

Los Angeles



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January 7, 2014

Mr. Ted Bardacke, Deputy Director
Office of the Mayor
200 North Spring Street, Room 303
Los Angeles, California 90012

Dear Mr. Bardacke:

Subject: Bay Delta Conservation Plan (BDCP) Cost Impacts on Los Angeles
Department of Water and Power (LADWP) Water Ratepayers

As follow-up to our BDCP briefing December 18, 2013, I am enclosing a copy of our analysis of estimated cost impacts associated with the construction of the proposed BDCP project on a typical LADWP single-family residential water ratepayer.

Based on the assumptions and calculations outlined in the enclosed analysis, the estimated billing unit cost increase is \$0.17 per hundred cubic-feet (HCF). For a typical single-family customer using 12 HCF per month, the estimated monthly cost increase from the BDCP project would be \$2.04 per month on their water bill.

These cost estimates are subject to change due to many factors: revised construction cost estimates, cost share between federal and state water contractors, Metropolitan Water District of Southern California (MWD) and LADWP water sales, LADWP purchases from MWD, and debt services financing.

However, regardless of these factors, cost impacts on LADWP water ratepayers from BDCP will be on the order of a few dollars, and as LADWP develops local supplies and purchases less water from MWD, LADWP's water ratepayers' share of BDCP costs will decrease.

If you have any further questions or require additional information, please contact Mr. David R. Pettijohn, Director of Water Resources, at (213) 367-0899.

Sincerely,

A handwritten signature in black ink, appearing to read 'J B McDaniel'.

James B. McDaniel
Senior Assistant General Manager -- Water System

DK:yrq
Enclosure
c: Mr. David R. Pettijohn

Los Angeles Aqueduct Centennial Celebrating 100 Years of Water 1913-2013

111 N. Hope Street, Los Angeles, California 90012-2607 · Mailing address: Box 51111, Los Angeles, CA 90051-5700
Telephone: (213) 367-4211 www.LADWP.com

**WHITE PAPER
ON
BAY DELTA CONSERVATION PLAN (BDCP)
COST IMPACTS ON LADWP WATER RATEPAYERS**

January 2014

This paper provides an economic analysis of estimated cost impacts associated with construction of the proposed BDCP tunnel conveyance project on a typical LADWP single family residential customer's water bill.

Background

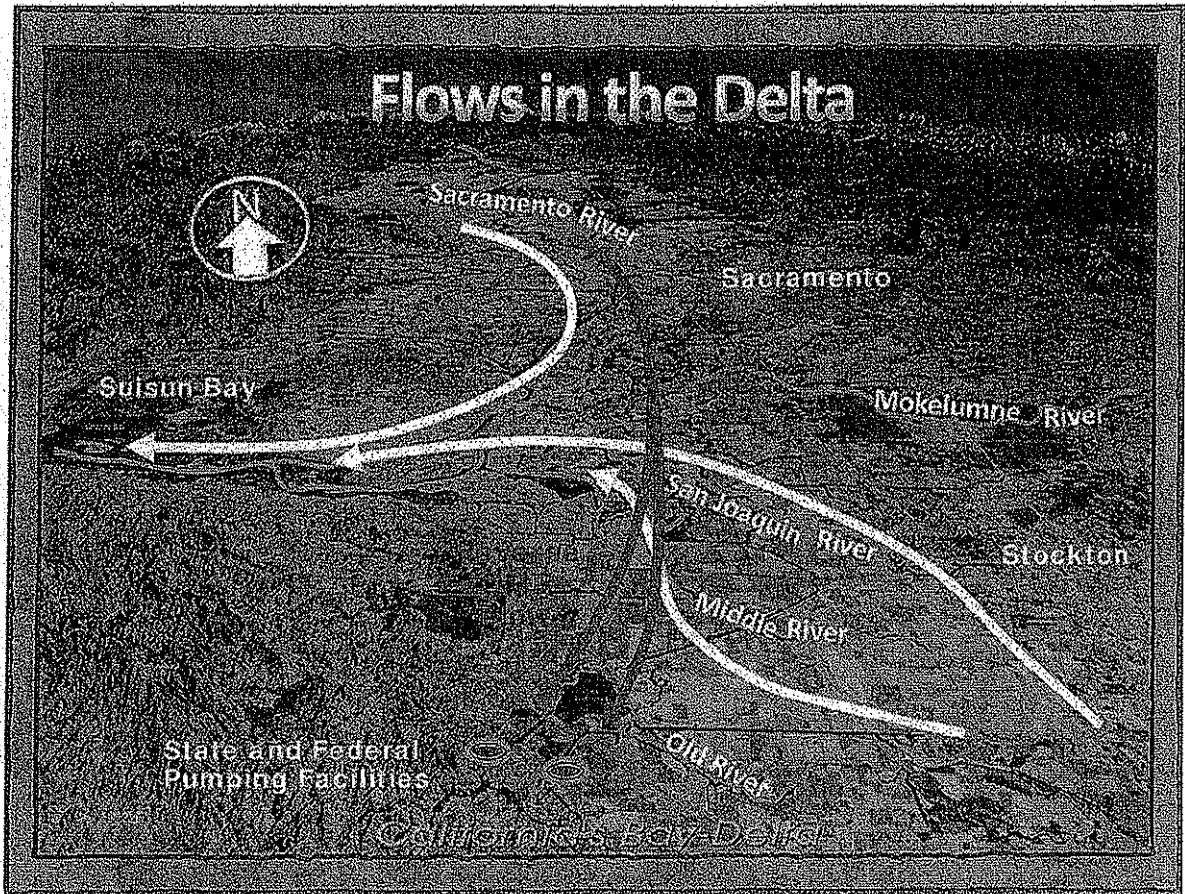
The Sacramento-San Joaquin River Delta (Delta) serves as a critical link in the state's water delivery system, and is also a very important ecosystem for hundreds of fish and wildlife species, many of which are unique to the Delta region. A number of these Delta species are threatened or endangered. Water that moves through the Delta is delivered to 25 million Californians throughout the San Francisco Bay Area, the Central Valley, and Southern California. In addition to these urban economies, this water infrastructure supports California's \$30 billion agricultural industry, which produces much of the nation's domestically grown produce. The Delta and its waterways also provide transportation corridors, support extensive infrastructure, and offer recreational opportunities, including fishing, boating, birding, and hunting.

About half of California's annual natural stream flows pass through the Delta. Over the past 150 years the natural flows in the Delta have been irrevocably altered by a system of man-made levees, reservoirs, dredged waterways, and the operations of the State Water Project (SWP) and the Central Valley Project (CVP). The Delta conveyance system as currently designed and operated is not sustainable from either an environmental, operational, or economic perspective. There is urgent need to improve the conditions for threatened and endangered fish species in the Delta, and to improve the conveyance system to meet demands and address risks to water supply reliability, water quality, and the aquatic ecosystem.

The proposed BDCP is a comprehensive habitat conservation plan that intends to address the critical issues in the Delta using an ecosystem-based approach. The plan would help to restore fish and wildlife species in the Delta and to improve reliability of water supplies, while minimizing impacts on Delta communities and farms.

The BDCP Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was prepared in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The BDCP EIR/EIS public review draft documents have been released by the State and public comments are due by April 14, 2014. The Draft EIR/EIS is intended to analyze and disclose the potential impacts on the environment from the proposed action and alternatives. The Draft EIR/EIS considers 15 action alternatives, including the proposed BDCP, and one no-action alternative. The alternatives analyzed in the draft EIR/EIS include a combination of water conveyance configurations, capacities and operational criteria; conservation measures that include habitat restoration and conservation targets and environmental stressor reduction measures; and various impact avoidance and minimization measures.

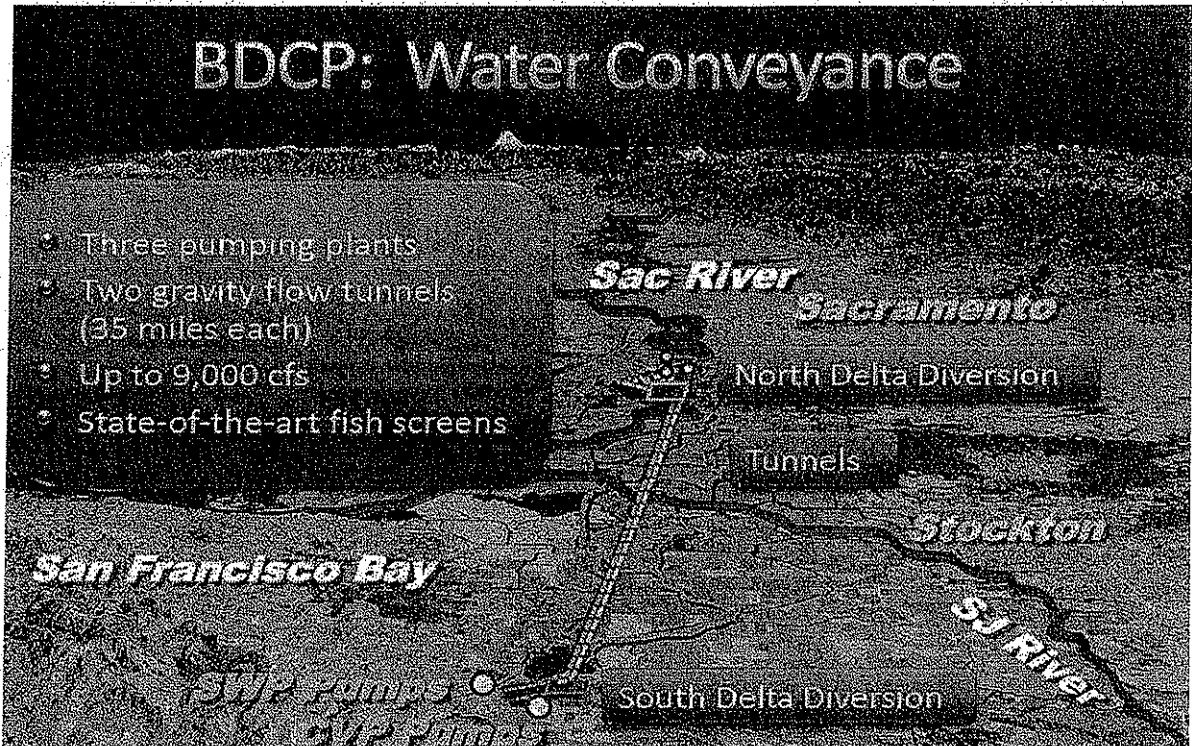
The existing operation of the SWP/CVP pumps in the southern Delta can cause or increase a reversal in river flows, potentially altering salmon migratory patterns and can contribute to the decline of sensitive fish species such as the delta smelt.



The proposed project's preferred alternative would make substantive changes to water operations in the Delta by implementing a dual-conveyance system to serve the existing SWP /CVP pumping plants. The preferred alternative's dual-conveyance system would be comprised of two major components:

1. Construction of new water facilities, including:
 - Three proposed north Delta intakes with state-of-the-art fish screens
 - Two 30-mile long main tunnels
 - New 40-acre intermediate forebay
 - New Head of Old River operable gate
 - Improvements and expansion of Clifton Court Forebay
2. Operation of both new and existing water conveyance facilities, including:
 - North Delta intakes
 - South Delta export facilities
 - Delta Cross Channel gates
 - Suisun Marsh salinity control gates
 - North Bay Aqueduct intake
 - Clifton Court Forebay

The purpose is to construct and operate a facility that improves conditions for covered species and natural communities in the Delta while improving water supply reliability. By relocating the main point of water diversion from the south Delta to the Sacramento River, and by establishing new operating criteria to improve water volume, timing, turbidity, and salinity, along with other conservation measures, the BDCP would improve native fish migratory patterns and habitat conditions and allow for greater operational flexibility.



The proposed BDCP project includes three new intakes along the Sacramento River in the north Delta and two underground main tunnels approximately 30 miles long under the Delta to carry water to the CVP and SWP pumping plants. A forebay would be needed near the intakes to collect water diverted from the river from which gravity flow would move the water through the tunnels. The twin tunnels would be capable of moving a maximum of 9,000 cubic feet per second (cfs). The gravity-flow system requires two 40 foot-diameter tunnels to convey the needed flows and overcome friction losses to keep water moving through the system. The gravity-driven system would eliminate the need for an intermediate pumping plant in the Delta. Using gravity to transport water would save tremendous amounts of energy and reduce greenhouse gas emissions.

Proposed BDCP Conveyance Costs

The December 9, 2013 release of the public draft BDCP and its corresponding draft EIR/EIS triggered a public comment period that will end April 14, 2014. The costs of implementing the proposed project are described in Chapter 8 of the public review draft BDCP documents. The preferred alternative's 9000 cfs conveyance facility's capital and operation/maintenance costs were estimated at \$14.58 billion and \$1.46 billion over 50-year period in 2012 dollars after adjusting for inflation, for a total estimated cost of approximately \$16 billion.

Funding of the conveyance facility's capital and operation/maintenance costs will come from the SWP and CVP water contractors. It is assumed that the water facilities will be owned by the state, and that the costs of constructing, operating and maintaining the facility will be shared by participating SWP and CVP water contractors. SWP and CVP water contractors have not yet fully agreed on a specific allocation of costs for the BDCP. The exact allocation of these costs between SWP and CVP contractors, and within these two projects will be determined at the time permits are issued for BDCP, and will take into account how BDCP benefits are realized within each project.

Proposed Debt Financing Costs

As discussed in Chapter 8 of the draft BDCP document, the SWP and CVP water contractors could issue bonds to finance their respective capital costs for the conveyance facility. One scenario under consideration to finance the BDCP costs identified for the state and federal water contractors is the issuance of a series of four revenue bonds, each with a term of 40 years. The costs would be financed with tax exempt, long term debt as shown in the table below:

Potential Financing Plan with Series of Four Revenue Bonds				
Component	1st Bond Series	2nd Bond Series	3rd Bond Series	4th Bond Series
Approximate delivered date	June 1, 2015	June 1, 2017	June 1, 2018	June 1, 2020
Last maturity	2055	2057	2058	2060
Face value	\$3,793,000,000	\$3,667,000,000	\$5,611,000,000	\$2,504,000,000
All-in true interest cost	6.135%	6.133%	6.132%	6.134%
Cost of issuance	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Underwriter's discount	\$6/bond	\$6/bond	\$6/bond	\$6/bond
Capitalized interest	2 Years	1 Year	2 Years	2 Years
Source: Southern California Water Committee 2012				

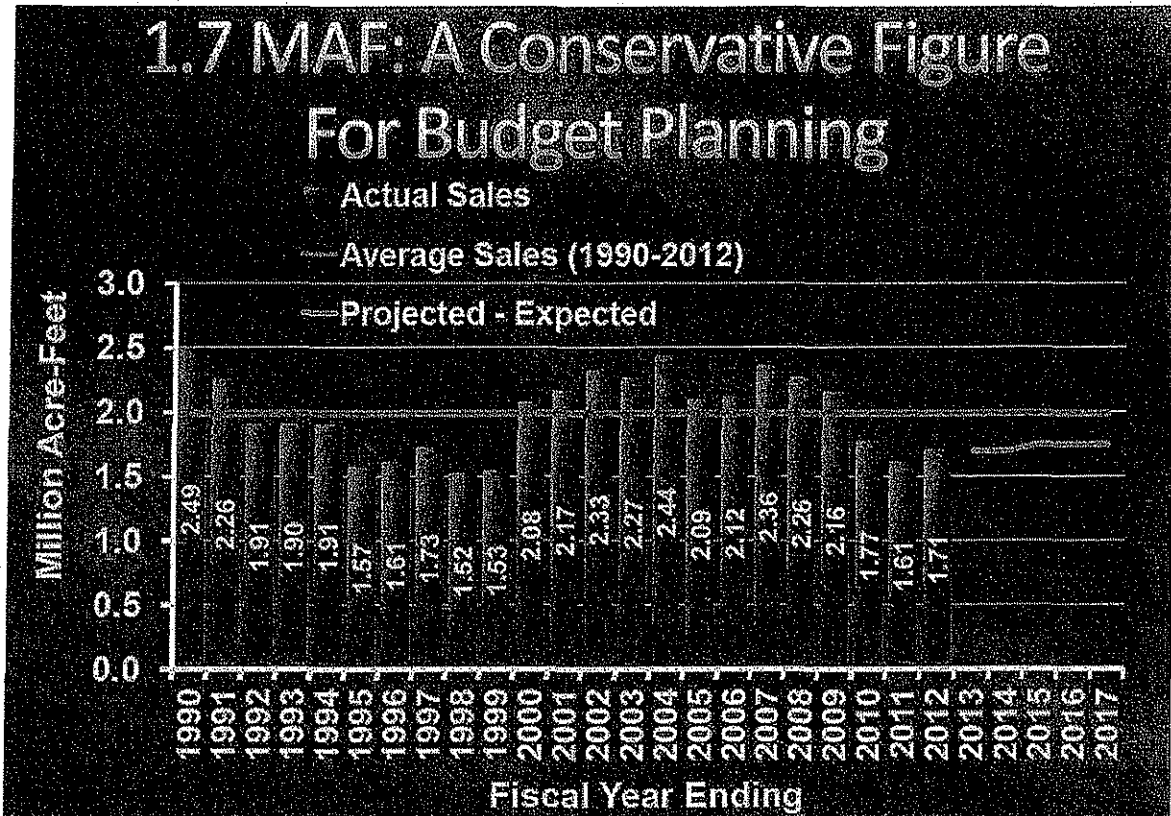
Each bond issue would have a period of capitalized interest to mitigate the debt service during the 9 year construction period. The financing interest rates are assumed at a 95% confidence interval of interest rates over the past decade rather than the historically low interest rates of 2012. The annual debt service would average approximately \$1.1 billion from 2021 through 2055.

Metropolitan Water District of Southern California (MWD)

MWD is comprised of 26 member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and numerous unincorporated communities. MWD's service area comprises approximately 5,200 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura.

One of MWD's two major sources of water supply is the State Water Project. In 1960, MWD signed a contract with the Department of Water Resources (DWR) and is one of 29 agencies that have long-term contracts for water service from DWR, and is the largest agency in terms of the number of people it serves (almost 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water contracts (approximately 58 percent for 2011). The State Water Contract, under a 100 percent allocation, provides MWD 1,911,500 acre-feet of water. Water received from the State Water Project by MWD over the ten years from 2002 through 2012 varied from a low of 908,000 acre-feet in calendar year 2009 to a high of 1,800,000 acre-feet in 2004.

The chart below summarizes MWD's annual water sales, in million acre-feet (MAF), to its member agencies between fiscal years ending (FYE) 1990 to 2012. Average sales over this period were about 2.0 MAF. Actual FYE 2012/2013 sales were 1.857 MAF, with five year average at 1.894 MAF. Sales projection for budget planning purposes was established at 1.7 MAF.



BDCP Cost Impact to LADWP Ratepayers

The following assumptions were used in determining the average cost impact to LADWP:

- \$1.1 billion annual debt service costs from the BDCP conveyance construction + O&M (reference: 2013 draft BDCP, Chapter 8)
- 50 / 50 cost share between federal and state water project contractors
- MWD's share of the state contractor's cost is about 50 percent, or about \$270 million / year.
- LADWP's share of MWD's water sales, average year hydrology, is about 15 percent.
- Assume 15 percent cost share for LADWP of MWD's BDCP costs, or 15 percent of \$270 million per year = \$40.5 million per year.
- LADWP would collect revenue to cover this cost through its retail water sales. Retail water sales are projected to average 240 million Hundred Cubic Feet (HCF).
- For an LADWP customer 1 HCF = 1 billing unit.
- Spreading LADWP's cost share of \$40.5 million over LADWP's 240 million HCF in sales, yields a billing unit cost increase of \$0.17 per HCF.

Based on the above assumptions and calculations, the estimated billing unit cost increase is about \$0.17 per HCF. For a typical single family customer using 12 HCF per month, the estimated monthly cost increase from the BDCP would be about \$2.04/month.

(If MWD's share of the debt service climbed to \$350 million / year, the estimated cost impact to LADWP would be about \$52 million / year. Based also on 240 million HCF sales, the unit cost increase is then estimated to be about \$0.22 / HCF. For the same typical single family customer using 12 HCF, the estimated cost impact would grow to \$2.64 / month.)

The above cost estimates are subject to change due to many factors: revised construction cost estimates, cost share between federal and state, MWD and LADWP water sales, LADWP purchases from MWD, and debt services financing. However, regardless of these factors the cost impacts on LADWP water rate payers from the BDCP will be on the order of a few dollars, and as LADWP develops local supplies and purchases less water from MWD the city's water rate payers share of BDCP costs will decrease.

