods will improve fish survival.
- Migrating salmon have less chance of survival if diverted into the Central Delta where predation pressure and entrainment are greatest.

It is also understood within the Delta scientific community that current water project operations have increased hydraulic residence times in the Delta, increased temperatures, altered salinity regimes, changed the annual hydrograph, and caused indirect loss of productivity. These changes have led to various impacts, including the proliferation of invasive species, changes in the Delta food web, and increased predation of covered fish species.

CVCWA is concerned that the BDCP EIR/EIS and RDEIR/SDEIS do not directly address these impacts of past water project operations on covered fish species and the Delta ecosystem. Such information represents the foundation for assessment of future impacts of changed water project operations under the proposed project. CVCWA is concerned that the failure to establish this foundation limits the ability to project or understand the future impacts of the proposed project. Additionally, the EIR does not clearly identify or distinguish the differences in export volumes that are currently occurring versus the export volumes that will be accommodated by the proposed project. This difference must be provided as a "bright line, bold print" statement so that all parties can understand the ultimate impact of the proposed project. Instead, the BDCP does not include a clear operations plan so that the public can meaningfully analyze or comment on the proposed project. Because the impact of current and proposed future exports is clearly tied to impacts on covered fish species and the Delta ecosystem, lack of clarity in the RDEIR/SDEIS on this point creates a lack of confidence in the overall impact assessment.

The BDCP is supposed to improve the Delta ecosystem, consistent with the co-equal goals of the Delta Plan. The proposed modified BDCP intends to improve the Delta ecosystem through reduced entrainment in the South Delta. It no longer includes elements to improve ecosystem health through

wetlands creation. A high degree of uncertainty continues to exist regarding the ability of the proposed project to deliver on this intent.

The burden of proof is on the BDCP to clearly identify the positive and negative impacts it will have on the Delta ecosystem and to ensure that the advertised benefits are realized. Instead, the plan fails to meet this burden. CVCWA and many other stakeholders, including eight U.S. Congressional Representatives (see letter dated June 29, 2014), believe the BDCP and the supporting documentation to be legally deficient under the National Environmental Policy Act, the California Environmental Quality Act, and several other statutes, including the Clean Water Act (CWA).

Finally, CVCWA is very concerned that the proposed BDCP invests inordinate authority to the agencies promoting the BDCP in the implementation of adaptive management, a cornerstone of the BDCP proposal. On the one hand, the proposed BDCP recognizes the great uncertainties regarding the impact of the project on the Delta ecosystem and the actual benefits that may be realized by the proposed project. Absent the proposed wetlands restoration elements that were previously proposed, this uncertainty is magnified. On the other hand, the proposed BDCP continues to be definitive in restricting the imposition of future constraints on the permittees and grants those parties significant leverage in resisting such future requirements, which may be essential to protecting the health of the Delta ecosystem and Delta beneficial uses.

Major Comments

In addition to the above, CVCWA continues to be concerned regarding numerous serious inadequacies of the BDCP EIR/EIS and the RDEIR/SDEIS, as follows:

1. **A dramatically impaired fishery and ecosystem in the Delta seriously impacts Central Valley POTWs** – BDCP documents fail to adequately address the impacts of water project operations on the Delta fishery, including past and future impact of entrainment and the loss of hundreds of millions of larval, juvenile, and adult fish as a result of the proposed project. Most problematic, the BDCP and related documents fail to ensure that the Delta fishery will be restored, or even that it will not continue to be in crisis or get worse under the proposed project. The BDCP EIR/EIS and RDEIR/SDEIS are fundamentally flawed in their failure to provide an adequate assessment of the current project operations on the Delta ecosystem. There is significant uncertainty as to whether the BDCP will improve the health of the estuary.

2. **Adaptive management deficiencies** – The RDEIR/SDEIS fundamentally relies on "collaborative science and adaptive management" to address many uncertainties associated with the proposed project. However, the BDCP governance structure restricts, rather than promotes, effective adaptive management. The BDCP fails to establish the scientific foundation/baseline or proper future monitoring requirements to allow for adaptive management to properly function, or the future impacts of the BDCP project operations to be determined (and managed). BDCP monitoring and research commitments by the project proponents are largely absent, and where

present, are weak. Monitoring and research performed by neutral science experts should itself be a BDCP conservation measure, not a loose end.

3. **BDCP is one sided and inequitable** – The BDCP guarantees certainty to the construction of Sacramento intakes and conveyance and ensures certainty regarding water operations, but it restricts the ability to adaptively regulate project operations, and fails to ensure Delta restoration, including the wetlands areas so vital to the achievement of the "dual goals" articulated in the 2009 Delta Reform Act, which have now been excluded from the proposed project.

4. **Serious problems with the BDCP governance structure** – The proposed structure provides undue power to the water contractors and does not allow effective input from many Delta and Central Valley stakeholders or a fair process for regulating water contract operations. One example is the makeup of the Real Time flow management and Adaptive Management teams, which fail to include representatives from local communities or non-governmental agencies.

5. **Unbalanced assessment of BDCP impacts on nutrient levels and nutrient-related effects in the Delta** – The BDCP EIR/EIS, and RDEIR/SDEIS fail to properly address the effects of the proposed BDCP project and associated projects in comparison to nutrient impacts from other sources, e.g., the BDCP documents allege that nutrients from future wetlands are beneficial whereas nutrients from municipal and other sources are detrimental. The BDCP EIR/EIS and RDEIR/SDEIS fail to provide a mass balance of nutrients in the Delta that would allow for the fair assessment of various sources. The RDEIR/SDEIS does not acknowledge or account for the fact that the effects of nutrients are exacerbated by historic water operations and the proposed project.

6. **Inadequate assessment of the impacts of the proposed project on flow regimes and residence times in the Delta** – The BDCP fails to adequately consider the effects of modified in-Delta flow regimes and increased residence time changes associated with the proposed project. For example, it is commonly accepted that flow is a prime driver of the undesirable proliferation of invasive macrophytes (e.g., Brazilian waterweed and water hyacinths) and cyanobacteria (e.g., *Microcystis*) in the Delta. The occurrence and magnitude of these undesirable species are associated with low velocities and increased residence times in the system. Although the RDEIR/SDEIS includes new information regarding *Microcystis* and other harmful aquatic species, the document does not properly link the acknowledged project-related increases in residence times in the Delta to a worsening of the *Microcystis* problem. The RDEIR/SDEIS also fails to link changed flow regimes associated with the proposed project to the increased proliferation of undesirable macrophytes in the Delta. The RDEIR/SDEIS should be modified to acknowledge these impacts in the South Delta and in the Lower Sacramento River.

7. **Failure to adequately address the impact of the BDCP on the Delta food web, including significant loss of productivity with the exports** – The BDCP documents provide inadequate consideration of historic water operations and the proposed project on the Delta food web, a low productivity estuarine system. Mass transport of phytoplankton and nutrients in the exports is not accounted for in the analysis of the Delta ecosystem. Additionally, the impacts of invasive species (clams, macrophytes) on the food web and the effects of the proposed project on the proliferation of those invasive species are not addressed.

8. **Inadequate analysis of compliance with federal antidegradation policy** – The BDCP RDEIR/SDEIS fails to remedy the serious problem of inconsistency with the federal antidegradation policy with regard to CWA section 303(d) listed parameters such as electrical conductivity (EC) in the Delta. The RDEIR/SDEIS continues to include information to confirm that significant ***measurable*** degradation of EC in the Delta associated with the proposed project will occur. This significant, measurable degradation of EC levels is illegal under the federal antidegradation policy provisions of the Clean Water Act. (See 33 U.S.C. § 1313(d)(4)(B).) The BDCP EIR/EIS and RDEIR/SDEIS fail to identify adequate alternatives or mitigation measures to offset this significant impact. Such measures were identified and requested in the U.S. Environmental Protection Agency's (USEPA) comment letter on the BDCP dated August 26, 2014. This fatal flaw results in a proposed project that violates the CWA.

9. **Fails to adequately evaluate future Delta flow scenarios/alternatives as mandated by the Delta Reform Act –** The BDCP documents largely ignore the Delta flow criteria that have been identified as necessary to support a healthy ecosystem by State Water Resources Control Board in its August 2010 report. These inadequacies in the BDCP documents represent a fundamental flaw that, unless corrected, should prevent the adoption of the BDCP as an element of the Delta Plan.

10. **Fails to reduce reliance on the Delta as a water supply** – The BDCP fails to reduce reliance on the Delta as required by California law. Despite clear comments by many parties pointing out this deficiency, BDCP proponents have seemingly gone out of their way to reject alternatives that would reduce reliance on the Delta. For instance, the proposed BDCP EIR/EIS or RDEIR/SDEIS fails to include the analysis of a "Portfolio Alternative," as described by the Natural Resources Defense Council, Representative John Garamendi, and others. The proposed BDCP flouts the Delta Reform Act and takes California in the direction of increased water diversions and exports from the Delta.

Given the deficiencies noted above, CVCWA requests that the BDCP proponents significantly modify the proposed project and associated documentation to address these major concerns. Simple mitigation will not be adequate to address concerns of this magnitude. The proposed project, its impact on future exports from the Delta, and the proposed operation of the project must be clearly and simply

stated. The means by which the dual goals of the Delta Reform Act and reduced reliance on the Delta will be met must be clearly stated.

Thank you for this opportunity to provide comments. If you wish to discuss our comments or have questions, please contact me at (530) 268-1338.

Sincerely,

Debbie Webster

Debbie Webster
Executive Officer, CVCWA

RECIRC2592

From: Debbie Webster <eofficer@cvcwa.org>
Sent: Friday, October 30, 2015 1:15 PM
To: BDCPcomments
Subject: CVCWA Comments on BDCP Revised DEIR/DEIS
Attachments: 2015-10-30 CVCWA Comments on BDCP Rec DEIR-DEIS.pdf

Please see attached comments.

Debbie Webster, Executive Officer
Central Valley Clean Water Association
New Mailing Address – Please update your records
1225 8th Street, Suite 595
Sacramento, CA 95814
(530) 268-1338
eofficer@cvcwa.org

The Central Valley Clean Water Association (CVCWA) is a non-profit association of public agencies located within the Central Valley region that provide wastewater collection, treatment, and water recycling services to millions of Central Valley residents and businesses.

For more information on CVCWA, check out our website at www.CVCWA.org

From: Jimk Lynch <jimklynch@yahoo.com>
Sent: Friday, October 30, 2015 9:14 AM
To: BDCPcomments
Cc: Lowell Ashbaugh
Subject: Comments on the Delta Fix proposal
Attachments: BDCP opp ltr.doc

Please see attached my comments in opposition to this proposal.

RECIRC 7513

October 30, 2015

BDCP/Water Fix Comments
P.O. Box 1919
Sacramento, CA
95812

Attention: Legislators & Government Administrators

Subject: Opposition to the Delta Tunnel Plan/CA Water Fix

I am responding to an article in the local newspaper, The Vacaville Reporter, which said you are seeking input from the public on this project. I am definitely opposed for many reasons but the main reason is the effect of the salt water incursion on the Delta. The Vacaville municipal water supply depends on 25% of its water from the lower Delta. Of course, this would be unusable. Another 25% comes from local wells that eventually would also be affected. I don't understand how a public project of this magnitude can ignore the needs of the people and communities who depend on the continuing flow of fresh water through the system.

Please be responsive to our needs and preserve our beautiful and bountiful river systems.

Sincerely,

Jim Lynch
148 Carmel Court
Vacaville, CA
95688

From: March, Andrew <Andrew.March@mail.house.gov>
Sent: Friday, October 30, 2015 4:35 PM
To: BDCPcomments
Subject: Comments on RDEIR/SDEIS from Congressman Garamendi
Attachments: Congressman John Garamendi WaterFix RDEIRSDEIS Comments.pdf

Please find attached, comments from Congressman John Garamendi regarding the Partially Recirculated Draft RDEIR/SDEIS for the California WaterFix.

Andrew March
Congressman John Garamendi, CA-03
530-753-5301
412 G Street, Davis, CA 95616
www.garamendi.house.gov/

RECIRC 2594

THE "LITTLE SIP, BIG GULP" PROPOSAL

An alternative to the "California WaterFix"
Including responses and comments to the Bay Delta Conservation Plan/California WaterFix July 2015 Partially Recirculated Draft EIR/EIS
Prepared by Congressman John Garamendi

Introduction

The recirculated EIR/EIS for the California Water Fix seems intended to promote the State Department of Water Resources' foregone conclusion to build Alternative 4A, the massive twin 40-foot diameter tunnels, capable of carrying 15,000 cubic feet of water per second (cfs). The new draft does not consider the full range of alternatives available to meet the legally required coequal goals of water supply and ecosystem restoration in the Delta. The divorce of California EcoRestore from the conveyance facility only reinforces the fact that this project is not about protecting the environment, but rather about building a plumbing system that will harm the Delta and San Francisco Bay without creating a drop of new water.

Just as the EIR/EIS for the Bay Delta Conservation Plan (BDCP) did not consider a more diverse range of alternatives necessary to truly protect both the Delta and reliability of water supply, the 8,000 pages of new material attempt to prop up a project with well documented flaws from an environmental, economic and engineering perspective. While experts will be able to point out a myriad other flaws in the California Water Fix, I will focus my comments on the need for more serious consideration of a range of alternative measures that meet the legally required co-coequal goals

A FULL RANGE OF ALTERNATIVES

Under the National Environmental Policy Act (NEPA), a range of alternatives that would meet the project's purpose and need must be evaluated. The California Environment Quality Act (CEQA) requires that similar analysis must be conducted. Furthermore California statute states:

> *"Providing a more reliable water supply for the state involves implementation of water use efficiency and conservation projects, wastewater reclamation projects, desalination, and new improved infrastructure, including water storage and Delta conveyance facilities."* [1]

The California WaterFix and this recirculated EIR/EIS do not meet the most fundamental requirements of both state and federal law.

If the California WaterFix truly lived up to its name, it would cast a wider net for solutions to our state's water infrastructure and ecological challenges. Just as the Delta Stewardship Council's *Delta Plan*, the Department of Water Resources' *California Water Action Plan*, the Natural Resources Defense Council's *Portfolio-Based BDCP Conceptual Alternative,* and my *Water Plan for All of California,* consider a wide range of actions that should be taken to provide water reliability, so should the California Water Fix consider actions beyond a new pumping facility and large underground tunnels. Each of the plans listed above discuss water conservation, recycling, desalination, the creation of more storage (both surface

[1] CA Water Code, Division 35, Section 85004(b)

and aquifer), and fixing the Delta as the means to achieving a reliable water supply. These elements are vital to our water future, and by leaving them out of the California Water Fix's scoping and planning, the state is failing to seek out the most economical and environmentally viable option for our state and the Delta.

SIX BUILDING BLOCKS FOR CALIFORNIA'S WATER FUTURE

If California is to create a more reliable and environmentally sensitive water supply it must adopt a comprehensive approach. There are six specific actions to provide a foundation for California's water future.

1) Use a science driven process,
2) Water conservation,
3) Recycling and desalination
4) The creation of new surface and aquifer storage systems,
5) Fix the Delta - right sized conveyance, levee improvements, and habitat restoration,
6) Protection of existing water rights

LET SCIENCE DRIVE THE PROCESS

The California Water Fix and any other proposal must be based on, and driven by, quality science that measures and informs decisions. California law requires that the Delta's aquatic and terrestrial ecosystems be protected.[2] We must do so, not just because the laws demand it, but because our status as human beings on this planet demands that we pay attention and protect precious and rare ecosystems.

> *" In assessing the environmental impact of any project, concern is usually shown for its effects on soil, water and air, yet few careful studies are made of its impact on biodiversity, as if the loss of species or animals and plant groups were of little importance." – Pope Francis*

Go forward carefully. Start with the least destructive option. Use science to evaluate each step starting with conservation, recycling, and surface and underground aquifer storage systems, fixing the Delta levees, and then and only then, if necessary proceed to a conveyance facility through the Delta. Remember that the Delta is a unique and precious environmental resource. We must let science govern.

CONSERVATION

The quickest and cheapest source of new water is to stretch our current supplies by conserving what we have. Californians have been at this for years in our cities, in our industries, on our farm, and in our homes. Statewide conservation efforts this summer alone have saved 611,566 acre feet of water proving the potential of this largest source of readily available new water.[3]

All of us should do a lot more water conservation, not just the agriculture community. The water conservation mandate set by the state is a 20 percent reduction per capita by 2020 which equals 2

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[2] CA Water Code, Division 35, Section 85004(c)

[3] California State Water Resources Control Board, *Water Conservation Portal-Conservation Reporting* http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml

million acre feet.[4] In a very real way conservation can create new water that was not previously available for use. To be on the conservative side, let us assume that just one half of the State's goal could be obtained in the next decade, thereby adding 1 million acre feet of new water to our supplies each year.

RECYCLING

Can you name the fifth largest river on the west coast of the Western Hemisphere? It's the water that flows out of the sanitation plants in Southern California and is dumped into the Pacific Ocean.

Why would any sane government take water from the Sacramento River, pump it 500 miles south, lift it 2,000 feet in the air, clean it, use it once, then clean it again to a higher standard than the day it arrived in Southern California, then dump it in the ocean? California does just this as it discharges vast quantities of water to the ocean each year, much of which could be reused.

We need to think seriously about recycling, not just in Southern California, but everywhere. The State of California currently recycles approximately 669,000 acre feet of municipal water each year[5] and has set a water recycling goal of 1.5 million acre feet of new water in California by 2020, and 2.5 million acre feet by 2030.[6]

Another option is desalination of the ocean water. This is feasible and used throughout the world, however it is not a viable option for all communities. It costs about 36 to 60 percent more to desalinate sea water than to recycle urban wastewater using current technologies.[7] However, technological advances are being pursued for both recycling and desalination that could lower the costs of each.

Conservation and recycling in California can create approximately 2.9 million acre feet of new water to use each year, and that can increase to 3.4 million acre feet by 2030.[89] This is new water that is not available today because it is wasted or pumped out to sea. Since much of this new water is created south of the Delta, there is a direct reduction on the demand for water from the Delta. Conservation and recycling are steps one and two in a comprehensive water program for California.

WATER STORAGE

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[4] California, Department of Water Resources, *California Water Plan Update 2013, Urban Water Use Efficiency* Chapter 3, 2013 http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/Vol3_Ch03_UrbanWUE.pdf

[5] CA Department of Water Resources, *2009 Municipal Wastewater Recycling Survey Results.* http://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/docs/munirecsrvy/Table1.pdf

[6] California, Department of Water Resources, *California Water Plan Update 2009, Integrated Water Management Bulletin 160-09*, Vol. 2, Chapter 11, 2009. http://www.waterplan.water.ca.gov/cwpu2009/index.cfm

[7] California, Department of Water Resources, *California Water Plan Update 2013, Resource Management Strategies Bulletin 160-13*, Vol. 3, Chapter 10, 2009. http://www.waterplan.water.ca.gov/cwpu2013/final/index.cfm

[8] Combined statistics from California Water Plan predictions for new water from recycling irrecoverable water and conservation predictions based on SB X7-7.

[9] California, Department of Water Resources, *California Water Plan Update 2013,* Vol. 3, Chapter 3 and 12. http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/Vol3_Ch03_UrbanWUE.pdf

Water storage south of the Delta is possible and necessary. The combined capacity of the great Delta pumps near Tracy is 15,000 cubic feet per second. They do not operate year round, only when there is sufficient water in the Delta, when threatened fish are not near the pumps, and when there is agricultural and urban demand south of the Tracy pumps. Currently, there is very limited water storage capacity south of the Delta. We must build more. San Luis and Los Vaqueros reservoirs should be expanded. New dams could be built at Los Banos Grandes, and numerous smaller off stream sites throughout the San Joaquin Valley. There are many aquifers throughout the San Joaquin Valley that may prove suitable to store additional water that would be used in a conjunctive use water management system. With these water storage facilities in place, the need for havoc causing excessive pumping in the Delta could be avoided.

When coupled with recycling, the underground aquifers in Southern California are another key to our water future. The underground aquifers of the South Coast Hydrologic Region in Southern California have a combined capacity larger than Lake Shasta.[1011] Today Orange County Water District and the Chino Basin agency recycle water and put into the underground water basins to be stored for those inevitably dry years and to protect the quality of the aquifer. When needed, it is pumped out, used, cleaned and returned to storage. Statewide, this recycling system could create as much as 2.5 million acre feet of new water, and thereby reduce the need for importing Colorado and Sacramento River water. We applaud the recent decision by Metropolitan Water District to build a new recycling program in its district and encourage other water districts to pursue expanding the capacity of the state's water recycling system.

Surface and underground storage should be used in a conjunctive use water management program. Use the rivers when there is lots of water and use the reservoirs when there is little. Water storage north of the Delta is also important, and three proposals are on the books today. An off stream reservoir at Sites, located west of Williams in Colusa County, has great promise for storage and for creating greater flexibility in managing the Sacramento River for salmon runs, water demand, and Delta outflow. This reservoir can deliver 500,000 acre feet of annual yield and the additional flexibility that it offers can under some scenarios, save another 500,000 acre feet of water that would otherwise be released into the river systems.[12] Raising Shasta Dam is also possible, as is better conjunctive management of the many aquifers in the Sacramento and San Joaquin Valley. State and federal agencies have already commenced studies for these projects. A quick completion of these studies and construction of those that are feasible is essential.

THE LITTLE SIP, BIG GULP SOLUTION

The best way to achieve a long term solution to California's water crisis is an "All of the above strategy" that uses the programs described above (science driven programs of conservation, recycling,

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[10] California, Department of Water Resources (1975). *Bulletin no. 118: California's Ground Water.* http://www.dwr.water.ca.gov/pubs/groundwater/bulletin_118/california's_ground_water__bulletin_118-75_/b118-1975.pdf

[11] Based on DWR calculations of 10.4 million acre-feet of usable storage capacity in the South Coastal Hydrologic Study Area

[12] Sites Project Joint Powers Authority, *North-of-the-Delta Off Stream Storage Fact Sheet*, www.sitesjpa.net.

desalination, and groundwater and surface storage) and then address the Delta problem with the **"Little Sip, Big Gulp"** solution.

FIX THE DELTA

All of the alternatives envisioned in this EIR/EIS (Alternatives 4A, 2D, 5A) depend on the existing Delta channels to deliver approximately half of the average annual water deliveries of approximately 2.5 million acre feet of water. This is the **"Big Gulp"**. Thus, an important part of securing California's water system is improving the integrity of the Delta levees. The levee improvements, which are not included in Alternatives 4A, 2D, 5A would increase the security of the water delivery system, and also significantly increase the safety and security of state highways, rail lines, natural gas fields, gas and fuel pipelines, drinking water pipelines, and numerous businesses and towns.

Alternative 4A, the "twin tunnels", does not "fix" California's water problem. It assumes a duel conveyance strategy of transporting water to the pumps in the tunnels and also through the existing Delta channels. However the recirculated draft EIR/EIS does not include any meaningful analysis of the improvement of the levees or how the construction process would impact the levees. If the Delta levees are not improved, the only conclusion that can be drawn is that the California Water Fix really intends to abandon the Delta and only use the massive tunnels to transport water south. Thus the "twin tunnels" become an existential threat to the Delta and San Francisco Bay, the largest and most important estuary system on the west coast of the western hemisphere. This would be in direct violation of the Delta Reform Act.

Furthermore, the lack of storage south of the Delta in Alternative 4A makes the massive size of the proposed tunnels superfluous. There is no place to store the water. As a result, the California Water Fix as it stands does not meet the State's mandated coequal goals and fails to offer any alternatives that even come close to meeting them. The State's preferred alternative constructs a conveyance facility that will potentially harm the Delta while providing no reliable water supply.

Fixing the Delta must begin with fixing the Delta levees.

> *"15 years after the CALFED Bay-Delta program set a goal of bringing all Delta levees up to the standards of the U.S. Army Corps of Engineers' PL 84-99 program, the levee systems protecting 69 percent of the Delta's land do not meet this standard. Demands for future levee improvements are significant."*[13]

Analyses conducted by DWR and the Army Corps of Engineers have shown that seismic activity and subsidence represent threats to earthen levees protecting the Delta. Levee failures would not only inundate Delta islands, but would also cause salt water intrusions disrupting the water supply.[14]

In order to ensure that this **"Big Gulp"** of high-water flows can actually work, the levees must be improved. Specifically the levees for South and North Forks of the Mokelumne River and the sloughs

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[13] Delta Stewardship Council. (2015). State Investments in Delta Levees: Key Issues for Updating Priorities. http://deltacouncil.ca.gov/sites/default/files/documents/files/Item%2011_Attach%201_14-0918%20Levee%20Investment%20Strategy%20Issue%20Paper.pdf

[14] United States Army Corps of Engineers. (2014) *Delta Islands and Levees Feasibility Study, California*

and rivers in the Central and South Delta must be upgraded to ensure greater capacity, reliability and flood safety. Also key levees blocking sea water intrusion into the Delta must be upgraded.

A key component of improving the Delta s is a fish screen on the Cross Delta Channel Gates and Georgiana Slough, which are located in Walnut Grove, so that out migrating salmon will not be drawn southward to the pumps. Consideration should be given to the sound and light fish screen concept recently tested on the Georgiana Slough.[15]

THE LITTLE SIP SOLUTION: AN OVERVIEW

As conservation, recycling, surface and aquifer storage and improvements to the Delta levees come on line, continuous and robust scientific study of the effects of these improvements on the health of the Delta must take place. **If it is determined that the reduced demand on water from the Delta and altered pumping regimes from the Delta are not sufficient to meet the goal of water reliability, then it's time for "Little Sip Facility".**

The **"Little Sip Facility"** is a much smaller facility with a capacity of no more than 3,000 cfs, built to deliver water from the Sacramento River to the Tracy pumps. 40 percent of this Delta-friendly system is already built and begins only two miles from the State Capitol, at the Port of Sacramento. A fish screen and a low head pump at the existing opening on the Sacramento River would allow 3,000 cfs of Sacramento River water to enter the Sacramento Deepwater Ship Channel and flow 25 miles south to a shipping lock at the southern end of the channel. Then, pumps would deliver the water into two 10-foot diameter, pressurized pipes that would span a mere 12 miles beneath the Sacramento and San Joaquin Rivers and deliver water into a new channel along the east side the Old River channel leading to the Tracy Pumps.

An alternative route could deliver the water from the pressurized pipe to an aqueduct at Brentwood and on to the pumps at Tracy. This route would intersect six vital San Francisco Bay aqueducts, thus creating a safety system for 8 million Bay Area residents.

The "**Little Sip**" described above would be coupled with a "**Big gulp**" which is drawing water from the existing Delta channels when there are high water flows and no Delta smelt near the Tracy pumps.

WATER SUPPLY

With the normal minimum flows in the Sacramento River above 15,000 cfs, a small 3,000 cfs facility could operate at least 300 days per year, delivering approximately two million acre feet of water to the pumps at Tracy and then on to the new and expanded storage facilities in the south (Los Vaqueros, San Luis reservoir, Los Banos Grandes, and the many aquifers in the San Joaquin Valley and south of the Tehachapi's.) Note that the full 9,000 cfs capacity of the tunnels proposed in Alternative 4A of the California Water Fix would only be operational during large storms flows that occur at most a few times each year. Thus these huge tunnels become a massive waste of money for California and California water agencies.

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[15] California Department of Water Resources. *2011 Georgiana Slough Non-Physical Barrier Performance Evaluation.* http://baydeltaoffice.water.ca.gov/sdb/GS/docs/GSNPB_2011_Final_Report+Append_090512.pdf

This is where the "**Little Sip, Big Gulp**" strategy comes into play, and why fortification of the Delta levees is so essential. In average and above average water years, there is sufficient water in the Delta to allow the Delta pumps to take a "**Big Gulp**" of 2.5 million acre feet of water. This amount, together with the two million acre feet delivered through the 3,000 cfs facility, would meet the annual water demand south of the Delta. Rather than spending billions of dollars on a construction project that will rarely operate at its full capacity, we should prioritize the 300 day reliability of **"Little Sip"** versus the sporadic operation of the twin tunnels.

By DWR's own analysis in the BDCP Draft EIR/EIS under Alternative 5, a 3,000 cfs facility in the North Delta would result in a net increase in water supply of 345,000 acre feet per year on average, when operated in conjunction with South Delta exports.[16]

FISHERIES AND HABITAT

We must improve delta smelt science around the Tracy pumps. Current studies indicate that the delta smelt follow turbidity and move toward the Tracy pumps during times of high pumping, as storm water flows are pulled through the Delta.[17] Improved monitoring can and should be implemented to determine where the smelt are, so that pumping necessary to achieve the **"Big Gulp"** of 2.5 million acre feet can occur without harming the delta smelt and other endangered species. (Note that this level of pumping is less than one half current annual water pumped from the Delta).

Delta smelt trawl surveys conducted by the California Department of Fish and Wildlife have found smelt in the Sacramento Deep Water Ship Channel.[18] The construction of a single shipping lock at the southern end of the levees would isolate the Sacramento River water flowing south in the channel from the Delta water and any smelt in the area. Some smelt habitat in the channel would be lost. However mitigation measures such as shallow flooding of low value land in the area could significantly expand delta smelt habitat.

Salmon migration in and out of the Delta is covered in the Alternative 4A studies. One 3,000 cfs fish screen at the Sacramento Ship Channel facility and another fish screen at the Delta Cross Channel Gates would be much cheaper and environmentally preferable to three larger (9,000 cfs) fish screens further down the Sacramento River as envisioned in Alternative 4A.

MITIGATION

Mitigation of the effects for the use of the ship channel could be strengthening the west levee of the Deep Water Shipping Channel. This would serve the dual purpose of protecting the levees necessary to move water down the channel and protecting West Sacramento from floods caused by high water flows in the Yolo Bypass.

Additional mitigation should include deepening the ship channel to 35 feet, designing the intake fish screen on the Sacramento River in manner that is compatible with development plans of West

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[16] 2013 BDCP Draft EIR/EIS, Figure 5-17

[17] Feyrer, F., M. Nobriga, and T. Sommer. 2007. Multi-decadal trends for three declining fish species: habitat patterns and mechanisms in the San Francisco Estuary, California, U.S.A. Canadian Journal of Fisheries and Aquatic Sciences 64:723-734.

[18] Spring Kodiak Trawl Survey #3 of 2014 http://www.dfg.ca.gov/delta/data/skt/DisplayMaps.asp

Sacrament including access roads, river oriented parks, walkways and educational facilities focused on the ecology of the region.

Delays caused by the new shipping lock on the Deep Water Shipping Channel could be mitigated by building a new high bridge across the Sacramento River on Highway 12 at Rio Vista, thus eliminating the current impediment to all river and Highway 12 traffic. This high bridge is a subject of a Caltrans study.

Mitigation for the loss of delta smelt and other species habitat in the shipping channel could be accomplished by inundating low value islands near the southern end of the channel thus creating shallow water habitat.

FINANCING

According to a presentation made to the BDCP Steering Committee by Ron Milligan from the United States Bureau of Reclamation on July 2010, a 3,000 cfs conveyance with one intake on the Sacramento River south of Freeport would cost approximately $7 billion dollars. This modeling is based on a 40-mile tunnel along the same alignment as the twin tunnel project. It does not use the Deep Water Shipping Channel. The report estimated that SWP-CVP exports would average 6 MAF, with 1.4 MAF from the northern diversion and 4.6 MAF from the southern diversion point. Furthermore, the capital cost for an incrementally increased supply increases dramatically as the size of the conveyance increases—while water would cost $150/acre foot with a 3,000 cfs conveyance, a 15,000 cfs conveyance would cost approximately $210/acre foot under current conditions. Furthermore, a 3,000 cfs conveyance would cost approximately $380 million annually, when considering debt service, O&M, and power costs compared to $540 million for the 9,000 cfs twin tunnels. Note that these figures are based on very different project than the **"Little Sip**" discussed here.[19]

In a 1997 report, CALFED considered using the Sacramento Deep Water Shipping Channel and found"no major technical problems" in this route, (Alternative 3G).[20] This route is identical to that proposed in "**Little Sip, Big Gulp**", except it diverted 5,000 cfs from the river. A 3,000 cfs facility would result in a lower cost. The State identified the need for a low lift pump station on the Sacramento River that would provide the hydraulic head to move water through the channel during periods when gravity flows alone were insufficient. The plan called for a new unscreened pumping plant that would move water into a pressurized pipeline to Brentwood (about the same distance as the pipe line to Old River) where an open canal would convey the water to Clifton Court Forebay and the Tracy pumping plants. This early plan did not include a shipping lock or a fish screen on the Sacramento River. However this plan indicates the potential for the use of the ship channel.

The "**Little Sip, Big Gulp**" solution would require construction of a new intake replacing the existing intake at the Port of Sacramento. A fish screen at the intake, a low head pump to move water during periods of insufficient gravity; a shipping lock at the south end of the channel to facilitate commerce and to prevent Sacramento River water from flowing into the Delta; an intake and second pump north of the southern end of the eastern levee of the Deep Water Shipping Channel; two new 10-foot diameter pressurized pipelines to carry water under the Sacramento and San Joaquin Rivers; and an aqueduct to

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[19] Milligan, R. (2010, July 1). BDCP Sizing Presentation. Lecture presented at BDCP Steering Committee, Sacramento, CA.

[20] CALFED Bay-Delta Program. (1997) *Alternative Narrowing Process: Alternative 3G.*

carry the water to the Tracy pumps along the east side of Old River or to Brentwood then through Contra Costa County to the Tracy Pumps.

USACE estimated the costs of deepening the Deep Water Shipping Channel to 35' to be around $168 million, with an annual cost of $8 million and an annual benefit of $24 million.[21]

CALFED estimated a cost of $1.1 billion to $2.2 billion (adjusted for inflation to 2015 dollars) to upgrade the Delta levees, as reported in the Public Policy Institute of California's Armored-Island Aqueduct proposal.[22] Presumably the twin tunnel project and the Little Sip would have the same Delta levee costs, since both rely on continuing to pump water from the Delta when it is available.

The analysis by the DWR for the 3,000 cfs option that takes water out of the Sacramento River below Freeport includes a fish screen at the intake. It is reasonable to assume that a similar fish screen at the port of Sacramento would have a similar cost. The CALFED Storage and Conveyance Refinement Team estimated that screening an isolated Delta conveyance facility would cost $22,700 per cfs in 2007. [23] Based on this information, a 3,000 cfs facility today would cost $78,150,000 adjusted for inflation.

An additional mitigation measure could be strengthening the west bank levee of the Sacramento deep Water Shipping Channel. According to USACE estimates improving the west bank levee of the would cost $202 million[24]

The discussion above indicates that the **"Little Sip, Big Glup"** solution would be less expensive than DWR's $7 billion cost estimate for a 3,000 cfs 40-mile tunnel through the entire Delta. Even if we were to accept the DWR price tag the Little Sip Big Gulp solution would be $10 billion less expensive than the $17 billion cost of the 9,000 cfs tunnel in Alternative 4A.

These financial savings could be used for new and expanded storage facilities south of the Delta at Los Vaqueros, San Luis reservoir, Los Banos Grandes, and the many aquifers in the San Joaquin Valley and Los Angeles basin, and north of the Delta at the off stream Sites Reservoir. Savings could also be used for urban and agricultural conservation.

CONCLUSION

Ultimately, construction of a 3,000 cfs conveyance as described in the "**Little Sip, Big Gulp**" proposal with levee improvements and appropriate mitigation, is a much cheaper alternative than the alternatives in the California Water Fix. The State's proposal would also eliminate the economic, historic, cultural, and environmental impact on the North Delta. Armoring the Delta as presented in the "**Little Sip, Big Gulp**", would reduce flood risk in Delta cities and historic communities and also create water supply reliability for Southern California and the San Joaquin Valley.

A Discussion of the Legal Problems of the California Water Fix

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[21] United States Army Corps of Engineers. (2011) *Sacramento River Deep Water Ship Channel Limited Reevaluation Report: With-Project Economic Analysis.* http://www.spn.usace.army.mil/Portals/68/docs/SRDWSC/Appendix_E.pdf

[22] PPIC. *Dealing with the Delta: Envisioning Futures, Finding Solutions.* February 2007

[23] CALFED Storage and Conveyance Refinement Team 1997i. *Facility Descriptions and Updated Cost Estimates for an In-Delta Storage Project.* October 1997.

[24] United States Army Corps of Engineers. (2014) *West Sacramento General Reevaluation Report*

FEDERAL LAW

Under the National Environmental Policy Act (NEPA), a range of alternatives that would meet the project's purpose and need must be evaluated. The Council on Environmental Quality (CEQ) has provided guidance on what this "range of alternatives" means as Environmental Impact Statements (EIS) are developed under NEPA:

> *"The phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated.... Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."*[25]

This guidance is clear that alternatives must represent a wide range of options that can be rigorously explored and objectively evaluated. The draft EIS fails to meet this requirement in several ways. First, it fails to provide a wide range of options that meet the purpose and need of the proposed action. The stated planning goals for the California Water Fix/BDCP are to restore ecological functions of the Sacramento-San Joaquin Delta and improve water supply reliability in the state of California. Alternatives to meet these needs should include not only a conveyance facility, but also other actions and water projects that could be pursued to achieve water reliability. The alternatives in the recirculated draft EIR/EIS fall drastically short in this regard. There is no discussion of water conservation measures or recycling projects or increasing storage capacity, all of which could be used to support water reliability the recirculated draft EIS fails to rigorously explore alternatives. Building massive tunnels through the Delta is not the only option for creating water reliability, and there are plenty of other ideas out there for how reliability could be achieved. If the range of alternatives identified do not include all options that could reasonably meet the purpose and need for the California Water Fix/BDCP, then a rigorous review is impossible to achieve.

Finally, reasonable alternatives are those that are practical and feasible from a technical and economic standpoint, not just those that are desirable for the applicant. Proponents of the California Water Fix/BDCP have one goal in mind – building tunnels to move water from the North to the South. These blinders have limited the scope of this project and the scope of alternatives put forth for analysis. For these reasons, this EIR/EIS violates federal law and fails to provide the required components for an EIS under NEPA.

STATE LAW

The current draft EIS/EIR also violates state laws governing the development of the project. First, the California Environmental Quality Act (CEQA) applies to state projects which "may have a significant effect on the environment."[26] Since building tunnels 40-feet wide and 40-miles long through the Delta will directly cause physical change, the state has prepared a Draft Environmental Impact Report (EIR) to comply with CEQA. However, draft EIRs must provide feasible alternatives or mitigation measures that

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[25] Counsel on Environmental Quality, Guidance document "NEPA Forty Most Asked Questions"

[26] CA Public Resources Code Section 21100(a)

could substantially lessen the significant environmental effects of the proposed project, and this is where the state has failed. As previously mentioned, the alternatives offered in the draft EIR are not actual alternatives to the proposed project, they merely offer different sizes of conveyance systems without looking at alternatives that would actually lessen the environmental impact. Building tunnels, no matter what size, will have a major environmental impact. To comply with CEQA, the project proponents need to offer alternatives that would provide a reliable water supply through a variety of methods that extend beyond building a new conveyance system.

Second, in 2009, the Sacramento-San Joaquin Delta Reform Act became state law and mandated coequal goals for the Sacramento-San Joaquin Delta[27]. These two goals are to provide a more reliable water supply for California and to protect, restore and enhance the Delta ecosystem[28]. The Delta Stewardship Council (DSC) was created through the legislation and charged with the mission of developing and implementing a Delta Plan to achieve these goals. Rather than allowing the Delta Stewardship Council to complete its work in developing a Delta Plan, a group of independent stakeholders rushed ahead with the BDCP in an effort to find an easier way to export water from the Delta to the South under the guise of meeting the coequal goals. However, this narrow focus clearly fails to comply with the state law which states:

> *"Providing a more reliable water supply for the state involves implementation of water use efficiency and conservation projects, wastewater reclamation projects, desalination, and new improved infrastructure, including water storage and Delta conveyance facilities."* [29]

A conveyance system is only one element to achieving water reliability, and any plan that is put into place should encompass the entire list above. Some may argue that this is just the first step to achieving reliability, but that is the wrong approach. The Delta Reform Act goes on to discuss the need to reduce reliance on the Delta:

> *"The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. 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"*[30]

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[27] CA Water Code, Division 35, Section 85000
[28] CA Water Code, Division 35, Section 85020
[29] CA Water Code, Division 35, Section 85004(b)
[30] CA Water Code, Division 35, Section 85021

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SMUD®

October 30, 2015

BDCP/California Water Fix Comments
P.O. Box 1919
Sacramento, CA 95812

Re: Bay Delta Conservation Plan/WaterFix Partially Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement

To whom it may concern,

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Partially Recirculated Draft Environmental Impact Report and Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) for the Bay Delta Conservation Plan (BDCP) /California WaterFix project that was published on July 10, 2015. SMUD is the primary energy provider for Sacramento County and as such could provide electricity for any of the project components constructed or operated in our service area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a potential Responsible Agency under the California Environmental Quality Act for the California Water Fix project, SMUD targeted its comments toward ensuring the proposed project limits the potential for significant environmental effects on SMUD facilities, employees, and customers. As a utility provider for a portion of the anticipated impact area, SMUD also has a direct interest ensuring the environmental analysis adequately covers the environmental impacts that may result from our participation in the construction and operation of electrical facilities needed to serve the proposed project and implementation of any relevant mitigation measures.

SMUD staff review focused on Alternative 4A. SMUD recognizes that under this alternative, no permanent transmission lines in Sacramento County would be needed for operation or construction of the project. Based on our review of the RDEIR/SDEIS sections and our understanding of the proposed project, SMUD offers the following input:

1. This document does not discuss the results of SMUD's System Impact Study, which indicated that this project could be served by SMUD's proposed new Franklin Bulk Substation. However, a transmission line from the Franklin Substation would be shorter in length than the one identified in the RDEIR/SDEIS extending from a point north of Lambert Road and west of Highway 99 and SMUD assumes that the magnitude of impacts from a

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shorter line would not exceed those analyzed in the RDEIR/SDEID and Draft EIS/EIR.

2. The System Impact Study, prepared for this project, indicates that an area 250 feet by 300 feet would be required for each substation needed to support the project, but the RDEIR/SDEIS identifies a smaller footprint. The larger area should be assumed for purposes of measuring environmental impacts.

Appendix 3C Construction Assumptions, Table 3C-1

3. SMUD's 69kV poles are typically spaced 250 to 350 feet apart, not 450 feet as indicated on page 3C-15.

Chapter 25, Public Health, Impact PH-4

4. As mentioned in our comment letter on the DEIS/EIR, SMUD will abide by the California Public Utilities Commission's (CPUC) seven interim measures that address EMF from its November 1993 decision which was affirmed on January 27, 2005. The "CPUC EMF Design Guidelines for Electrical Facilities" document referenced on page 25-73, lines 13-14, of the DEIS/EIR does not, to SMUD's knowledge, exist.

5. The CPUC interim measures state that approximately four percent of the project cost to be used for EMF mitigation. Shading by placing trees or other physical barriers along the transmission right-of-way or increasing the distance between the source of the EMF and receptor by a higher tower or wider right-of-way (Page 25-72, lines 40-43) would be very expensive, would quickly exceed this four percent allocation, and DWR should consider whether the cost would make such measures infeasible.

Several of SMUD's comments on the Draft EIS/EIR were not addressed in the RDEIE/SDEIS. These comments are provided again below. SMUD does recognizes that many of the comments are not specific to the impacts discussed in the RDEIR/SDEIS, but refer to SMUD's general operating procedures, which are inconsistent with methods proposed in the document

1. Chapter 3, Description of Alternatives
   a. Page 3-58, line 8, discusses the use of a dipped cross arm configuration that could be used to discourage raptor perching. SMUD does not typically or currently use this configuration, but would be willing to work with DWR to find a solution that addresses this concern.

   b. Phase Separation clarification: Page 3-58, lines 11-13 state that for 69kV lines, there would be 60 inches between the conductor and pole face.

Please confirm whether this separation would be the result of materials placed on the conductors at each pole to create 60 inches of separation between perching opportunities and exposed wires, or whether the wires themselves would be constructed 60 inches apart. Would this standard also apply to distribution lines constructed or relocated for this project?

c. Please identify the party responsible for identifying areas of raptor concern as discussed on page 3-58, lines 12 and 13. Will DWR or the local utility designate those areas?

d. Material coating on monopole and lattice structures (page 3-58, lines 21-23): SMUD typically uses hot-dip galvanized steel that is dulled to reduce reflectivity as material for its poles. Please describe the material that would be used (both type and color) that would address reflectivity and visibility.

2. Avoidance and Minimization Measure 20, Greater Sandhill Crane

a. Similar to Comment 1c, please confirm that DWR will identify the bird strike risk zones and greater sandhill crane winter use areas.

b. SMUD is open to exploring the feasibility of undergrounding existing lines in high bird strike zones, but removing or relocating lines may be infeasible due to our obligation to provide power to our existing customers. SMUD has several concerns associated with construction and operation of underground transmission and subtransmission lines, including but not limited to: costs; increased environmental impacts associated with constructing the lines (i.e., the physical impacts from a trench exceed the impacts associated with installing poles); increased environmental impacts associated with maintenance of the lines; and potentially feasibility given the high water table, soil type, and seismicity. The Draft EIS/EIR discusses some of these concerns on pages 3-59 through 3-61.

c. SMUD is willing to install and maintain flight diverters on all new permanent lines and existing lines in the highest risk zones at DWR's cost. SMUD would like to be kept apprised of discussions and plans to install bird flight diverters on electrical lines or transmission and distribution line construction design options as well any other issues related to mitigating electrical facility construction and wildlife and power line interactions.

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3. Chapter 13, Land Use

    d. Impacts associated with utility easements and existing infrastructure are not described in the Land Use discussion and could result in additional incompatibilities. SMUD recognizes that there is some discussion of this impact in the Public Services and Utilities Section, starting on Page 20-17. Please ensure these issues are adequately addressed in the Final EIR/EIS.

2. Chapter 17, Aesthetics and Visual Resources

    The mitigation for visual impacts included potentially undergrounding transmission lines in areas where significant visual impacts would occur. SMUD rarely installs transmission lines underground, as described above in section 2b, due to costs and additional construction and operational environmental impacts, but is willing to work with DWR to address this concern. The BDCP Mitigation Monitoring Plan should state that the project applicant is responsible for the funding of the associated aesthetic mitigation measures.

3. Chapter 20, Public Services and Utilities

    SMUD has existing distribution lines throughout the project area including both the water conveyance system and Conservation Zone 4 that serve existing customers. Construction and operation of the water conveyance system may require relocation of SMUD facilities as described in Impact UT-6 and UT-7, respectively. DWR would be responsible for obtaining any easements and resolving any environmental issues.

4. Chapter 22, Air Quality

    SMUD may not have the equipment required to comply with the environmental commitments that DWR has proposed for its portion of the project, but is willing to work with DWR to reduce generation of criteria pollutants resulting from project construction.

5. Chapter 23, Noise

    SMUD is willing to work with DWR to ensure that the proposed noise cancelling and vibration reducing mitigation measures are indeed feasible.

6. Chapter 24, Hazards and Hazardous Materials

RECIRC
2555

Please ensure that SMUD will be included in the preparation of all plans for this project with which it will be required to comply, including but not limited to the stormwater pollution prevention plans, hazardous materials management plans, spill prevention, containment, and countermeasure plans, and a barge operations plan stated along with HAZ-1a and HAZ -1b and TRANS-1a.

The RDEIR/SDEIS as it is currently written appears, on its face, to be sufficient for SMUD to use as the CEQA document addressing construction of any electrical infrastructure facilities necessary to serve the BDCP project. While the details of electrical infrastructure SMUD could potentially build to serve the project have not yet been determined, the RDEIR/SDEIS and the Draft EIS/EIR appear to have captured a "worse-case scenario" for the resulting environmental impacts.

SMUD would like to continue to be kept apprised of the planning, development, and completion of this project. We aim to be partners in the efficient and sustainable delivery of the proposed project. Please ensure that the information included in this response is conveyed to the project planners and the appropriate project proponents.

Environmental leadership is a core value of SMUD, and we look forward to collaborating with you on this project. Again, we appreciate the opportunity to provide input on the RDEIR/SDEIS. If you have any questions regarding this letter, please contact Emily Bacchini, SMUD Environmental Specialist at (916) 732-6334. I will be the primary environmental point of contact for SMUD on this project.

Sincerely,

Emily Bacchini

Emily Bacchini
Environmental Specialist
Environmental Management
Sacramento Municipal Utility District

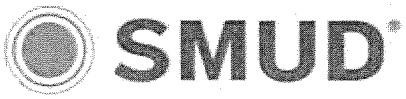
RELRC2555

From: Emily Bacchini <Emily.Bacchini@smud.org>
Sent: Friday, October 30, 2015 4:09 PM
To: BDCPcomments
Subject: SMUD's comment letter on the BDCP/California WaterFix RDEIR/SDEIS
Attachments: SMUD RDEIR SDEIS comment letter.pdf

Please see the attached document with SMUD's comments on the BDCP/California WaterFix RDEIR/SDEIS.

Thanks!!

Emily Bacchini
Environmental Management Specialist III
Environmental Management
6201 S Street, Mailstop H201, Sacramento, CA 95817
w.916-732-6334 | c.916-524-8059 | emily.bacchini@smud.org



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Together.

From: Jeffrey Michael <jmichael@PACIFIC.EDU>
Sent: Friday, October 30, 2015 10:54 AM
To: BDCPcomments
Subject: WaterFix Comments
Attachments: WaterFix RDEIR comments.pdf

My comments are attached.

Dr. Jeffrey Michael
Director, Center for Business and Policy Research
Eberhardt School of Business
University of the Pacific
Sacramento: 916.340.6084
Stockton: 209.946.7385
Cell: 209.662.5247
jmichael@pacific.edu

RECIRC 2596

Dr. Jeffrey Michael
Director, Center for Business and Policy Research
University of the Pacific

October 30, 2015

BDCP/WaterFix Comments
P.O. Box 1919
Sacramento, CA 95812

RE: RDEIR/SDEIS is severely biased in favor of the tunnels by using economically unviable water yields, and ignoring practical and potentially superior alternatives.

Thank you for the opportunity to comment on the Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). There are several significant changes to the Water Fix, most notably the change from a Section 10 to Section 7 permit, and the addition of 3 new alternatives with a different regulatory approach. The change in regulatory approach has a substantial impact on the project's economic viability, and the new alternatives put forward are completely unresponsive to repeated requests made by numerous independent experts and various stakeholders for years. Thus, these comments are focused on critical problems with the revisions and response to comments in the RDEIR/SDEIS.

Specifically, these comments focus on two critical structural errors in the description of the project and its alternatives: 1) use of a project description that is known to be economically unviable due to its extremely low and highly uncertain water yields, 2) the exclusion of obvious, common-sense alternatives. The project description and the alternatives are the basis for the voluminous technical analysis that makes up the bulk of the RDEIR/SDEIS. The inaccurate description of project water yields and alternatives appear to be intentional actions to hide negative environmental and social impacts of the proposed project. I will leave it to legal experts to argue whether these actions are unlawful, but it is clear that the inaccurate project description and omission of alternatives has resulted in an RDEIR/SDEIS that is severely biased to support the proposed tunnels.

I. Water yields: The financial viability of the tunnels requires much higher water yields than described in the RDEIR/SDEIS. Financially viable water yields would substantially reduce freshwater flows to the Delta and have serious negative effects on water quality and endangered/threatened fish species.

The minimal water yields reported in the RDEIR/SDEIS are far too low for the $16+ billion capital investment to make economic or financial sense. Compared to the No Action Alternative, the average annual water yield from Alt 4A (the preferred project) ranges from a loss of 23,000 acre feet to a best case scenario of 537,000 acre feet or a midpoint of 257,000

acre feet. Thus, the water yield from the tunnels is about 15,000 acre feet per $1 billion in capital investment. A simple comparison to the most costly alternatives available to urban water agencies and the value of farmland illustrates the economic absurdity of the tunnels if operated in the manner described in the RDEIR/SDEIS.

For farmers, 15,000 acre feet of annual average water yield for $1 billion capital investment would be sufficient to keep about 5,000 acres of land in crops. That is a $200,000 capital cost per acre of crop land, nearly 20 times the current market price of cropland with reliable water in the San Joaquin Valley. The tunnels are more likely to be affordable for urban areas, but their cost per acre foot greatly exceeds the most costly urban alternatives. For example, a desalination plant under construction in San Diego County yields 56,000 acre feet for a $1 billion capital investment, over three times the water yield per dollar of investment than the tunnels. A water recycling proposal being considered by Metropolitan Water District would yield 150,000 acre feet for a $1 billion capital investment, ten times the water yield per dollar of capital investment. Independent economist Rodney Smith has estimated that the average cost of the tunnels' RDEIR/SDEIS water yield is about $3,000 per acre foot when considering operating and financing costs over the projects expected life cycle which is much higher than the cost of alternatives and well above what farmers have been willing to pay for water during the most extreme drought years.

Even the BDCP's own chief economic consultant, Dr. David Sunding, said that the tunnels do not make sense at the water yields in the environmental documents. He was asked by a board member of the Metropolitan Water District if the tunnels' penciled out at the 2013 EIR/EIS water yields, and he answered "No." It should be noted that the 2013 EIR/EIS water yields were higher than those in the current RDEIR/SDEIS. It should also be noted that the seismic risk reduction and water quality benefits do not provide economic justification according to their own expert. His 2013 analysis estimated the seismic risk reduction and water quality benefits to water exporters were worth a cumulative $2.5 billion over the first 50 years of operation, only about 15% of the tunnel's cost. The majority of the economic benefits he estimated from the tunnels were based on the 50-year regulatory protection from being part of the BDCP habitat conservation plan – based on the theory that environmental restrictions on pumping are likely to get stronger in the future – and the Section 10 ESA permit would protect the water agencies from future water exports that he argued would be much lower than the No Action Alternative in the EIR/EIS. In essence, the value of the tunnels was that the Section 10 HCP would lock in current or somewhat higher level of exports for 50 years. However, the new alternative 4A in the RDEIR/SDEIS is not a Section 10 HCP. Thus, that analysis from a draft August 2013 economic impact report is irrelevant to the new alternative 4A, and no update has been released despite repeated promises.

Many of the water agencies that would pay for the WaterFix have stated openly (i.e. Kern County Water Agency RDEIR/SDEIS comment letter) that the project is economically infeasible at the EIR/EIS water yields, or expressed serious doubts (Westlands Water District, San Diego County Water Authority). There can be no doubt that after the tunnels are built that there will be enormous financial pressure to export far more water than described in the RDEIR/SDEIS. Given the projects extreme cost and reliance on water rates and water sales to generate

revenue for its massive debt service, the project description is incomplete without a detailed financial plan and analysis.

In short, common sense and even the BDCP's own analysis show that the tunnels are not financially viable at the operations listed in the RDEIR/SDEIS. ***A complete project description must include an economic analysis and financial analysis that supports the project at the water yields in the project description. Without this financial information, it appears that the RDEIR/SDEIS is using a false project description to conceal adverse environmental impacts from reductions to Delta freshwater flows.***

II. Alternatives: The RDEIR/SDEIS claims that it is being responsive to the call for new alternatives by adding three revisions to the North Delta Intakes and isolated tunnel conveyance. In doing so, it continues to ignore the substance of repeated comments from independent scientific experts and stakeholders. Incredibly, the RDEIR/SDEIS even ignores alternatives that are specifically cited as viable tunnel alternatives in current plans and recent reports by the beneficiaries of the tunnels.

The RDEIR/SDEIS ignores at least four obvious alternatives to the north Delta intakes and tunnels. These four alternatives should be considered separately and combined into comprehensive alternatives. As another possible approach to correcting this deficiency, several of these alternatives could be included in the No Action Alternative, especially when they have been already identified in the plans of various water agencies as actions that they will take or expect if the tunnels are not constructed. While these comments specifically mention the four most obvious alternatives that have been ignored, it should not be considered a complete list.

1) Levee Upgrades: Delta levees are simultaneously a water conveyance system and habitat, and concerns about the performance of the "aging" levee system is the most prominent motivation for the proposed tunnels. Upgrading the existing system is an obvious and common sense alternative that must be considered. In fact, several other comprehensive analyses of the Delta have found levee upgrades are a superior approach to isolated conveyance. Thus, it seems the only reasonable explanation for ignoring levee upgrades in the alternatives is to avoid serious negative findings in the RDEIR/SDEIS. Among the analyses recommending levee upgrades that were produced during the California Water Fix process are the following:
    a. The Department of Water Resources' 2008 Report to the California Legislature "Risks and Options to Reduce Risks to Fishery and Water Supply Uses of the Sacramento/San Joaquin Delta" included seismic levee upgrades along with isolated conveyance on a short list of three promising strategies for further analysis.[1] It is indefensible that the same agency that told the California Legislature levee upgrades were on the short list of promising

[1] http://www.water.ca.gov/floodsafe/fessro/levees/drms/docs/AB1200_Report_to_Legislature.pdf

alternatives would then omit it among fifteen BDCP/Water Fix alternatives that were developed shortly thereafter

b. The peer-reviewed Economic Sustainability Plan approved by Delta Protection Commission in early 2012 recommended seismic levee upgrades as a superior approach to isolated conveyance. It found that seismic levee upgrades would enhance water supply reliability, improve riparian habitat, and compared to isolated conveyance it has the added benefits of enhancing public safety, protecting critical infrastructure and property.

c. Department of Water Resources consultants working on DRMS Phase II found that Seismic Levee Upgrade strategy had higher benefits and lower costs than other strategies including a peripheral canal similar to the current WaterFix proposal. The Department of Water Resources then omitted Seismic Levee Upgrades from the options in the DRMS Phase 2 final report and delayed its release by several years.[2] This omission of seismic levee upgrades from the DRMS Phase 2 final scenarios when it performed best in the draft analysis, provides an important precedent that shows DWR has a history of deleting levee upgrade alternatives from their reports if it does not support their politically preferred alternative.

Unlike isolated conveyance, which only protects water exports from the risk of earthquakes and floods, seismic levee upgrades would protect water exports, save hundreds of lives, prevent destruction of habitat and water quality degradation, and protect billions of dollars in critical infrastructure and private economic assets. Thus, if compared to a seismic levee upgrade strategy, the BDCP/Water Fix preferred project would be found to result in avoidable fatalities, environmental and economic damage. Clearly, that serious negative impact for tunnels' that is not disclosed in the RDEIR/SDEIS because it ignores seismic levee upgrades as an alternative.

2) Increased Investment in Alternative Water Supplies and Conservation: Many water agencies have stated that they will increase investment in alternative water supplies in the absence of the tunnels. In fact this strategy is in the official resource management plan of some of the agencies, and water agencies have put forward economic analysis that describes much of the benefit of the tunnels as avoiding these obvious alternatives. Thus, it is inexcusable to exclude increased investment inalternative water supplies from the No Action and alternative scenarios.

3) Increased Freshwater Flows, Reduced Exports: This is the No Action Scenario DWR uses in previous economic analysis, and continues to argue is their expected outcome without the tunnels use when questioned on costs. But the RDEIR/SDEIS invalidly and inconsistently ignores higher flows in either the No Action scenario or alternative scenarios.

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[2] http://www.pacific.edu/Documents/school-business/BFC/Econ%20Sustain%20Plan%20PDFs/Appendices/Appendix%20N.pdf

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4) Alternative Intake Locations, Especially the West Delta: This is another obvious alternative that is ignored in the analysis. It would reduce environmental and socio-economic impacts in the Delta and potentially reduce costs to the water agencies by greatly shortening the lengths of the tunnels. While there are advantages to water exporters of being further upstream, there is no valid reason to completely exclude a full analysis of moving the intakes downstream.

The RDEIR/SDEIS should be rejected. A generous review of the RDEIR/SDEIS would reject it for providing an incomplete description of the project without a financial plan to support the low water yield, and incomplete because it fails to consider a full range of viable, practical alternatives. Given the substantial record and nine years of planning, a less generous review would reject the RDEIR/SDEIS for making intentional false statements about expected water yields, the no-action scenario, and available alternatives in order to obtain environmental approvals with a severely biased analysis.

The WaterFix is the most costly and controversial water project every proposed in California's history. I do not have the legal expertise to offer an opinion on whether or not the RDEIR/SDEIS meets minimal legal standards. However, it is clear that the RDEIR/SDEIS falls well short of the unbiased and complete analysis that California and U.S. citizens deserve to support such an important policy decision. If the WaterFix was a strong project, the obvious bias in the framing of the analysis described in this letter would not be necessary. Having closely studied the development of BDCP/WaterFix for the past seven years, there is no doubt in my mind that there are not only superior alternatives, but that building the tunnels will ultimately prove to be more economically and environmentally harmful than doing nothing at all. Fortunately, there is no shortage of positive actions and investments that will be more likely to occur without the Delta tunnels, even if those likely and preferable alternatives are ignored in BDCP/WaterFix RDEIR/SDEIS.

Sincerely,

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