

BDCP 11 Financial Red Flags Report

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Introduction

Federal and State water contractors are being asked by the Brown administration to pay an additional \$500 million for the Bay Delta Conservation Plan to continue work on the environmental processes, design and permitting.¹ For those contractors needing to borrow funds there would be additional costs for the interest payments.

This report was done to identify the significant financial red flags that water contractors' Boards of Directors should consider as they decide whether to provide BDCP with more of their ratepayers' funds.² These same red flags will be of concern to bond underwriters. In addition legislators and State and Federal and taxpayers are interested in knowing the costs that would be passed on to them.

1. BDCP's Performance Record

In 2007 BDCP projected a cost of \$153.5 million for planning, environmental review, permitting and design.³ Water contractors provided almost all of those funds. By 2011 BDCP had run out of those funds. Water contractors then provided an additional \$100 million to "complete" the BDCP-DHCCP (Delta Habitat Conservation and Conveyance Plan) Planning Phase, including the necessary preliminary engineering design, geotechnical analyses, environmental field surveys and documentation, hydrodynamic and operational modeling analyses, and to obtain the regulatory approvals necessary for implementation.⁴ (emphasis added)


By the end of this calendar year BDCP and its contractors will have apparently gone through the supplemental \$100 million (in addition to the initial \$153.3 million). Rather than a final EIR/EIS, all that will be available is a

¹ Westlands Water District's Engineering Consultant James Watson at November 21, 2013 Westlands Water District Board of Directors Workshop on the BDCP, based on notes from an attendee at that Board Workshop.

² This report was done as a public service by the Strategic Economic Applications Company. We have received no compensation from any party for this report or any other work associated with BDCP. It follows up on SEACO's August 2009 report, "The Sacramento San Joaquin Delta 2009, An Exploration of Costs, Examination of Assumptions and Identification of Benefits." <http://delta.senate.ca.gov/sites/senate.ca.gov/files/KasowerCost%20Exploration%20v.1c1.pdf>

³ Metropolitan Water District of Southern California Water Planning and Stewardship Committee Subject 8-8, August 16, 2011.

⁴ IBID.



draft EIR/EIS. Preliminary design is at less than the 10% level.⁵ No regulatory approvals or Record of Decision is on the horizon.

BDCP is now requesting State and Federal water contractors commit in a little over a month to pay an additional \$500 million for pre-construction activities with another commitment of \$700 million in 2017. That would bring total preconstruction costs to approximately a billion and a half dollars, ten times the original estimate.⁶

Even that fund request does not include several necessary actions. For instance BDCP would be the most complex water project ever proposed since enactment of the California Environmental Quality Act, the National Environmental Policy Act and the Endangered Species Act. Based on the substantial comments that will be submitted on the initial draft EIR/EIS, it is highly likely that funds will be required to prepare a new draft EIR/EIS, recirculate it and respond to those comments before issuing a final EIR/EIS.

It is also not known if BDCP's current request for more money includes funding for all of the technical and legal work required to go through the required multi-year State Water Resource Control Board (SWRCB) permitting process.

Additional costs (and time delays) would also be incurred with defending multiple lawsuits that are inevitable. If an initiative were put before the voters to stop the project that would add additional costly delays. If such an initiative were successful or if the SWRCB did not grant permits, contractors' money spent on BDCP would have no benefit.

2. Real Construction Costs of the Tunnels

It is well documented that major capital costs are highly susceptible to major cost overruns.⁷ One of the last additions to the State Water Project, the Coastal Branch Aqueduct, was projected to cost ratepayers \$270 million. The final costs could be more than \$1.7 billion and will deliver less water than originally touted during project evaluations and justifications.⁸

In year 2002 when construction began, the San Francisco Bay Bridge was projected to cost \$1.5 billion. Final costs have been estimated as over \$6 billion.⁹


⁵ IBID. Engineering Consultant James Watson at November 21, 2013 Westlands Water District Board of Directors Workshop, November 21, 2013.

⁶ Financial Consultant Dave Houston, Presentation at the Westlands Water District Board of Directors Workshop, November 21, 2013, based on notes from an attendee at that Board Workshop.

⁷ See numerous citations such as: **Cost and Time Overruns in Public Sector Projects**, Sebastian Morris, *Economic and Political Weekly*, Vol. 25, No. 47 (Nov. 24, 1990), pp. M154-M168, Published by: [Economic and Political Weekly](http://www.jstor.org/stable/4397023), Article Stable URL: <http://www.jstor.org/stable/4397023>, and Herman Steyn, "Why are capital projects often late and over-spent? Putting the puzzle together," online: <http://web.up.ac.za/sitefiles/file/44/2163/8121/Innovate%203/Inn%20bl73-75.pdf> and, Bent Flyvbjerg, University of Oxford - Said Business School, Mette Skamris Holm, Aalborg Municipality, and Søren L. Buhl, Aalborg University, **What Causes Cost Overrun in Transport Infrastructure Projects?** Social Science Research Network, June 15, 2013, online: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2278352

⁸ California Water Impact Network, Press Release, "Report Documents Huge Cost Overruns For Santa Barbaras State Water: An Indication Of Massive Cost S For Peripheral Canal," online: http://www.c-win.org/webfm_send/251

⁹ For example see Lisa Vorderbrueggen, Mercury News, **Bay Bridge opens to traffic after an 11-year wait**, 9/03/13, online: http://www.mercurynews.com/traffic/ci_24001507/bay-bridge-opens-traffic-after-an-11-year



Just seven years ago the BDCP conveyance (then a canal) was estimated to cost \$3.8 billion. Since then costs have increased to a current estimate of \$15 billion.¹⁰ That is without sufficient geotechnical information for such a massive and challenging tunnel boring project. The configuration and location of the project is

continuing to change through the extended planning process. The design is at less than 10% level of completion.

As technical consultants have also noted what little geotechnical data is available does not go down to the 180 foot depth where the two 44 feet in diameter, 35 mile long borings would occur.¹¹ Additionally, technical consultants have noted that there could be challenges boring through an area with natural gas wells serving Pacific Gas and Electric's extensive natural gas field.¹²

3. Debt Service Costs

As the economist Dr. Rodney Smith has pointed out in his analysis, BDCP proponents have improperly excluded the economic costs of debt service reserves and working capital can total \$500 million to \$750 million. With underwriting fees, the full price tag can total \$1 billion.¹³

4. Capital Costs by the Time the Project is Built

Again as pointed out by Dr. Smith, The current practice of securing an opinion of probable cost based on what the project will cost today is only the first step. Market trends in goods and services must be assessed to convert estimated costs today into estimated costs in future years when construction actually occurs. Especially when projects start years out and have long construction periods, the early cost estimates will predictably be below actual costs. For the BDCP, this may be a \$1.4 billion issue.¹⁴ Westlands Water District's financial consultant estimated this cost in the range of \$3 billion.¹⁵

5. Overestimating Benefits

The primary benefit advertised for the BDCP is water supply reliability. They define this in terms of the amount of water that would be diverted from the Delta with the two tunnel project. Officials describe that it is possible that even with the tunnels no more, and possibly even less water would be pumped than historic high amounts.¹⁶

¹⁰ Statement of Jerry Meral to Redding City Council November 18, 2013.

¹¹ IBID. Jim Watson at Westlands Board of Directors Workshop, November 21, 2013.


¹² IBID. Watson

¹³ Hydrowonk Blog, **Hydrowonk's Take on the BDCP**, online: <http://hydrowonk.com/blog/2013/10/09/hydrowonks-take-on-the-bdcp>

¹⁴ IBID. Hydrowonk Blog

¹⁵ IBID. Financial Consultant Dave Houston, Presentation at the Westlands Water District Board of Directors Workshop, November 21, 2013, based on notes from an attendee at that Board Workshop.

¹⁶ Bay Delta Conservation Plan, **Your Questions Answered**, "Would BDCP Divert More Water from the Delta?" online: <http://baydeltaconservationplan.com/AboutBDCP/YourQuestionsAnswered.aspx>



To justify the project they describe the project's benefits as a reduction how much the exports would be cut back if the project was not built.¹⁷ They put that average annual decrease in water supplies from the Delta of over 40% without the BDCP.¹⁸ In fact, they claim that "BDCP will stabilize project deliveries close to the levels of the recent past."¹⁹

However the Administrative Draft of the EIR/EIS analyzed the "no project alternative." This is the legally required description of what is most likely to occur if the preferred project (i.e. the two tunnels) is not implemented. In that official analysis they find the water supply operations in the Delta will reflect today's conditions and adhere to contractual obligations and water rights out into the future.²⁰

The Draft EIR/EIS does describe many potential impacts to the Delta environment from many phenomena such as climate change. The authors further describe the difficulty in defining those impacts over the timeline through 2060. For a project with a proposed 50 year adaptive management component it is thus impossible to definitively estimate how much the actual exports will be. However it is entirely possible that the water supply benefits have been grossly overstated by liberally interpreting what those obscure impacts will do to Delta diversions over the long term horizon.

6. Significantly Underestimating Cost of Water from the Project

The cost per acre foot is the result of dividing total "annualized" project costs by the amount of annual water yield. As pointed out above BDCP proponents significantly underestimate costs and overestimate water export benefits. The result is a highly skewed cost per acre foot. Dr Rodney Smith cites the BDCP's cost of water between \$300/AF and \$400/AF (inflation-adjusted), and proposes a more reasonable range of \$625/AF to \$890/AF (inflation adjusted).²¹ This demonstrates that the costs and the benefits are highly variable based on BDCP assumptions.

In addition the current dry conditions highlight another uncertainty on the cost of water. The State Water Project's initial projection of 2014 deliveries is only 5% of their contractual entitlements.²² Initial projections of water deliveries from the Federal Central Valley Project will likely be in the same range.

Because the water contractors have major fixed costs including interest on bonds, that means the cost per acre foot will rise significantly. At the same time the contractors will incur additional costs to obtain supplemental supplies and reduce demand.

¹⁷ Bay Delta Conservation Plan, **BDCP Draft Statewide Economic Analysis Released**, online: http://baydeltaconservationplan.com/news/news/13-08-05/BDCP_Draft_Statewide_Economic_Analysis_Released.aspx


¹⁸ Bay Delta Conservation Plan, **BDCP Statewide Economic Impacts Fact Sheet**, online http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Statewide_Economic_Impacts_Report_-_Fact_Sheet.sflb.ashx

¹⁹ IBID.

²⁰ Bay Delta Conservation Plan, **BDCP Consultant Administrative Draft EIR/EIS Chapters Available for Review, EIR-EIS Appendix 3D "Defining Existing Conditions - No Action Alternative - No Project Alternative - and Cumulative Impact Conditions 5-10-13"**

²¹ IBID. The Hydrowonk, online: <http://hydrowonk.com/blog/2013/10/09/hydrowonks-take-on-the-bdcp>

²² <http://mavensnotebook.com/wp-content/uploads/2013/11/SWC-Notice-No-13-14-5-Percent-Initial-Allocation-2.pdf>



In order for water district managers and governing board members to carry out their fiduciary responsibilities, a full, independent risk assessment is required.

7. Agricultural Contractors May Withdraw From the Project

Agricultural water contractors receive about 75% of the water exported from the Delta by the State Water Project and the Federal Central Valley Project. According to the BDCP, the project would be funded through a “beneficiary pays” principle.²³ Moreover, it states that the State and Federal Water Contractors will pay an estimated 68% of the total BDCP costs.²⁴ As pointed out above, those costs can rise much higher as the project proceeds.

DWR Director Cowin said that it is up to water contractors to decide whether or not to pay.²⁵ Agricultural irrigation contractors may choose not to pay their share of the capital costs plus additional project operations and maintenance, and bond maintenance costs.

If agricultural water contractors drop out that will shift the costs to the urban water contractors. If urban water district have to fund the entire project, urban water costs from the project would increase at least fourfold.

Urban water agencies have demonstrated no willingness to subsidize agriculture contractors. As Santa Clara Water District’s General Manager stated at a public meeting on October 11, 2013, “I can tell you I would not be bringing forth a recommendation to this [Santa Clara Valley Water District] board if urban was going to foot the bill on this and not ag.”²⁶

8. What “Step Up” Provisions Would be Required?

Bond underwriters are likely to require legally enforceable assurances that if some of the exporters were unable to repay their share of the principal and interest on the bonds, the other contractors would be bound to pay those costs (known as “step up” provisions).


This is not an impossibility. By BDCP’s very best case estimate this will be a very expensive project for agricultural water users. If costs are higher or water amounts are lower it would further increase the costs. In addition there are the financial impacts of a multi-year drought. That could easily exceed one or two years of debt service reserves. The lack of water to produce income generating crops could cause significant defaults.

²³ Bay Delta Conservation Plan, **Estimated Funding to Implement the BDCP**, online: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Estimated_Funding_to_Implement_the_BDCP_Brochure_5-29-13.sflb.ashx

²⁴ IBID.

²⁵ IBID Westlands Board Workshop based on notes from an attendee at that Board Workshop.

²⁶ Maven’s Notebook, **Maven’s Minutes: Santa Clara Valley Water District workshop: A statewide perspective on the Bay Delta Conservation Plan**, October 21, 2013, online: <http://mavensnotebook.com/2013/10/21/mavens-minutes-santa-clara-valley-water-district-workshop-a-statewide-perspective-on-the-bay-delta-conservation-plan>



Step up provisions would likely shift the legal debt obligations to the deeper pockets of the urban water contractors. This would impose tremendous costs at the same time they would have less water to sell to their customers.

9. Requirement for Take-or-Pay Contracts

Similar to the requirement for step up provisions would be the bond underwriters' requirement that those water contractors which are wholesalers have take-or-pay contracts with their member agencies.

As an example the Metropolitan Water District of Southern California currently does not have take-or-pay contracts with its member agencies. Each member agency can choose in any given year to decrease the amount of water it takes and pays for from MWD.

Several of the largest member agencies of MWD already have indicated they intend to pursue their own local projects that will reduce their water demand from MWD. Without take-or-pay contracts this means that MWD's major debt obligation for BDCP would have to be repaid through increased water rates to other member agencies. That would give those agencies financial incentives to build their own local projects so they too could reduce their demand from MWD. Bond underwriters are well-versed in this potential risk and will require take-or-pay assurance that bonds repayment will be maintained.

10. Who Will be Financially Liable for Restoration Costs, Capital and, O&M?

In order for BDCP to receive permits as a Habitat Conservation Plan²⁷ and a Natural Communities Conservation Plan²⁸ Federal and State laws require evidence that there is assured funding for the habitat restoration component of BDCP. BDCP is assuming that Federal and State taxpayers will pay just under \$4 billion for the capital costs of purchasing and restoring upwards of 145,000 acres of land.²⁹

Department of Water Resources Director Cowin described the estimated cost of the BDCP plan as \$24.5 billion, of which \$14.5 billion would be for conveyance (the tunnels). The remaining costs are for habitat and operations and maintenance costs, Cowin said.³⁰


When it comes to Federal funding shares, they are ignoring the significant change in Congress' willingness to fund discretionary projects. The growing history of sequesters, government shutdowns, debt limit disputes and deficit reduction priorities suggest that those coffers will be not be opening up in time to demonstrate assured funding.

²⁷ Online: <http://www.fws.gov/endangered/what-we-do/hcp-overview.html>

²⁸ Online: <http://www.dfg.ca.gov/habcon/nccp/>

²⁹ Costs are cited from The Brattle Group, **Employment Impacts for Proposed Bay Delta Water Conveyance facility and Habitat Restoration**, February 22, 2013, Table 3-1, page 18, online: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Employment_Impacts_for_Proposed_BDCP_2-26-13.sflb.ashx

³⁰ IBID. Heather Hacking, MediaNews Group, **Final chapters of Bay Delta Conservation Plan Released**, 5/31/2013, online: http://www.redbluffdailynews.com/ci_23361038/final-chapters-bay-delta-conservation-plan-released



On the State level BDCP is suggesting that several bonds will be passed by the voters to begin funding the capital costs of land acquisition and restoration. That again ignores the reality that such voter approval is very problematic. Virtually all parties recognize that the \$11.14 billion bond on the 2014 ballot has little or no chance of passing.

Even a smaller bond faces a very uncertain future. The recent the USC Dornsife College of Letters, Arts and Sciences/Los Angeles Times Poll found that when voters are told that the state would borrow between \$5 and \$6 billion dollars, eventually to be repaid out of the state budget, 54% of voters say the water improvements are not worth borrowing the money according to the poll.³¹ So, it may be highly unlikely that voters in California will support a bond to finance their "public" share of BDCP.

A major unknown is what would happen if the Federal and State funding was not forthcoming. It is possible that in order to keep permits for their diversions the exporters would have to provide the additional billions.

Another significant expense would be the ongoing operations and maintenance for the nearly 145,000 acres of restored habitat. A conservative estimate of the annual cost obligation is in the range of \$2.59 million.³² It is a long established practice of the State of California not to use bond funds (long term borrowing repaid by taxpayers) for annual costs. All of this introduces great uncertainty in what the ratepayers of the water contractors could be required to pay.

11. Drying Up Money for Local Projects

If the water contractors legally commit themselves to paying the costs of BDCP (whatever they turn out to be) that could dry up their capability to borrow for their own local and regional water supply reliability projects. Local projects such as conservation, water recycling, desalination, and groundwater cleanup can provide drought proof water supplies. However ratepayers' willingness and ability to absorb increased costs is not unlimited. The massive debt obligations and contingent liabilities required by BDCP would likely put many of those cost effective projects on the shelf.

³¹ USC Dornsife/Los Angeles Times Press Release, **Calif. voters concerned about state water supply "until they see the cost**, September 2013, online: <http://dornsife.usc.edu/usc-dornsife-la-times-poll-water-sept-2013>

³² IBID. The Brattle Group, **Employment Impacts for Proposed bay Delta Water Conveyance facility and Habitat Restoration**, February 22, 2013, Table 3-1, page 18, online: http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Employment_Impacts_for_Proposed_BDCP_2-26-13.sflb.ashx