



October 19, 2016

Attention: Imported Water Committee

Update on California WaterFix and the Sunding Report (Presentation).

Purpose

The purpose of this memo is to provide updates on California WaterFix and describe the recently disclosed draft economic analysis of WaterFix by Dr. David Sunding.

Background

The Sacramento-San Joaquin Bay-Delta (Bay-Delta) serves as an important water source for Californians in urban and agricultural areas, yet it also has a fragile ecosystem with threatened and endangered species. Through its supply diversification strategy, the Water Authority has reduced its reliance on the Bay-Delta by reducing purchases from MWD, the only source of the Water Authority's Bay-Delta supply. In recent years, about 20 percent of the Water Authority's supply flows through the Bay-Delta.¹ Since the late 2000s, the ecological decline of the Bay-Delta has led to increased regulatory pumping restrictions. Regulatory measures intended to minimize environmental impacts influence water exports, including, among other things, salinity control, outflow requirements,² and regulation of reverse flows.³

In an effort to address ecological and supply issues, state and federal agencies developed the Bay Delta Conservation Plan (BDCP). The BDCP was a Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), seeking to secure 50-year incidental take permits under state and federal endangered species laws requiring Endangered Species Act (ESA) permits through Section 10 and Section 2835 of the respective federal and state laws. However, when the BDCP was unable to secure permits as planned, the ecological restoration goal was separated from the conveyance project, and retitled California EcoRestore⁴ and California WaterFix, respectively. California WaterFix is the same conveyance system as proposed in the BDCP, a gravity-fed twin-tunnel project that bypasses the Bay-Delta through three new intakes on the Sacramento River intended to enhance water exports by operating in conjunction with the existing system to minimize reverse flows. Permitting for WaterFix was altered to a Section 7 ESA permit, the same species-by-species permit under which the State Water Project (SWP) currently operates, and is subject to change should additional species become listed. As a result, regulatory certainty is no longer achievable.

The Water Authority Board supports a cost-effective and environmentally sustainable Bay-Delta solution and has outlined its policy in a set of Bay-Delta Policy Principles.⁵ Although Water Authority staff conducted a multi-disciplinary review of the BDCP documents,⁶ the team was unable to make any recommendation to the

¹ The exact amount of Bay-Delta water the Water Authority receives in any given year depends on how much water MWD purchases from the State Water Project, and how MWD operates its system; for example, in fiscal year 2016, only about 3 percent of the Water Authority's supplies came from the Bay-Delta.

² Water that flows out of the Bay-Delta and into San Francisco Bay for environmental purposes.

³ Reverse flows at the Old and Middle Rivers (OMR) occur when Delta pumps are operating; for fish protection, limits are placed on the amount of reverse OMR flows allowed.

⁴ California EcoRestore is a trimmed-down version of the environmental restoration plan envisioned in the BDCP and is largely reflective of mitigation work required under the existing biological opinions governing the operations of the SWP and CVP.

⁵ See Policy Principles here: www.sdcwa.org/sites/default/files/files/news-center/bay-delta-policy-principles-2012.pdf.

⁶ See Water Authority's prior Bay-Delta Board materials here: www.sdcwa.org/bay-delta-board-memos-presentations.

Board due to the inability to obtain answers to key questions. Questions included how costs would be allocated between SWP and the Central Valley Project (CVP) contractors, within the SWP contractors, among MWD member agencies, as well as what supply benefits the Water Authority would receive.

Several agricultural water agencies have publically expressed reluctance to support a project that would not increase water exports. The MWD Board itself has yet to take a formal position on WaterFix. Despite this, and the lack of cost information, MWD staff began expanding outreach efforts to promote and support WaterFix.⁷ MWD's promotional materials for use in San Diego County claim that San Diego "needs" an update to the SWP "delivery system" without further explanation. As noted, the Water Authority has significantly reduced its reliance on the Bay-Delta; its MWD purchases went from 673,000 acre-feet in 1990 to 187,000 acre-feet in 2016—a 72 percent reduction. The San Diego region plans to further reduce its MWD reliance to 88,000 acre-feet by 2035 – an 87 percent reduction from 1990 level.⁸ Data presented in MWD's and the Water Authority's respective 2015 urban water management plans show the Water Authority plans to manage its MWD demands to stay within MWD's "existing programs."⁹

While WaterFix is going through its biological opinion and incidental take permitting process, additional processes may impact the ultimate export capability. For example, the State Water Resources Control Board is going through the water rights permit proceeding for changes in points of diversion, but it is not scheduled to conclude until after the adoption of the WaterFix environmental documents.¹⁰ The Delta Stewardship Council's Delta Plan was recently invalidated by a trial court because it lacked "quantified or otherwise measurable targets."¹¹ That decision is on appeal, and it is uncertain how long it will take to conclude the court case. More recently, a draft report prepared for the California Natural Resources Agency (CNR) found that for WaterFix to be economically feasible to agricultural contractors, it would require at least \$3.9 billion in federal funding. Just last month, MWD staff reiterated at its Bay-Delta committee meeting that there is no state or federal subsidy planned, and nor does it anticipate that the state or federal government would pay any of the costs of the WaterFix. But if the project cannot pass the cost-benefit test for agricultural contractors without at least a \$3.9 billion subsidy, will urban agencies – namely MWD – be expected to "step up" to fill that void? How would that cost be passed down to the member agencies? Furthermore, Water Code 85089 explicitly requires the water contractors pay for the new Delta conveyance facility.

Discussion

A draft economic analysis of WaterFix by Dr. David Sunding of the Brattle Group was recently disclosed through a public records act request made by Delta stakeholders.¹² The report states, the "[p]roject passes a benefit cost test but not for all groups under the operating criteria being considered at present."¹³ The report

⁷ The MWD Communications Plan states that the "Goal of all [outreach] products: Clear, simple and direct messaging about the importance of California WaterFix and the value and need for Southern California," and "Need to get the job done. Need to complete the process. Decision time." Memo from MWD External Affairs Office dated August 22, 2016

⁸ The Water Authority's UWMP is available here: www.sdcwa.org/uwmp

⁹ MWD's "existing programs" do not include California WaterFix.

¹⁰ Record of Decision and Notice of Determination are currently scheduled to be completed by end of calendar year 2016, while the water rights proceeding is anticipated to conclude sometime in 2018.

¹¹ See "Status of Delta Stewardship Council Delta Plan" memo in July 2016 Water Authority Board Packet starting on page 75 here: www.sdcwa.org/sites/default/files/files/board/2016_Agendas/2016_07_28FormalBoardPacketSECURE.pdf

¹² California Water Tunnels Would Need U.S. Funding, Analysis Says. September 14, 2016. AP. Available at <http://www.usnews.com/news/us/articles/2016-09-14/apnewsbreak-california-water-tunnels-would-need-us-funding>.

¹³ CalWater Fix Economic Analysis, DRAFT. A report prepared for the California Natural Resources Agency by David Sunding, November 15, 2015.

notes that unless subsidized by the federal government at \$3.9 billion,¹⁴ the benefits do not outweigh the costs for agricultural agencies. While Sunding notes with respect to WaterFix supply benefits, the project has, “lost some degree of certainty with respect to project outcomes now that the permitting has migrated from Section 10 to Section 7,” the analysis assumes that WaterFix benefits would last 50 years to derive the cost-benefit conclusions. The report thus acknowledges that if environmental conditions continue to deteriorate after the construction of the tunnels, new biological opinions may be issued to protect the species thereby reducing benefits. The report also cautioned that if the project does not stay within budget, depending on the magnitude of the overrun “the cost-benefit comparison may not be favorable.”

The crux of the debate about WaterFix supply benefit is the “baseline” assumption. Depending on which baseline is used, the amount of water supply to be restored, or the “benefit” of WaterFix, varies. Sunding’s report noted that under the baseline he assumed, total water yield of WaterFix for SWP and CVP is about 1 million acre-feet (MAF), a drop from the 1.2 MAF to 1.7 MAF in BDCP. To understand the water supply benefit of having WaterFix, a baseline of how much supply the existing projects would produce without WaterFix is needed to measure the benefit. The “No Action Alternative” – the standard baseline for environmental review – assumes current Delta regulations continue. However, Sunding’s cost-benefit analysis uses a different baseline that assumes much tighter regulations would occur at the south Delta export facilities without WaterFix, although the rationales supporting the tighter regulations absent of the WaterFix were never made clear.¹⁵

These assumptions and choice of baseline used influence the calculation of WaterFix’s supply benefits. See Table 1 for WaterFix yields for MWD. The various yields reflect different baseline assumptions, since the total yield with WaterFix does not change. As a reference, Table 1 includes yield assumptions denoted in MWD’s recently adopted 2015 Integrated Resources Plan (IRP) and 2015 Urban Water Management Plan (UWMP).

Table 1: WaterFix Yields for MWD

Baseline Assumption	Yield with WaterFix (TAF) A	Yield without WaterFix (TAF) B	WaterFix Benefit (TAF) C=A-B
EIR/EIS No Action Alternative	1,212	1,126	85
Sunding’s cost benefit baseline	1,212	920	291
2015 MWD IRP based on 2015 DCR ECHO baseline ¹⁶	1,213	837	376
2015 MWD UWMP based on 2015 DCR ECLO baseline ¹⁷	1,224	976	248

As shown in Table 1, under the No Action Alternative baseline, Sunding’s report shows WaterFix will produce 85,000 acre-feet of supply benefit to MWD. Using the tighter restrictions baseline, Sunding’s report concludes

¹⁴ In 2014\$

¹⁵ The tighter regulations include additional reverse flow restrictions on the south Delta facilities mirroring proposed operations under WaterFix; however, it is unclear why these constraints would be placed on the existing facilities in the absence of WaterFix. For example, the most recent discussions on the operation of existing projects have focused on increasing outflow requirements, rather than reverse flows.

¹⁶ 2015 Delivery Capability Report (DCR) appendix included several alternative operating scenarios, including “Existing Conveyance High Outflow” (ECHO), which MWD’s IRP used as the baseline.

¹⁷ “Existing Conveyance Low Outflow” (ECLO)

that the project would produce 291,000 acre-feet of supply benefit. These figures also differ from those projected in MWD's two planning documents: 2015 UMWP (248,000 AF), and 2015 IRP (376,000 AF).¹⁸

Based on the benefit summary table included in Sunding's report, the total benefits – assuming project benefits last 50 years -- resulting from WaterFix to SWP urban agencies totaled \$13 billion;¹⁹ the same report placed the present value of WaterFix project cost at \$13.9 billion.

The final WaterFix cost to individual contractors, their own member agencies and ratepayers will depend on how many water contractors ultimately agree to fund the project, and by how much, as well as how costs are allocated among the various parties. Individual contractors' view on the baseline and other cost and risk assessments, including allocation amounts, will guide whether they participate in project funding or not.

The Water Authority Delegates have made numerous requests at MWD – including a motion recently made at the October board -- to schedule a discussion on how MWD plans to allocate the costs among its member agencies, but MWD has refused to schedule such discussions.

Over the Water Authority's objection, MWD's 2015 Integrated Resources Plan discussed the possibility that WaterFix "could also create opportunities for new markets and partnerships."²⁰ The Water Authority Delegates have been clear that the Water Authority has no interest or intention of paying for speculative water ventures for the benefit of unidentified markets or "partnerships." If agricultural agencies cannot afford the project now, it is difficult to understand how they would be able to pay the costs of the project later, unless the water is expected to be offered at a discount or as part of some other structure that purportedly benefits MWD. The conveyance project is under tight scrutiny with many environmental groups, Bay-Delta stakeholders, and Bay-Delta elected officials.²¹ Earlier this month, members of Congress Garamendi, McNerney, Matsui, and Thompson sent a letter to the Bureau of Reclamation and the Department of Water Resources requesting answers to critical questions, including funding and projected yields.²²

Next steps

Dr. Sunding has been invited to present his findings to the Imported Water Committee at its October 27 meeting.

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Attachment 1: Dr. David Sunding's Report, "CalWater Fix Economic Analysis."

¹⁸ It is unclear why MWD's planning documents (IRP and UWMP, both adopted in 2016) relied on different operating baseline assumptions; they are noted here to provide a comparison.

¹⁹ Table 8 of Sunding's report dated November 15, 2015, identified \$10.1 billion of environmental compliance, \$2.3 billion of water quality, and \$499 million of seismic benefits for urban agencies, totaling about \$13 billion.

²⁰ MWD's Integrated Water Resources Plan. 2015 update available here:

[www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20\(web\).pdf](http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf)

²¹ Letter from California Legislators to Co-Hearing Officers available here: mavensnotebook.com/wp-content/uploads/2016/10/Policy-Statement-Delta-Leg.pdf

²² Letter from Congress members to BOR and DWR dated October 4, 2016 available here:

garamendi.house.gov/sites/garamendi.house.gov/files/documents/20161004%20DWR%2C%20BOR%20%28WaterFix%20Cost%20Benefit%29.docx.pdf