



Subject: **Progress Update on Development of Program Baseline Report**

Requested Action:

Review and comment on the ongoing development of the Program Baseline Report representing the Project's updated costs, benefits, and plan of finance.

Detailed Description/Background:

Advancing the Sites Reservoir Project beyond the planning phase (Phase 2) into detailed design, construction, and operations (Phases 3-5) will require Participants to decide on their Capacity Interest and execute a Benefits and Obligations Contract (B&O Contract). In October 2024, Staff presented the concept of developing a Program Baseline Report (PBR) to support Participant decision-making with an updated review of Project costs and benefits. The expected escalation of project cost was identified as part of that report and the Board concurred in January 2025 with reforming the Value Planning Ad Hoc to perform review of technical elements of the costs and benefits.

This report represents an update on progress made to preliminarily review the Project's cost, benefits, and affordability as well as a discussion of next steps. It is important to note that all analyses presented are interim work products. A project cost estimate, benefits analysis, and affordability assessments are not expected to be finalized until after receipt of the water right and completing negotiation of the State and Federal contracts, anticipated in September 2025.

Project Costs:

The Authority has undertaken extensive work with the Value Planning Ad Hoc to analyze and understand project costs and associated risks. While there is more work to do to present a full and complete cost estimate, the Ad Hoc advised that an updated cost estimate range be provided to the Board as an interim check-in on the process. Based on detailed analysis and current market conditions, it is currently estimated that the sum of all the project work packages "as bid" cost is expected to be in the range of \$6.2B to \$6.8B in 2025 dollars. This estimate range reflects changes occurring since 2021 due to increased state/federal permitting and regulatory requirements, advancing to a 30% design, a detailed evaluation of design and construction cost risk factors by several industry experts inside and outside of the project team, and accounts for significant inflation and construction escalation.

In addition, several cost saving measures have been identified that could reduce the “as bid” cost in the range of 5-10%, and these will be fully evaluated as work progresses.

Staff anticipates presenting two key values for the project cost in the Program Baseline Report for the purpose of managing the project cost as follows:

- The Project Construction Cost, currently estimated as a range from \$6.2B to \$6.8B in 2025 dollars, and will be further refined between now and start of investor commitment. This will be the “Management Budget” used to establish the overall capital budget for all expenditures during final design and construction on the Project starting at the initiation of Phase 3. This number will set the baseline for managing project cost. As the project progresses, more detailed estimates and actual bid costs will be updated and compared to this baseline. This number does not include an allowance for change orders.
- The Benefits and Obligations Contract Construction Authority is a total value consisting of a 10-15% change order allowance that will be necessary in addition to the Project Construction Cost. Together, this total will constitute the “Governance Budget”. This is envisioned to establish the maximum project spending authority for Phases 3 and 4 provided by Participants at the time of signing the Benefits and Obligations contract for their share of the final design and construction of the Project. This number should be approved by home boards, and raising this ceiling would require additional authority from the Reservoir Management Board, with voting threshold to be determined.

Attachment A shows these “in-progress” values on a probability curve. The Board will need to set these values at the start of investor commitment with attention on balancing the need to ensure adequate authority to perform all necessary work with the need to achieve the constructed project able to deliver the expected benefits at an affordable cost while meeting all permit and approval conditions.

Project Benefits:

The Value Planning Ad Hoc primarily conducted a review of the water operations based on operational modeling for the Project that has been updated to CALSIM 3, and incorporated the incidental take permit conditions, which have previously been discussed with the Board. They also performed an in-depth examination of:

- How the use of Sites water from the reservoir showed Participants that “turnover” their storage allocation at a frequent rate result in an increased annual average supply, i.e. greater project benefits. Modeled water supply generated from each Participant’s storage account ranges from 0.5 to 2.5 times average (i.e. 6.234) solely based on how the Participant manages its storage account and up to the limits of ability to divert water.
- Potential constraints limiting the ability to convey water at certain times into and through the Delta which illustrated i) there is generally sufficient

capacity to meet the modeled demands of all Storage Partners with capacity rights in downstream facilities, ii) the need for Participants envisioning possible future lease or transfer of Sites water to consider securing percentage shares in the downstream facilities.

Considerations for Project Affordability and Financial Feasibility:

The Program Baseline Report will include an updated plan of finance that accounts for current escalation and financing assumptions. A very preliminary estimate of the total Participant annualized fixed costs (i.e., debt service and O&M) ranges between \$300M and \$380M (in 2025 dollars). It should be noted that actual annual cost in future years will be higher due to escalation, interest rates, and other financing terms (e.g., weighted cost of capital, term of debt, amount of capitalized interest, etc.) The Value Planning Ad Hoc felt this information might be useful to Participants' internal agency evaluations of the Project. Use of capitalized interest will be analyzed as part of the full update to occur later this year.

Updates to the Project's variable O&M costs are being prepared. Preliminary results indicate these costs are similarly impacted by inflation. The largest component of variable cost is power purchases for pumping. These costs are highly sensitive to whether the rates paid for power are commercial or wholesale. Clearly, the need is to focus future work on securing low power rates through wholesale pricing, which is critical to reducing these costs. Securing a place in California ISO (CAISO) Cluster 15 best positions the Authority for a positive outcome in this regard. Overall, total average fixed and variable O&M&R remains consistent with prior work using wholesale power rates at approximately 15% of total annual costs.

Using the preliminary information we have to date, analysis indicates the Project's Benefit-Cost Ratio (BCR) to conservatively be in a range of 1.1 to 1.9, depending on the methodology used, which is well within the range of feasibility acceptability.

Item 2.03 will address the percentages of capacity interest for participants and can be used to approximate each Participant's share of annual fixed cost.

Next Steps:

The schedule to complete the Program Baseline Report, including costs, benefits, and updated plan of finance is envisioned to proceed as follows:

- Q3 to Q4 2025 – State Water Resource Control Board decision on the Sites Water Right. The Benefits and Obligations Contract, State Public Benefit Agreements, Federal Partnership Agreement, Operations Agreement and the Program Baseline Report are revised as needed to conform to the final terms and conditions in the Sites Water Right (~2 months to perform this work). Setting the Project Construction Cost and the Benefits and Obligations Contract Authority will also occur during this period.
- Q4 2025 to Q1 2026 – RC/AB approve a “Resolution to Offer Capacity Interest” and supporting material, beginning a 6-month decision-making

process. All documents are frozen and the Program Baseline Report is established as the Sites Project offering. This is the point at which each Participant initiates pursuing their home board authority to execute the B&O Contract. The wait list may need to be activated. State Public Benefit Agreements, State Final Funding Award Agreement and Federal Partnership Agreement must be executed during this period as well.

- Q2 2026 – After receiving commitments for 100% of Capacity Interest in the Project (including State and Federal Participation), Phase 3 will be initiated and the Authority will start to draw on interim financing to pay for project activities. There are no further cash calls planned prior to the start of interim financing.

Fiscal Impact/Funding Source:

This development of the Program Baseline Report is budgeted within the current Work Plan and no additional fiscal impacts are anticipated.

Prior Action:

January 2025: Reviewed and commented on the process of providing input as the updated Total Project Cost Estimate is being developed.

October 2024: Reviewed and commented on the process, assumptions and other considerations that are key to the development of the 2024 Program Cost Forecast representing to Storage Partners the anticipated total project cost and annual costs of construction and operations to consider during investor commitment.

Staff Contact:

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Primary Service Provider:

HDR

Attachments:

Attachment A: Draft Cost Probability Graph

Draft Cost Probability Graph, 1.5 MAF
Conceptual Numbers

