

From: Gayle Vaughan <vonwind@yahoo.com>
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To: BDCP.comments@noaa.gov
Subject: Comment Letter on the BDCP/EIR
Attachments: Letter to BDCP July 24.docx

BDCP2007.

[Attached]

Attached and printed below is my letter of comment.
Gayle Vaughan, 707-745-8322

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July 24, 2014

BDCP Comments
Ryan Wulff, NMES
650 Capitol Mall, Suite 5-100
Sacramento, Ca, 95814

*email text
processed separately
as letter #1591*

Dear Mr. Wulff,

I am a 35 year resident of Benicia, a fourth generation Californian, a former elementary school teacher, an avid Delta sailor, and a current tidal marsh docent for the Solano Land Trust at Rush Ranch on Suisun Slough. I have been reading, attending hearings and community meetings, and studying the Bay Delta Conservation Plan for the last two years. I have numerous and serious concerns about the Plan.

Inequitable economics

The most prominent of these concerns among my friends and acquaintances involves the issue of water flow from the Northern Sacramento River to the lands south of the Delta. There is great consternation over what appears to be a "water grab" by farmers in the San Joaquin Delta and large water agencies that supply residential water to Los Angeles. Past practices by these agencies have led to the subsidence of soils in the San Joaquin, the draining of Owens Lake, and the reverse flow of the San Joaquin River (Cadillac Desert, Marc Resiner, 1963, DWR, USGS data). It seems that once water resources in the Central Valley became overused, farmers seeking greater profits began to use Sacramento River Watershed water, through the CVP and SWP. Later, the Delta Cross Cut Channel diverted water away from the Sacramento outflow and into the Mendota Cannel. Now, the plan is to take even more water to irrigate marginal soils in a desert region. The fear is that such water takes will cause the Delta to have severely reduced water flows, increased salinity and silt build up, and that the availability of water for current users above and within the Delta will decrease significantly.

While farmers throughout the state from Redding to Bakersfield are seeking a secure source of water to maintain their livelihoods, the BDCP proposes a development which would allow farmers in the San Joaquin and water agencies further south to grow and prosper at the expense of those of us living in the five county Delta region. As stated July 22, 2014, at the Solano County Board of Supervisors' meeting by the Solano County Director of Resource Manager, Bill Emlen, " The plan facilitates a glaring imbalance and inequity whereby economic objectives of other regions are supported at the expense of the Delta region." At a previous Solano Board of Supervisors meeting (June 2, 2014) other problems for our county were brought to light: uncertainty about which lands will be affected and how management of these lands and habitat will take place, increased salinity of both flowing and ground water, as well as increased salinity of the land itself, loss of taxes from loss of farmland revenues, loss of housing, decrease in local food production, and environmental concerns. Solano County Supervisors have noted in their comment letter that "the plan has significant and far-reaching impacts that will erode the agricultural base that the county has spent decades trying to responsibly preserve."

In addition the Plan has many indirect costs to the county, state, and private industry in order to benefit those in the southland. The "preferred alternative" plan would cause Highway 12, SR 160, and parts of I-5 to be rerouted. With implementation of the habitat plan several county bridges would need to be moved or extended and in one plan for Suisun Marsh, the railroad (Capitol Corridor line, and the one scheduled to bring heavy crude to the Benicia Valero Refinery) would need to be restructured or moved. There is no funding mechanism allowed for any of this in the BDCP.

Project Size and Management

The Bay Delta Conservation Plan will affect a much larger area than is covered by the the plan itself. While the Plan documents indicate it is "a comprehensive conservation strategy aimed at protecting various species of wildlife while permitting the reliable operation of

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Project Size and Management

The Bay Delta Conservation Plan will affect a much larger area than is covered by the plan itself. While the Plan documents indicate it is “a comprehensive conservation strategy aimed at protecting various species of wildlife while permitting the reliable operation of California’s two most important delivery systems”, it’s purview of study and influence is limited to an area bounded by Goodyear Slough near Benicia in the west to Staten Island in the east and southward to the Tracy pumps. In the plan area alone 3500 to 20,000 acres of useable land will be altered (EIR-31-1), not including the land to be set aside for habitat mitigation. The Plan will in fact affect a much larger area than that. The way the BDCP and DWR choose to manage the water in the CVP and SWP will have great impact on millions: farmers, towns, cities, and wildlife all the way from Shasta Dam to Los Angeles and out through the Golden Gate.

As noted in the EIR (ES.3) the effects of implementing the BDCP would extend beyond the boundaries of its proposed region, and these effects have not been fully evaluated or mitigated. The Plan needs to examine those effects before proceeding with construction of a water delivery system that will negatively impact millions of people as well as wildlife. At one of the roundtable hearings presented by the BDCP in Sacramento last year, I was very surprised to learn that wildlife presenters, ICF Consultants, and multiple water agencies’ personnel had very little understanding of how the BDCP area is geographically and economically connected to the rest of California.

The San Francisco Bay Delta is the largest estuary on the West Coast of North America. It includes many subregions, each of which has different sensitive ecosystems that will be impacted by the BDCP (*Suisun Marsh*, Peter Moyle, 2014). The BDCP seeks to recreate historic habitat for about 90,000 acres, while preserving another 116,000 acres in the Suisun Marsh. Some of these acres will be grossly

restructured under the Plan, while others will just be more tightly managed. Even though the EIR and BDCP reports are massive in length, the conclusions about how Marsh ecosystems and natural habitats will be impacted are vague, and are only in theoretical stages according to the EIR. Proponents and consultants for the habitat restoration project are not yet clear on what the results of their efforts will be. As one ecological consultant at a February hearing in Sacramento announced, "There has never been a habitat restoration project this large in the world, so scientific data about it is limited."

The BDCP lacks a clear statement of oversight and implementation of the project. The Implementation Agreement is nebulous at best. As written there, the BDCP conflicts with six different current water plans for the state of California including the Delta Plan, the California Water Action Plan, and the Suisun Marsh Preservation Plan, numerous county land use plans, and an international treaty for bird migration between multiple countries from Columbia through Canada. The Plan requires reworking of water rights issues that have been in place for decades.

The BDCP is in violation of the Delta Protection Act which "accords first priority to satisfaction of vested rights and public interest needs for water in the Delta and relegates to lesser priority all exports of water from the Delta." The Water Code Section 11461 states that "projects must be operated so as not to cause any material deterioration of water quality which would impair its usefulness for the reasonable beneficial uses which are made by senior right holders." The BDCP is in clear violation of this. (Dante Nomellini, Sr., Central Delta Water Agency, June 3, 2014).

The management of the BDCP is not efficient or transparent. The document itself is so lengthy and user- unfriendly that is difficult for consultants, managers, and the general public to access necessary information for understanding and implementation of the stated goals. The Plan is not inclusive. Those delineated in the IA as primary decision makers do not include stakeholders from the Delta or areas upstream who will be impacted. There is no public vote on any part of the plan. This lack of inclusion increases the political conflict between North and South, farmers, and fisherman, and environmentalists. The hearings that were held, and the comment period allow for some input, but it is limited considering how many will be impacted and how much it will cost us all financially.

The BDCP is expensive and its funding is uncertain. Costs are not set and estimates vary from \$16 to \$35 billion with approximately \$3.2 billion for tunnel construction. These costs are based on an optimism basis according to the Implementation Agreement. The BDCP has offered two cost /benefit evaluations, that don't agree. Economics Professor Dr. Jeffrey Michael (Directory of the Business Forecasting Center, University of the Pacific) completed an independent cost/benefit comparison that shows a much lower benefit-cost ratio, which indicates that the Plan is not cost effective.

According to the BDCP the annual debt service and operating costs of the tunnels will be about \$1.2 billion, while a Westlands Water District Presentation sets it at \$2 billion. Estimations for costs to agriculture in California presented by economist Dr. Michael, and based on the BDCP Economic Impact Report, indicate that the revenue gain based on increased production for south of the Delta would be around \$134 million, the loss to Delta would be around \$91 million. The net gain to California agriculture would be \$41 million before deducting the annual cost of tunnel operation. Financially, for agriculture this plan does not make sense.

The cost of tunnel or conveyance construction and operation is to be split between water supply benefactors, water agencies, and the Federal and State government. Estimates given in February, 2014 by John Laird, Secretary of Natural Resources indicated that about 68% of costs would be paid by urban and agricultural water users. Last week, at a presentation by the Metropolitan Water District, the figure was quoted at 55%. There appears to be some Adaptive Management going on to convince the water contractors to sign onto the agreement. For some water contractors the cost/benefit will not be worth it.

As noted by San Diego County Water Authority in their June 2, 2014, comment letter, "Chapter 8 of the current BDCP does not provide the detailed information necessary for potential participating agencies to evaluate individual agency cost-benefit of the proposed project."

Where will the money come from? Obviously, water rates will rise for all users, including us here in Benicia. Currently, it was reported in the news that larger water agencies may be seeking to raise property taxes to pay for the BDC without a public vote. The State will need to pass a water bond, and the legislature can't seem to agree on one to submit. The Federal government has declined at this point to offer any financial assistance. A recent Army Corp of Engineers Levee Feasibility Study indicated that there is too little benefit for the costs for the Federal Government to get involved at this time. This study also revealed that the benefit to cost ratio is appropriate for habitat restoration, and that the Federal Government may offer assistance there, but only at 50/50% with private funding.

Uncertain water availability for the whole state

While the BDCP has co-equal goals of supplying a consistent water source to California users and maintaining a sustainable wildlife habitat in the Delta, it seems unlikely for those goals to be achieved. First let's look at water availability. According to the EIR for the BDCP, (ES.2.2.2.2) water supply reliability cannot be maintained at permitted levels. In 2006, the State Water Board presented information to the Delta Vision Task Force indicating that quantities totaling several times the average annual unimpaired flow in the Delta watershed could be available based on the face value of water permits already issued. What's expected as "consistent water supply" by the farmers in the San Joaquin Valley has never been available and probably never will.

Presenters at springtime hearings (Santa Clarita Delta Bus Tour, at Rush Ranch, April, 2014) indicated that the tunnels are not going to take more water than is taken now. The BDCP tunnel option would allow 65% of the outflow to be taken for state and federal water projects. The "Preferred Plan" allows an outtake of water at 9,000 cubic feet per second from July to January every year. According to the Delta Water Atlas, the average outflow during the summer varies between 5,000 and 10,000 cfs. This year, the US Geological Service monitoring stations within the Delta show the outflow last month to be closer to 150-300 cfs. Comparisons made by U. C. Davis researchers indicate that the Dayflow calculation system used by the DWR shows almost twice the water outflow as the USGS monitors. There is concern about the difference in monitoring and in the science used by the DWR to determine accurate water flows through the Delta. The science here is questionable. BDCP has not been accessing the Delta Science Project information either.

BDCP computer modeling of water flows through the Delta are inaccurate. (Chapter 5) Although the Plan indicates the water not going through the tunnels would flow equally through three channels: Steamboat Slough, the Sacramento River, and Georgianna Slough. The real life lesson of the drought is showing that isn't happening. My own personal observation and those of others living in the Delta (Isleton Newspaper, July, 2014) indicate that Steamboat Slough is "turning into a mud flat" at low tide because of a sandbar that has developed blocking tidal inflow, the Sacramento River is 10-15 feet deep between Rio Vista and Walnut Grove, while the Georgianna Slough is 20-40 feet deep.

There are other problems with the computer modeling as well. At a recent presentation by Solano Resource Conservation District, the director presented his own computer modeling about the critical placement of tidal marshes that provided very different information than that found in the BDCP. Placement of such habitat restoration projects is critical for attempting to mitigate the effect of flooding caused by climate change and sea rise (NERR, 2014), one of the secondary goals of the BDCP.

The US Department of Fish and Wildlife noted in the EIR that modeling which had been done was insufficient and/or inaccurate. Limited and inaccurate modeling of water flows and salinity levels in Suisun Marsh were also noted by Peter Moyle, Associate director of the Center for Watershed Sciences at the University of California, Davis, in the book, *Suisun Marsh*.

Maintenance of a consistent water flow to those in the southland requires both an adequate amount of fresh water and the systems with which to move it. While the BDCP (Chapter 8) offers alternatives for moving water in and around the Delta and proposes certain modifications to the levee system to accommodate this water movement, it does not address the issue of failing water delivery infrastructures south of the Delta.

According to Michelle Sneed, hydrologist with the USGS who has studied land subsidence along the Delta-Mendota Canal since 2003, the subsidence of soil near the Delta Mendota Canal, the East Side Bypass, and the California Aqueduct is affecting the efficiency of the canals. "You get lost conveyance capacity." Another common impact is a loss of storage capacity within the aquifers there. Perhaps the BDCP or DWR should consider spending funds to improve the current canal system, and regulate ground water pumping to reduce subsidence before heavily investing in a massive Delta conveyance system.

One of the current problems for consistent water delivery is the EPA requirement to stop pumping when Delta smelt and long-fin smelt become trapped in the south Delta pumps. According to the CEQA in the EIR (Table 9-1) these same fish as well as Chinook salmon will be negatively affected and run the same risk of entrapment at the tunnel pumps. Adaptive management techniques suggest that when the fish are more likely to be killed, the water will not flow through the conveyance. At a hearing in Sacramento (February, 2014), The Director of DWR stated that "if (covered) species are jeopardized, permits will be withdrawn" as per the Bay Delta Reform Act of 2009. It would appear that even with the tunnels we will likely have a water delivery problem very similar to the one we have now.

Water users upstream of the tunnel construction will likely suffer reduced water resources, including ground water, during the construction (ten years?) although the EIR only mentions that the BDCP fails to take into account the upstream disruption that can be caused by the construction of the tunnels. Feather River flows will suffer significant reduction during high water demand periods, negatively impacting the endangered fall Chinook salmon run. Water use by towns and farmers in the Delta during construction and operation will be negatively impacted as well.

So, there will be less water for those in the Sacramento River watershed, less water for Delta farmers and residents, and an inconsistent source of water for those south of the Delta. Goal number one: not met.

Decreased Water Quality

Not only will there not be a consistent source of water, the water provided is likely to be of lower quality. The operation of the tunnels will reduce the quality of water available in the Delta. About 20 million people depend on water flowing in the Sacramento-San Joaquin Delta inland from North Bay for their water supply (sfbay.wr.usgs.gov) They and certain aquatic species will be negatively impacted by increase in salinity caused by the reduced outflows of the tunnel project.

As water flows through the Delta are decreased by the tunnel outtake, the EIR explains that increased silting and sedimentation are likely to develop in the channels and sloughs west of the tunnels, further impacting water quality within the Delta. For example, Baker Slough is currently the outtake site for the North Bay Aqueduct, a major source of Benicia's water. According to the BDCP, the tunnel

project will cause such a reduction in Delta outflow that the water quality and salinity levels of the water there will not be appropriate for irrigation or drinking. Hence, the North Bay Aqueduct outtake site will need to be moved closer to the construction site of the tunnels.

The water going through the tunnels is likely to degrade in quality as well. Natural filtration of sediment and increased oxygen provided by wetlands and channel habitat will not occur inside the 35 miles of tunnels. (*Suisun Marsh*, P. Moyle, et al, 2014).

According to the EIR and the USGS, the construction of the tunnels and disruptions of underwater soils are likely to increase the amounts of mercury, bromide, chloride, copper, lead, and selenium, negatively impacting water quality downstream. The EIR also notes that agricultural drainage will be negatively affected and may cause a build up of various minerals and pesticides that could seep into the ground or ponding surface water. No mitigation for this is included in the BDCP.

Reconstruction of the wetlands habitat as proposed in the EIR will also cause degradation of water quality within the Delta. Currently, salinity gates at Montezumma Slough help maintain fresh water within Suisun Marsh. The Plan calls for the removal or non-operation of those gates, allowing greater saltwater intrusion. Additionally, the habitat reconstruction suggests removing levees, reducing freshwater flow through channels, and allowing moving water to become more pond-like, to be affected primarily by the wind and tides. Not only will this area likely increase in salinity, it will likely become more polluted with water-borne sediments dropped by slow or non-moving water. USGS and US Department of Fish and Wildlife have expressed concern over fisheries management with this scenario.

Increased Salinity

Changes in the Delta inflow and outflow affect Delta water quality particularly with regard to salinity. (EIR, ES.2.2.2.3 Hydrology). Freshwater is a major control on estuarine salinity within the North Bay and Delta and is a key state variable for fisheries management in San Francisco Bay according to the USGS (sfbay.wr.usgs.gov). Their surveys show that the salinity within the Delta has been slowly increasing, since the advent of the CVP and SWP. The BDCP calls for a reduction of Delta outflows that will allow salt water to intrude even further. Farmers are concerned (Ag Alert, June, 2014) that this increase in salinity will impact the irrigation water they use, the ground water they rely on, the production of their crops, and even the salt levels in the land itself. The EIR notes all of these problems but fails to offer any mitigation for it.

Much of the water flow in the Delta is affected by tidal action. Brackish water is created when fresh water flows mix with tidal water from the Bay and ocean. The location of this brackish water varies with the tides each day and with the fresh

water outflows. During the summer the “tide line” of brackish, salty water known as X2 is usually near Chipps Island. In the winter it is further west near Collinsville. This year because of the drought and reduced water flows the X2 line is further upstream near Brannan Island. This encroaching salinity affects where fish like smelt and even herring go, and impacts the water quality of those relying on river water to irrigate or for drinking purposes.

The EIR (ES-7, Biological goals and objectives) indicates that modification to existing flow regimes will result in changes in salinity patterns and water quality. With decreased outflows and increased tidal inflows over the course of several decades it is possible that higher salinity will reach as far as the tunnel outtakes. Currently, consistent brackish water is present at Brannan Island just 17 miles from the proposed outtake site near Hood. (USGS monitoring report, July, 2014). The X2 tide line has moved eastward 12 miles just this year alone. This could almost certainly impact the salinity level of the water being moved through the tunnels. Computer modeling conducted by the BDCP consultants did not reflect this possibility. Once again the modeling is inaccurate and/or incomplete. The data cannot be relied upon as a predictive agent.

Salinity is also a problem in the San Joaquin Valley, partially as a result of the reverse flow of the San Joaquin River due to export pumping. Recent farm news from Bakersfield reported a decline in melon production because of increased salinity in the irrigation water.

Salinity levels influence the movement of fish and birds through the Delta. Last month a local fishing column reported that there was a large school of herring (a pelagic fish) east of Pittsburg. Currently, Delta smelt are reported at Brannan Island and Franks Track, in the flow of fresher water being pumped through the south Delta pumps. The BDCP models had predicted that with lower fresh water flows, the smelt would stay in the lower Delta, which has not happened. Both flow levels and water quality have negatively impacted this endangered species. The California Department of Fish and Game indicates that the population of smelt is at its lowest in 37 years, likely because of lack of fresh water flow.

Unclear Conservation Plan

The Bay Delta Conservation Plan is an ill-conceived conservation plan. It is incomplete and misleading. The Plan area does not include the San Francisco Bay at all, and parts of the Delta are excluded as well. The effects on the Bay and Carquinez Straits from the construction and operation of the tunnels for water export have not been addressed in the Draft Plan or the EIR.

The major focus of the plan is a water conveyance system to shunt water away from the Delta impacting hundreds of species of wildlife that the government is required to protect. The Plan goal of habitat restoration lacks specifics of location, uses of materials, time required, costs, and financing sources. While the tunnel project will be funded in part by water users, the habitat portion has no such provision.

Biological Goals and Objectives stated in the EIR (ES-7) state that there is a significant conflict between conservation goals and the use of natural resources and lands for economic developments.

There are repeated statements within the Draft Plan that are contradictory with the premise of conservation. For example, The Effects Analysis chapter (Chapter 5) of the Draft plan admits that the new upstream diversion would reduced water flows, that in conjunction with climate change, will negatively impact future salmon population, a critically endangered species.

The Implementing Agreement (Chapter 8) requires the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to issue permits to the DWR and the SWP/CVP water contractors to be allowed to “take” wildlife that is fully protected by the EPA or ESA for the next 50 years. Suspending portions of the EPA for 50 years is not a conservation plan!

The EIR recognizes these contradictions in the section on Biological Resources (ES-7): The complexity of the BDCP raises many concerns over environmental consequences for the aquatic and terrestrial ecosystem. These include changes of land uses and habitats, disparity between restored habitat and and historical conditions, which could result in adverse effect on sensitive resources, including covered species.

The current proposed location for the tunnel construction is Staten Island, which is a Nature Conservancy Bird Preserve for the breeding and nesting of endangered sandhill cranes. The Implementation Agreement would allow for an unspecified “take”, fully jeopardizing the species.

The location of the lands for mitigation or conversion to wildlife habitat is unclear. Some of the agricultural land to be used falls under the Williamson Act of 1965, which is a conservation measure to protect agricultural and related open space lands. Often these lands are used as habitat for various covered wildlife. The BDCP will alter the use of these lands, reducing the conservation benefits for land conservation, birds, and other animals.

The BDCP calls for massive changes in the wildlife habitat of the Delta. The ideas presented for restoration back to pre-1850's condition as a “natural state” are erroneous. Although human intervention did change the Delta in the 1852, previous human effects on Suisun Marsh can be traced back almost 200 years earlier (Historical Ecology, *Suisun Marsh*, Amber Manfree, 2014). There is not scientific definition of a “natural state” within the BDCP.

The result of proposed habitat development plans to break levees and let water overtop 27 islands in the Delta is very unclear. An attempt to create new wetlands and marshlands, in with a changing dynamic of reduced water flows, increased sedimentation, increased salinity, unclear sedimentation rates, climate change, and a myriad of other variables requires significant monitoring and adaptive

