November 13, 2024

Attention: Imported Water Committee

Bay-Delta Update. (Presentation)

Purpose

This memo provides an update on Sacramento-San Joaquin Bay-Delta (Bay-Delta) activities and projects impacting the State Water Project (SWP).[1]

Executive Summary

- The Bay-Delta, hub of the SWP and federal Central Valley Project (CVP), has long been in ecological decline, resulting in regulatory limitations on water exports and increasing costs; various Bay-Delta solutions have been proposed over several decades.
- In 2019, the Water Authority Board supported a proposed Bay-Delta Fix on condition the project costs be allocated to supply so agencies that need and use the water pay for it.
- Consistent with 2009 state policy, the San Diego region has significantly reduced its reliance on Bay-Delta supplies over the past 20 years; however, it pays SWP costs as a component of the price set under the Exchange Agreement.
- In December 2023, California Department of Water Resources (DWR) approved the Final Environmental Impact Report (FEIR) for a proposed $20 billion single tunnel Bay-Delta Fix (Tunnel) as a climate adaptation strategy intended to protect against future water supply losses caused by climate change, sea level rise, and earthquakes; MWD's anticipated share of the Tunnel is about $10 billion.
- The State Water Resources Control Board's (State Water Board) update of the Bay-Delta Water Quality Control Plan (Water Quality Control Plan) and updated long-term operations plan for the CVP and SWP with updated biological opinions are planned for December 2024 and are expected to reduce water exports, including the Tunnel's ultimate water supply benefit.
- At its December 2024 meeting, the MWD board will consider providing $142 million to support the Tunnel's additional $300 million planning and pre-construction costs; this funding is not included in MWD's adopted two-year budget.
- MWD continues its long-term planning process, Climate Adaptation Master Plan for Water (CAMP4W),[2] to support its water supply reliability and climate adaptation investments and strategies.

Background

In 2009, the state legislature adopted the 2009 Delta Reform Act establishing the Delta Plan's co-equal goals of improving water supply reliability and protecting and restoring the Bay-Delta ecosystem, and its policy of reducing reliance on the Bay-Delta. State water code requires water exporters to pay for a Bay-Delta Fix. Many state and federal agencies are engaged in efforts to

[1] More on the Bay-Delta in the memo "Bay-Delta Update" found in the Water Authority's October 2023 board packet and on the Water Authority's website, Imported Water Supplies: Northern California.

[2] More on MWD's CAMP4W process in the memo "Metropolitan Water District Climate Adaptation Master Plan for Water Update" found in the Water Authority's August 2024 board packet.

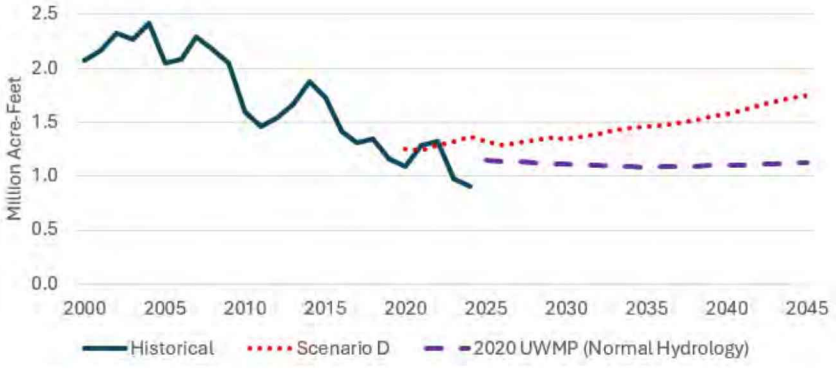
balance the need to export water and to protect the environment including managing climate change impacts.

Tunnel: Proposed Climate Adaptation Measure

During the Water Authority's October 2024 IWC meeting, DWR and Delta Conveyance Design and Construction Authority (DCA) representatives provided an overview of DWR's proposed Tunnel as one way to mitigate climate change impacts to SWP operations and export challenges. DWR approved the FEIR in December 2023, and the DCA produced an updated cost estimate in early 2024 of $20 billion (2023$).[3] The Tunnel is proposed to be used about 20% of the time with the other 80% of exports going through existing Bay-Delta waterways. DWR expects exporters to approve their participation in the project by 2027 with early construction beginning in 2029 and the Tunnel operational in 2045.

DWR commissioned a cost-benefit analysis (CBA) for the Tunnel, which DWR's consultant presented during the Water Authority's October 2024 IWC meeting. The CBA found an overall statewide cost-benefit ratio of 2.2, meaning that for every $1 spent, $2.20 in benefits would be generated. The primary benefit of the Tunnel is reduced projected supply shortages. Urban water demands were based on agencies' 2020 Urban Water Management Plans' (UWMP) estimated demands through 2045 except that MWD's demands were based on its 2020 Integrated Water Resources Plan - Needs Assessment's Scenario D, which projects more than 600 thousand acre-feet (TAF) of increased demand in 2045 over its 2020 UWMP projections (see Figure 1).

Figure 1. Historical and Projected MWD Water Sales



The agricultural cost-benefit ratio is only 0.39, meaning costs exceed benefits. The CBA does not describe flood protection benefits but states the Tunnel could be used for exports in the event of levee failures from a 500-year seismic event. Because benefits are aggregated statewide, DWR's consultant has said individual SWP contractors should perform their own agency analysis of the Tunnel's benefits. MWD staff has not yet conducted an analysis of the benefits to its service area nor individual member agencies.

The Tunnel faces several permitting, planning, financial, and legal hurdles. Its water rights hearing to change the point of diversion is scheduled to start in early 2025. DWR must also demonstrate consistency with the Delta Stewardship Council's (DSC) Delta Plan, specifically that the Tunnel will not have a significant adverse impact on the achievement of one or both of the coequal goals or implementation of government-sponsored flood control programs to reduce

[3] The last cost estimate for one tunnel but with different alignment and ancillary facilities was $15.9 billion (2020$).

risks to people and property in the Bay-Delta. In 2020, DWR filed a validation action seeking the court's confirmation of its authority to issue revenue bonds to finance the Bay-Delta Fix. In January 2024, the court ruled against DWR, which appealed. As a result, DWR is now seeking alternative funding for $300 million in planning and pre-construction activities in 2026 and 2027. In 2020, participating contractors funded $340.7 million in planning funds, of which MWD paid 47.2%, or $160.8 million. MWD's participation in this round of Tunnel planning funding was unanimously supported by its board. DWR covered a roughly 12% to 13% gap in this funding resulting from SWP contractors that opted out of the first round of planning funding. This funding gap remains for the additional $300 million that DWR is now seeking.

Other SWP Supply Considerations

In July 2024, DWR released an updated SWP Delivery Capability Report, which appears to be responsive to a 2023 state audit report finding DWR did not adequately account for climate change.[4] The new DCR aims to better account for climate change. The projected average annual SWP yield in 2043, prior to the Tunnel being in operation, ranges between 1,921 TAF (a 46% Table A allocation) and 1,706 TAF (a 41% Table A allocation) under 50% and 95% (or extreme planning scenario) likelihood of conditions being better. In 2024, MWD reported that due to lower demands, it would store water when the SWP Table A allocation exceeded 30%.

There are also other regulatory updates, costs and project processes ongoing that will affect the SWP, a Bay-Delta Fix, and their potential operations and supply. Sites Reservoir is a proposed $3.9 billion (2021 $)[5] off-stream, 1,500 TAF reservoir located about 70 miles north of Sacramento. This project is independent of the Tunnel but would also rely on diverting water upstream on the Sacramento River. Sites Reservoir's water right permit hearing process is continuing into 2025. The Sites Authority approved the final state and federal environmental documents in November 2023. MWD is the largest single investor in Sites Reservoir and has an estimated project share of about 23%.

The State Water Board is also updating its Water Quality Control Plan to establish water quality objectives for designated beneficial uses of water in the Bay-Delta watershed, along with an implementation program to meet those objectives. The plan is updated through two separate amendment phases: one for the San Joaquin River and the other for the Sacramento River and Bay-Delta watersheds. The San Joaquin River plan update began in 2008 and took more than 10 years to be completed, followed by years of litigation. In March 2024, the court upheld the State Water Board's 2018 phase one plan for the San Joaquin River that required higher unimpaired flows,[6] meaning more water is left in the river for environmental purposes and an average of 14% less water is available for export. In October 2024, the State Water Board issued a draft of potential options for updating phase two for the Sacramento River and Bay-Delta watershed. The options include potential quantified and descriptive flow-related requirements for inflows, cold water habitat, and Bay-Delta outflows. The potential draft updates also include options for incorporating negotiated Voluntary Agreements (VAs), also known as the Healthy Rivers and

[4] More information on the state audit of DWR found in the *Bay-Delta Update* memo in the Water Authority's October 2023 board packet.
[5] In September 2024, Sites Executive Director Brown reported an updated cost estimate is expected by early 2025.
[6] Unimpaired flow is defined as the natural water production of a river basin without any upstream diversions, storage, exports, or imports.

Landscapes proposal, which intend to achieve the plan's objectives without relying only on unimpaired flows (as the San Joaquin River update proposes). The State Water Board will also consider incorporating the definitions for three tribal beneficial uses into the plan. It will hold public workshops and receive comments on the draft updates through early 2025 with adoption and implementation possibly years away. Any update could impact exports or, in the case of VAs, require additional efforts and funds for water purchases, habitat restoration, a new governance structure, a science program, and monitoring.

A decision on the biological opinions could also affect operations of the SWP and CVP. In 2019, California filed a lawsuit challenging the Trump administration's biological opinions that govern the coordinated operations of the SWP and CVP, which allowed greater project exports. The lawsuit alleged the opinions provided a limited analysis of climate change impacts, put various fish species at risk of extinction, and did not provide a meaningful opportunity for the public to provide input. DWR and the U.S. Bureau of Reclamation have been working to voluntarily reconcile SWP and CVP operations since 2021 and are aiming to update the operating plan by December 2024. There is already concern from environmental, fishery, and other Bay-Delta stakeholders that these reconciled operations may result in less water for environmental purposes, which could result in further litigation.

Also, the Bay-Delta ecosystem has been in decline for decades due to various factors. In summer 2024, one species was listed, and another was proposed to be listed as endangered. It is unclear how the further listing of species will impact regulatory requirements on Bay-Delta flows and exports, including the Tunnel's operation.

Discussion

The Water Authority's MWD Delegates (Delegates) and other MWD directors have requested staff analysis of alternatives to the Tunnel that might meet MWD member agency supply and climate adaptation needs as they are identified in the CAMP4W process. In February 2024, MWD provided a report on the Bay-Delta islands it owns.[7] MWD described it had been collaborating with other Bay-Delta stakeholders to develop and propose an update to existing 44-year-old levee standards. The updated standard would protect the through-Delta freshwater export pathway against a 100- to 500-year seismic event; a 100- to 500-year flood event; and sea level rise up to 2.9 feet, which are comparable to the Tunnel's benefits. MWD's report referenced a 2023 cost estimate of $400 million to $700 million to bring the levees along the freshwater pathway up to this modernized standard and $3 billion to $5 billion to bring all primary Bay-Delta levees up to it.

During the Water Authority's October 2024 IWC meeting, the State Water Contractor's general manager stated that levee maintenance is needed regardless of the Tunnel's implementation. Additionally, because levees have multiple benefits such as flood control, modernizing them could potentially attract additional state, federal, or other funding, and the work would also have near-term impact to mitigate future uncertainties. DWR and MWD acknowledge other adaptation strategies are needed to fully mitigate SWP risk including subsidence remediation, ground and surface water storage enhancement, and enhanced SWP asset management.

[7] More on levee improvement in Attachment 3 of the Water Authority's February 2024 MWD Delegates' Report.

Next Steps

DWR requested Tunnel participants fund an additional $300 million in 2026 and 2027 pre-construction work including engineering and geotechnical studies. In December 2024, the MWD board will consider approving its $142 million share, which is unbudgeted.

After MWD's October committee and board meeting discussions of the Tunnel, MWD's interim general manager sent a letter to DWR[8] outlining remaining questions that he said must be resolved prior to MWD's consideration of providing additional funding. These are related to understanding DWR's plan to:

- Navigate the remaining permitting and certification processes;
- Provide an implementation funding plan;
- Resolve MWD's approximately $180 million protest claims to DWR related to its SWP payments (that if accommodated would result in credits or refunds); and
- Mitigate climate change impacts on the SWP's reliability during the 20-plus years before the Tunnel is operational.

MWD's CAMP4W process is pending, and DWR and MWD are now describing climate adaptation as an express objective and cost driver of the Tunnel and other potential investments in the SWP. Related to the MWD's investments in climate adaptation and water supply reliability, the Delegates have: (1) encouraged a data-based and data-driven CAMP4W process to identify the geographic location and extent of anticipated supply gaps; (b) sought the refinement of Scenario D inputs and assumptions, or the use a different planning scenario altogether that is more consistent with future demand projections for MWD water; (3) urged MWD conduct analyses assessing the respective supply, water quality, and other benefits of a Tunnel; and (4) advocated to review alternatives for how current and future SWP costs should be most fairly and equitably allocated. Water Authority staff continues to support the Delegates' efforts and will return to the Imported Water Committee with key updates.

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[8] MWD letter to DWR regarding continued Tunnel planning funding dated October 23, 2024.