



Requested Action:

Review and discuss the 2023 Draft Plan of Finance.

Detailed Description/Background:

In 2021 a Draft Plan of Finance was prepared and was focused on addressing the three big questions. Since that time, a lot of progress has been made to refine and clarify elements of the Plan of Finance. This report is intended to assess the progress made, to identify remaining issues Participants need to have resolved before investor commitment and provide a 2023 Draft Plan of Finance for use as Participants continue to evaluate their final participation in the Project.

Looking forward, a key part of investor commitment is securing the funding commitments for all activities beyond the planning phase and into detailed design and construction (Phase 3/4/5). The “Sites Reservoir Benefits and Obligations Contract” (Contract) will be the successor project agreement to the “2019 Phase 2 Reservoir Project Agreement” (currently on Amendment 3) and, upon execution, will represent final investor commitment. A decision by Participants on executing this agreement will be expected following the receipt of a water right and securing critical permits.

The Amendment 3 work plan period is approaching the halfway point, and the Authority has advanced strategic plan objectives related to affordability, permitability, and buildability. Progress since 2021 has helped answer the three big questions to support Participant decision-making, including:

- What do we get?
 - Submittal of permit applications and continuing engagement with resource agencies on areas of concern.
 - Final Approval of EIR/EIS (planned for August 2023).
 - Adoption of Guiding Principles and Preliminary Terms which form the basis of the Benefits and Obligations Contract.
 - Final selection of Alternative 3 with up to 25% participation by Reclamation and associated operations.
 - Development of governance provisions.
- How much does it cost?

- Terminal Regulating Reservoir final siting and sizing.
- Feasibility Cost Estimate (\$3.9B in 2021 dollars).
- Field work involving geotechnical explorations supporting design advancement and forthcoming Level 3 cost estimate update.
- Dam Safety evaluations, materials evaluation, DSOD engagement.
- Project Power needs assessment, CAISO interconnect application, confirmation of FERC Exemption.
- Evaluation of the CBD capacity and jurisdictional issues.
- How do we pay for it?
 - Selection, invitation, and application for a WIFIA loan.
 - Investment grade indicative credit rating.
 - Waitlist of Participants.

The Sites Authority has also taken several actions that support the Plan of Finance, including:

- Adopted Master Bond Resolution and Guiding Principles.
- Approved WIFIA Reserve Policy.
- Approved Debt Management Policy.
- Applying for a WIFIA loan to fund 49% of eligible Project costs.
- Reclamation requesting 16% storage and working to secure federal funding to support this level of participation.
- Receiving the State's feasibility determination.
- Establishing active Storage of 1.41 MAF taking into account latest survey information and deadpool assumptions.
- Updated operations modeling as reflected in the upcoming Final EIR/EIS

These actions have been considered and incorporated as part of an update to the Cost Tables in the Plan of Finance (Attachment A). The attached draft cost tables do not include an updated capital cost estimate (still \$3.93B in 2021 dollars) but do escalate project costs to future year dollars to better reflect costs that need to be recovered through rates, charges, and assessments.

Assumptions and approach for updating the Plan of Finance were reviewed with the Budget and Finance Committee and their feedback has been integrated into Attachment A.

Staff would benefit from Participants identifying any other information needs that will be required between now and execution of the Benefits and Obligations Contract.

Prior Action:

November 21, 2022: Adopted Master Resolution and Indicative Credit Rating Financial Documents.

Fiscal Impact/Funding Source:

The Amendment 3 Work Plan includes a sufficient budget to cover required resources and activities in support of the Plan of Finance and ultimately, the Benefits and Obligations Contract development. Any required adjustments based on feedback during the final rating or the WIFIA Loan development will be considered within the Fiscal Year Budget development process.

Staff Contact:

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Primary Service Provider:

Montague DeRose / Brown & Caldwell

Attachments:

Attachment A – 2023 Draft Plan of Finance Narrative and Cost Tables.

Sites Project

2023 Draft Plan of Finance Update



I. Purpose and Summary of Assumptions

Purpose

The purpose of this memorandum is to provide the Sites Authority and Reservoir Committee with an update to the financial forecast provided in the 2021 Draft Project Plan of Finance (2021 Finance Plan) to assist Participants as they determine their commitment to the Sites Project (Project) as part of the “soft call” later this year. This 2023 update is based on the 2021 estimate of cost and includes estimated financing consistent with the Board’s adopted Master Resolution, Guiding Principles, WIFIA Reserve Policy and Debt Management Policy. This memo supplements the 2021 Finance Plan and does not repeat the discussion about the types of financing, the different revenue sources that Participants may choose to make their payments or the credit drivers. The analysis continues to assume that Participants choosing to commit to the Project through the Benefits and Obligations Contract would do so on a take-or-pay basis – that is, Participants would be responsible for their share of costs (including debt service) whether any water is available or delivered.

Assumptions and Cost Drivers

Capital Cost. The cost estimate used in this update is consistent with the 2021 Feasibility Cost Estimate (AACE Class 4), totaling \$3.943 billion in 2021 dollars. This estimate is escalated to future year dollars for purposes of modeling financing and cash flow. Using the escalation factors described below, the total escalated cost of the Project (including construction, planning and design, land and right-of-way, environmental and permitting, and other activities such as project management and support, legal, etc.) totals \$4.799 billion over the period 2022 thru 2031. This is about \$300 million higher than the future cost estimate in the 2021 Finance Plan. The attached forecasts are based on a Project completion date in 2031. The forecast may be updated following the Sites Authority’s concurrence on Project Schedule development findings this summer and preparation of an AACE Class 3 cost estimate expected in the first quarter of 2024.

Capital Cost Escalation Factors. Escalation and inflation assumptions have a large impact on future costs. For purposes of this update, it is assumed that construction costs escalate at 7.96% from 2021 to 2022 and 3.87% from 2022 to 2023, consistent with increases in construction cost indexes (e.g., Engineering News Record) over the past two years. Construction costs beyond 2023 are escalated at 2.02% per year, which reflects historical escalation and the Federal Reserve’s target for inflation. Planning and Design costs were escalated at 2.8% annually from 2021 to 2023, and 1.75% per year thereafter. If costs continued to escalate at 4% rather than the 2% included in the current model, that would add about \$400 million to the total escalated cost of the project – assuming the same cash flows and schedule.

Participants and Participant Shares. Participant shares are shown below in *Table 1. Allocation of Available Storage*. In the model, Participant costs are generally allocated based on the percentage of Available Storage, with downstream users paying for the cost of the facilities needed to provide water downstream of the reservoir. The Benefits and Obligations Contract will provide for a Capacity Interest in the Project, reflecting each Participant and Storage Partners (i.e., the State and Reclamation) benefits and commitment to fund a share of Available Storage and a share of Downstream Facilities. It should be noted that the State of California (State) is currently contributing more than its share of storage to the capital costs since the State's contribution and storage allocation is based on the State's benefit analysis and is a fixed amount. If the Project cost escalates above current estimates, the State's share of cost would decline without an inflationary adjustment from the California Water Commission. For this analysis, Reclamation's share of storage is 9.1%; however, Reclamation has indicated a desire to increase its share of storage and obligations to 16%, which would require the reallocation of existing Participant shares.

Allocation of Available Storage (1)				
Entity	Amendment 3 Participation Level (AF)	Percent	Amendment 3 Storage Allocation (AF)	Percent
Antelope Valley-East Kern Water Agency	500	0.30%	3,117	0.2%
City of American Canyon	4,000	2.40%	24,936	1.8%
Coachella Valley Water District	10,000	6.01%	62,340	4.4%
Colusa County	10,000	6.01%	62,340	4.4%
Colusa County Water District	9,256	5.56%	57,702	4.1%
Cortina Water District	450	0.27%	2,805	0.2%
Davis Water District	2,000	1.20%	12,468	0.9%
Desert Water Agency	6,500	3.90%	40,521	2.9%
Dunnigan Water District	2,972	1.78%	18,527	1.3%
Glenn-Colusa Irrigation District	5,000	3.00%	31,170	2.2%
Irvine Ranch Water District	1,000	0.60%	6,234	0.4%
La Grande Water District	1,000	0.60%	6,234	0.4%
Metropolitan Water District of Southern California	50,000	30.03%	311,700	22.1%
Reclamation District 108	4,000	2.40%	24,936	1.8%
Rosedale-Rio Bravo Water Storage District	500	0.30%	3,117	0.2%
San Bernardino Valley Municipal Water District	21,400	12.85%	133,408	9.5%
San Geronio Pass Water Agency	14,000	8.41%	87,276	6.2%
Santa Clara Valley Water District	500	0.30%	3,117	0.2%
Santa Clarita Valley Water Agency	5,000	3.00%	31,170	2.2%
Westside Water District	5,375	3.23%	33,508	2.4%
Wheeler Ridge-Maricopa Water Storage District	3,050	1.83%	19,014	1.3%
Zone 7 Water Agency	10,000	6.01%	62,340	4.4%
Total	166,503	100.00%	1,037,980	73.6%
State			244,000	17.3%
Federal			128,020	9.1%
Total			372,020	26.4%
Grand Total	166,503	100.0%	1,410,000	100.0%

(1) Storage allocations are based on current estimates and contributions and may be revised. These estimates were used in the financial model to estimate future cash flows.

Table 1. Allocation of Available Storage

Financing. The Sites Project will be financed with a combination of direct Federal Funding through Reclamation Water Infrastructure Improvements for the Nation (“WIIN”) Act, State Funding through Water Storage Investment Program (“WSIP”) funds, cash calls from Participants, direct borrowing by Sites Authority (including loans through the Environmental Protection Agency’s Water Infrastructure Finance & Innovation Act (“WIFIA”) program and revenue bonds) backed by the Participants through the Benefits and Obligations Contract, and Participant “self-funding” of shares of obligations. Upon the completion of the Amendment 3 workplan¹, the financial model assumes that Participant costs would initially be funded with interim financing such as short-term notes (although some Participants may elect to self-fund their share of construction). WIFIA and tax-exempt revenue bonds are then utilized to pay off the notes and other short-term borrowings.

The 2021 Finance Plan included several scenarios for Participant borrowings, depending on the size of a potential WIFIA loan. The Sites Authority applied for a WIFIA loan in March 2023 and was invited to apply for a loan that would fund up to 49% of the eligible costs of the Sites Project. As a result, the 2023 Finance Plan update includes WIFIA proceeds up to 49% of eligible Project costs.

¹ Some permitting related delays may extend the Amendment 3 workplan into 2025, but Participant cash calls to fund this work will not extend beyond 2025.

The mix of long-term financing and other sources of funding is shown in *Table 2. Sources of Financing* below. Since the Federal and State funding is provided on a reimbursement basis, cash flow for the Federal and State share of funding during design and construction will likely be funded with a line of credit or commercial paper program to reduce the cash flow risk to Participants. The cost of such a financing mechanism has not been included in the projections but is expected to be minimal. As shown in Table 2, about \$28.5 million in interest earnings on borrowed funds is estimated to be used to help offset construction costs. While not explicitly shown, the assumption remains that prior participants are reimbursed for their contributions to the development of the Project through the Sites Authority’s Funding and Credit Reimbursement Policy, estimated to be about \$9 million.

Source	Amount (millions of future year dollars)	Percent
Federal Funds (WIIN Act)	\$435.7	9%
State Funds (WSIP)	\$849.0	18%
WIFIA Loan(s)	\$2,351.3	49%
Revenue Bonds	\$1,074.0	22%
Participant Cash Calls	\$60.3	1%
Interest earnings on construction fund	\$28.4	1%
Total	\$4,798.7	100%

Table 2. Sources of Financing

The Sites Authority has qualified for a United States Department of Agriculture (USDA) loan in the amount of \$449 million. The pro-forma model used to develop the forecasts and output in this memo does not include proceeds from a USDA loan, which could be accessed if needed.

Interest Rates. The cost of financing (interest rates) is another important driver of annual costs (as well as the total cost of the Project). The interest rates used in the forecast and results in the attached tables were based on historical averages in order to be conservative. The Sites Authority has received a positive indicative credit rating from Standard & Poor’s, which implies that the Sites Authority should be able to borrow at competitive, investment grade interest rates. Further, WIFIA interest rates are set at the time the loan is executed and are based on Treasury rates. The assumed interest rate for short-term notes used in the financial model is 3.0%. Long-term revenue bonds are modeled with an interest rate of 5.0% and a repayment period of 40 years. The WIFIA loans are estimated to be repaid over a 35 year period and bear an interest rate of 3.75%.

Operating and Maintenance Costs. Operating and Maintenance (O&M) costs include labor, materials, chemicals, repair and replacements and power costs. In addition to these typical O&M costs, the Sites Authority will encounter other fixed costs such as payments for in-lieu of property taxes, franchise fees, insurance, and legal and administrative costs. Consistent with the adopted Final Guiding Principles, O&M costs are expected to be allocated to Participants, including the State and Federal partners as either Fixed O&M charges or Variable O&M charges. Variable O&M costs are those costs that are directly related to the cost of moving water into and out of Sites Reservoir, as well as conveyance (wheeling) costs. Fixed O&M costs are estimated to be \$23.0 million in 2021 dollars and are escalated at 2.5% per year. This reflects historical changes in labor and non-labor costs, but has been higher in the past two years. Power costs are expected to increase 2.5% per year on average. Power costs are recovered through the Variable O&M charge and will depend on the water year and expected use of the reservoir (both for fill and withdrawals). In addition, the model accounts for power sales, which help offset variable costs and are allocated in proportion to releases.

Construction Schedule. The Project construction schedule will be driven primarily by the time required to secure environmental permits and water rights. Based on current planning estimates, permits and water rights should be secured by late 2024 and Project construction could begin in approximately mid-2025. The total duration of construction is estimated to be six years. Depending on potential early actions toward land acquisition and/or contractor selection, this duration may be able to be reduced which would reduce costs of capitalized interest.

Table 3. Major Assumptions shows the assumptions described above compared to those used in the 2021 Finance Plan. The major differences are the anticipated construction start date (and the subsequent end date), escalation factors in years 2021 and 2022, and the use of WIFIA funding for 49% of the estimated cost of the Project.

	2023 Update	2021 Plan
Project Cost (2021 dollars)	\$3.9 billion	\$3.9 billion
Project Cost (future dollars)	\$4.8 billion	\$4.5 billion
Construction start year	2025	2025
Construction end year	2031	2031
Escalation Rates		
Planning & Design		
2021 to 2022	2.8%	1.5%
2022 to 2023	2.8%	1.5%
2023 and after	1.8%	1.5%
Construction		
2021 to 2022	8.0%	2.0%
2022 to 2023	3.9%	2.0%
2023 and after	2.0%	2.0%
Operating and Maintenance	2.2%	2.5%
Power Costs	2.0%	2.5%
Interest Rates		
Notes	3.00%	3.00%
WIFIA (1)	3.50%	4.00%
Revenue Bonds	5.00%	5.00%

(1) WIFIA estimated interest rate in 2021 was 3.5%, but the main case did not include a WIFIA loan.

Table 3. Major Assumptions

II. Results and Forecast

The attached tables are similar to those included as part of the 2021 Finance Plan. These tables show the share of costs by Participant. A brief explanation and description of the information contained in the Attachment follows:

Attachment Table 1. Allocation of Available Storage. This table shows the estimated yield and storage amounts in acre-feet, as well as the resulting share of each in percentage terms. Participant's share of fixed costs, including annual debt service, is anticipated to be based on the Participant's proportionate share of available storage. As noted above, Reclamation's share of storage is about 9%, which is higher than the 7% share included in the 2021 Finance Plan. This increase reflects the increase in estimated Available Storage from 1.38 million acre-feet to 1.41 million acre-feet, which is the net adjustment from Deadpool and survey data information and assuming the additional capacity is provided to Reclamation.

Attachment Table 2. Allocation of Construction Cost. Table 2 shows the allocation of Construction Cost (including planning and design) among the Participants. This table also allocates downstream costs to those Participants who benefit from those facilities. The table shows costs in 2021 dollars (the same as in the 2021 Finance Plan) and future year dollars. Given the change in construction escalation in the past two years, the resulting escalated cost of the Project in future year dollars is estimated to be \$4.8 billion compared to the prior estimate of \$4.5 billion. This table shows the Participant share of construction cost but does not include the cost of financing those costs.

As discussed above, in the current estimate, the State's capital contribution exceeds its share of storage, which benefits the remaining Participants. This is because the State's capital contribution is not based on its share of storage, but rather is based on the benefits anticipated from the Project. At this point in the Project development, the benefits calculation yields a higher contribution than the amount of storage the State will acquire. But – if the overall cost of the Project increases – absent any changes in State funding – the State's percentage share of overall costs will decrease.

Attachment Table 3. Annual Fixed Project Costs. This table shows estimated debt service costs beginning in 2033 once the Project is in operation and principal payments start. The table shows the estimate from the 2021 Finance Plan in 2021 dollars, the current estimate in 2021 dollars, and the current estimated cost in future year dollars. Note that the current 2023 estimate in 2021 dollars is lower than the 2021 Finance Plan. This largely reflects the lower interest costs resulting from the WIFIA loan (as it replaced higher interest rate revenue bonds) and the higher capital contribution from Reclamation (the total cost in 2021 dollars of the Project remains the same, but Reclamation is now contributing 9.1% of the cost). In addition, the last column shows debt service payments for a capitalized interest case where no debt service is paid during construction. As shown in Table 3 and Table 6c (discussed below), capitalizing interest increases future annual debt service payments by about 25%, but there would be no debt service during construction. Future year dollars are provided as Participants may want to reference this type of information for budgeting purposes.

Attachment Table 4. Annual Operating Costs. Annual operating costs include fixed and variable O&M costs. Table 4 shows these costs in future year dollars – including the average, minimum and maximum variable costs estimated in the model. Variable costs are based on the amount of water moved into and out of Sites Reservoir. Variable costs can be negative in years where water is withdrawn from Sites Reservoir, and the water year does not provide supplies to be diverted into the Sites Reservoir. The negative numbers in Table 4 reflect the revenues from power generated when water is released from Sites Reservoir.

Attachment Table 5. Annual Debt Service + Average Operating Cost. Table 5 provides an estimate of the total cost a Participant may anticipate in a given year. It reflects the average O&M cost and Fixed Project Cost after the Project is put into service (Table 3 + Table 4).

Attachment Table 6a. Participant Costs if Financing. Participants may choose to participate in a “group” financing through the Sites Authority (e.g., a WIFIA loan or revenue bond) or contribute to capital cost on a “pay-as-you-go” (PAYGO) basis. Tables 6a, 6b and 6c are provided to evaluate the impact of each financing path on the Participant’s needed cash flow in the future. Costs in Table 6a are presented in future year dollars, with estimates based on O&M costs consistent with operational models, plus each Participant’s share of annual debt service. Payments in 2023 and 2024 are cash calls – as external financing would not be used until 2025. In addition, Table 6a represents a case where all Participants are involved in a “group” financing for the entire Participant share of Project costs (except cash calls through 2024). This scenario assumes that Participants would pay “interest only” until debt begins to amortize at the end of the construction period. Note that payments in 2024 reflect the 2024 cash calls as well as the pre-payment of 2025 costs in order to establish the reserve levels necessary for the WIFIA financing.

Attachment Table 6b. Participant Shares if Pay-Go (Self-Funding). Table 6b shows the annual costs for Participants if all Participants were to fund capital contributions on a PAYGO basis. This table shows costs in future year dollars. Table 6b can be used by Participants to evaluate the short and long-term impacts of financing the Project’s capital cost on their own vs. financing through the Sites Authority. Cash flow demands during the construction period of 2025 through 2031 are significantly higher than shown in Table 6a. If a Participant elects to self-fund and pay its share of capital contributions on a PAYGO basis, the Participant would have zero debt service obligations owed to Sites Authority, leaving only O&M costs to be paid. However, should a Participant choose to self-fund its share of capital costs by issuing its own debt (rather than using available cash on hand), they would only be obligated to pay O&M costs, including funding shortfalls in the Liquidity Reserve, to the Sites Authority and would be responsible for the debt service on their own Participant-issued debt.

Attachment Table 6c. Capitalized Interest Case. Table 6c is a case where all Participants are assumed to participate in a “pooled” financing, but interest is capitalized during the construction period. All other assumptions remain the same, including term of the loans and interest rates. As in the other tables, principal payments are assumed to start in 2033, with interest payments beginning in 2033. As seen in Table 6c, capitalizing interest during construction reduces the cost of the project to zero as there are no debt service payments and no O&M costs (all costs during this time period are assumed to be Project related.) But – future debt service payments would be about 25% higher over the balance of the contract period. As in the interest only case shown in Table 6a, given the need to have debt service payments available, principal and interest is collected in the year before payments are due.

III. Uncertainties

At this stage of the Project, many things are uncertain. The attached tables and forecast are based on a number of assumptions and estimates that will continue to change, including the overall cost of the Project. Cost estimates will continue to be updated and will be refined as the major bid packets are awarded and escalation will likely be different than projected. Even after bids are awarded, changes may occur during construction that change costs. The timing and initial construction date is subject to risks including permitting (e.g., water right) and potential litigation. The Project schedule will have to be adjusted over time in response to factors such as weather, environmental and cultural impacts, etc. Reclamation’s share of cost and storage is

still subject to negotiation and mechanisms to ensure the State pays its share of O&M are still to be resolved. In addition, it is assumed that Reclamation and State share of construction will be funded on a reimbursement basis. This means that the Sites Authority will need to utilize a line of credit or other similar form of financing to provide needed cash flow for the State and Federal share of the construction costs. This mechanism has not been included in the attached tables, but will be an important part of the financing plan as the Plan continues to evolve. It will be important to continue to monitor these uncertainties and risks – and Participants should add their own elements of risk to the costs presented as the Project proceeds.

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Attachment

Sites Project 2023 Draft Cost Tables

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Table 1

Allocation of Available Storage

Entity	Amendment 3	Percent	Amendment 3	Percent
	Participation		Storage	
	Level		Allocation	
	(AF)	(%)	(AF)	(%)
Antelope Valley-East Kern Water Agency	500	0.30%	3,117	0.2%
City of American Canyon	4,000	2.40%	24,936	1.8%
Coachella Valley Water District	10,000	6.01%	62,340	4.4%
Colusa County	10,000	6.01%	62,340	4.4%
Colusa County Water District	9,256	5.56%	57,702	4.1%
Cortina Water District	450	0.27%	2,805	0.2%
Davis Water District	2,000	1.20%	12,468	0.9%
Desert Water Agency	6,500	3.90%	40,521	2.9%
Dunnigan Water District	2,972	1.78%	18,527	1.3%
Glenn-Colusa Irrigation District	5,000	3.00%	31,170	2.2%
Irvine Ranch Water District	1,000	0.60%	6,234	0.4%
La Grande Water District	1,000	0.60%	6,234	0.4%
Metropolitan Water District of Southern California	50,000	30.03%	311,700	22.1%
Reclamation District 108	4,000	2.40%	24,936	1.8%
Rosedale-Rio Bravo Water Storage District	500	0.30%	3,117	0.2%
San Bernardino Valley Municipal Water District	21,400	12.85%	133,408	9.5%
San Geronio Pass Water Agency	14,000	8.41%	87,276	6.2%
Santa Clara Valley Water District	500	0.30%	3,117	0.2%
Santa Clarita Valley Water Agency	5,000	3.00%	31,170	2.2%
Westside Water District	5,375	3.23%	33,508	2.4%
Wheeler Ridge-Maricopa Water Storage District	3,050	1.83%	19,014	1.3%
Zone 7 Water Agency	10,000	6.01%	62,340	4.4%
Total	166,503	100.00%	1,037,980	73.6%
State			244,000	17.3%
Federal			128,020	9.1%
Total			372,020	26.4%
Grand Total	166,503	100.0%	1,410,000	100.0%

Notes:

1. Participation (AF of yield) is used primarily as the basis of local agency participation and allocation of local cost share of planning/development costs
2. The storage allocation for the State of California and Bureau of Reclamation are estimated as placeholders and will be determined at a later date. The storage allocations for local project participants are estimates until federal and state participation is finalized.

Analysis as of 05-10-2023

Table 2

Plan of Finance -- May 2023 Update

Allocation of Construction Cost (\$1000s)

Entity	Total Const. Cost Prior to Bifurcation	Total Const. Cost Prior to Bifurcation	% of Costs for "Base Facilities"	"Base Facilities" Cost Allocation	Down-stream Storage Partner?	% of Costs for "Down-stream Facilities"	"Down-Stream Facilities" Cost Allocation	Share of Const. Costs	PWA Share of Const. Costs	Const. Costs per AF Storage	% Change Due to Bifurcation
	(2021\$)	(future\$)	(%)	(future\$)		(%)	(future\$)	(future\$)	(%)	(fut\$/AF-St)	(%)
Antelope Valley-East Kern Water Agency	8,586	10,473	0.2%	10,062	yes	0.3%	505	10,568	0.3%	3,390	1%
City of American Canyon	68,691	83,783	1.7%	80,498	yes	2.1%	4,044	84,542	2.4%	3,390	1%
Coachella Valley Water District	171,726	209,458	4.4%	201,245	yes	5.4%	10,109	211,354	6.1%	3,390	1%
Colusa County	171,726	209,458	4.4%	201,245	no	-	-	201,245	5.8%	3,228	-4%
Colusa County Water District	158,950	193,874	4.0%	186,273	no	-	-	186,273	5.4%	3,228	-4%
Cortina Water District	7,728	9,426	0.2%	9,056	no	-	-	9,056	0.3%	3,228	-4%
Davis Water District	34,345	41,892	0.9%	40,249	no	-	-	40,249	1.2%	3,228	-4%
Desert Water Agency	111,622	136,148	2.8%	130,809	yes	3.5%	6,571	137,380	3.9%	3,390	1%
Dunnigan Water District	51,037	62,251	1.3%	59,810	no	-	-	59,810	1.7%	3,228	-4%
Glenn-Colusa Irrigation District	85,863	104,729	2.2%	100,623	no	-	-	100,623	2.9%	3,228	-4%
Irvine Ranch Water District	17,173	20,946	0.4%	20,125	yes	0.5%	1,011	21,135	0.6%	3,390	1%
La Grande Water District	17,173	20,946	0.4%	20,125	no	-	-	20,125	0.6%	3,228	-4%
Metropolitan Water District of Southern California	858,631	1,047,290	21.8%	1,006,226	yes	26.9%	50,544	1,056,770	30.4%	3,390	1%
Reclamation District 108	68,691	83,783	1.7%	80,498	no	-	-	80,498	2.3%	3,228	-4%
Rosedale-Rio Bravo Water Storage District	8,586	10,473	0.2%	10,062	yes	0.3%	505	10,568	0.3%	3,390	1%
San Bernardino Valley Municipal Water District	367,494	448,240	9.3%	430,665	yes	11.5%	21,633	452,298	13.0%	3,390	1%
San Geronio Pass Water Agency	240,417	293,241	6.1%	281,743	yes	7.5%	14,152	295,896	8.5%	3,390	1%
Santa Clara Valley Water District	8,586	10,473	0.2%	10,062	yes	0.3%	505	10,568	0.3%	3,390	1%
Santa Clarita Valley Water Agency	85,863	104,729	2.2%	100,623	yes	2.7%	5,054	105,677	3.0%	3,390	1%
Westside Water District	92,303	112,584	2.3%	108,169	no	-	-	108,169	3.1%	3,228	-4%
Wheeler Ridge-Maricopa Water Storage District	52,377	63,885	1.3%	61,380	yes	1.6%	3,083	64,463	1.9%	3,390	1%
Zone 7 Water Agency	171,726	209,458	4.4%	201,245	yes	5.4%	10,109	211,354	6.1%	3,390	1%
Total	2,859,294	3,487,537	72.7%	3,350,793		67.9%	127,826	3,478,619	100.0%		
State	717,703	875,396	18.2%	841,073	yes	21.0%	39,566	880,639		3,609	1%
Federal	357,203	435,688	9.1%	418,605	yes	11.0%	20,759	439,364		3,432	1%
Total	1,074,906	1,311,084	27.3%	1,259,677		32.1%	60,325	1,320,003			
Grand Total	3,934,200	4,798,621	100.0%	4,610,470		100.0%	188,152	4,798,621			

notes

1. PWA is Participating Water Agencies

Analysis as of 05-10-2023

Table 3

Plan of Finance -- May 2023 Update

Annual Fixed Project Costs (Post Construction) (\$1000s)

Entity	Case 1: 10/28/2021 POF- Historical Average Rates (no WIFIA)	POF Update May- 2023;	POF Update May-2023;	POF Update May-2023 -- Capitalized Interest
	(2021\$)	(2021\$)	(future\$)	(future\$)
Antelope Valley-East Kern Water Agency	417	383	562	703
City of American Canyon	3,333	3,060	4,494	5,628
Coachella Valley Water District	8,333	7,650	11,235	14,070
Colusa County	7,934	7,284	10,698	13,397
Colusa County Water District	7,344	6,743	9,902	12,400
Cortina Water District	357	328	481	603
Davis Water District	1,587	1,457	2,140	2,679
Desert Water Agency	5,416	4,973	7,303	9,145
Dunnigan Water District	2,358	2,165	3,179	3,981
Glenn-Colusa Irrigation District	3,967	3,642	5,349	6,698
Irvine Ranch Water District	833	765	1,123	1,407
La Grande Water District	793	728	1,070	1,340
Metropolitan Water District of Southern California	41,665	38,252	56,174	70,348
Reclamation District 108	3,174	2,914	4,279	5,359
Rosedale-Rio Bravo Water Storage District	417	383	562	703
San Bernardino Valley Municipal Water District	17,833	16,372	24,043	30,109
San Geronio Pass Water Agency	11,666	10,711	15,729	19,697
Santa Clara Valley Water District	417	383	562	703
Santa Clarita Valley Water Agency	4,166	3,825	5,617	7,035
Westside Water District	4,265	3,915	5,750	7,201
Wheeler Ridge-Maricopa Water Storage District	2,542	2,333	3,427	4,291
Zone 7 Water Agency	8,333	7,650	11,235	14,070
Total	137,150	125,916	184,912	231,567

Notes:

1. POF is Plan of Finance.

2. Principal payments begin in 2033, interest only through 2032. Revenue bonds are repaid over 40 years at an annual interest rate of 5.0% in both the 2021 Finance Plan and the current estimate. WIFIA loans are repaid over 35 years at an interest rate of 3.75% in the current estimate.

Analysis as of 05-10-2023

Table 4

Plan of Finance -- May 2023 Update

Annual Operating Costs (\$1000s)							
Entity	Fixed Costs	Variable Costs	Total	Minimum Variable Costs	Maximum Variable Costs	Minimum Non-Debt Service Cost (Fixed + Variable)	Maximum Non-Debt Service Cost (Fixed + Variable)
	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)
Antelope Valley-East Kern Water Agency	81	12	92	(46)	162	35	243
City of American Canyon	645	93	738	(365)	1,296	280	1,941
Coachella Valley Water District	1,613	231	1,845	(914)	3,239	700	4,852
Colusa County	1,536	231	1,768	(914)	3,239	623	4,775
Colusa County Water District	1,422	214	1,636	(846)	2,998	576	4,420
Cortina Water District	69	10	80	(41)	146	28	215
Davis Water District	307	46	354	(183)	648	125	955
Desert Water Agency	1,049	150	1,199	(594)	2,105	455	3,154
Dunnigan Water District	457	69	525	(272)	963	185	1,419
Glenn-Colusa Irrigation District	768	116	884	(457)	1,619	311	2,388
Irvine Ranch Water District	161	23	184	(91)	324	70	485
La Grande Water District	154	23	177	(91)	324	62	478
Metropolitan Water District of Southern California	8,067	1,157	9,225	(4,568)	16,194	3,499	24,261
Reclamation District 108	615	93	707	(365)	1,296	249	1,910
Rosedale-Rio Bravo Water Storage District	81	12	92	(46)	162	35	243
San Bernardino Valley Municipal Water District	3,453	495	3,948	(1,955)	6,931	1,498	10,384
San Geronio Pass Water Agency	2,259	324	2,583	(1,279)	4,534	980	6,793
Santa Clara Valley Water District	81	12	92	(46)	162	35	243
Santa Clarita Valley Water Agency	807	116	922	(457)	1,619	350	2,426
Westside Water District	826	124	950	(491)	1,741	335	2,567
Wheeler Ridge-Maricopa Water Storage District	492	71	563	(279)	988	213	1,480
Zone 7 Water Agency	1,613	231	1,845	(914)	3,239	700	4,852
Total	26,555	3,854	30,410	(15,212)	53,926	11,344	80,482

Notes:

- Fixed costs allocated by capital cost
 - Variable Costs could be zero (or negative) due to Above Normal/Wet years resulting in full reservoir preceding a Dry/Critically Dry years resulting in releases but no filling.
 - Assumes the State and Federal partners pay annual fixed and variable costs on same basis as participants
- Analysis as of 05-10-2023

Table 5**Plan of Finance -- May 2023 Update****Allocated Debt Service + Annual Operating Cost (Average)
(\$1000s)**

Entity	POF Update May-2023; (future\$)
Antelope Valley-East Kern Water Agency	654
City of American Canyon	5,232
Coachella Valley Water District	13,080
Colusa County	12,465
Colusa County Water District	11,538
Cortina Water District	561
Davis Water District	2,493
Desert Water Agency	8,502
Dunnigan Water District	3,705
Glenn-Colusa Irrigation District	6,233
Irvine Ranch Water District	1,308
La Grande Water District	1,247
Metropolitan Water District of Southern California	65,399
Reclamation District 108	4,986
Rosedale-Rio Bravo Water Storage District	654
San Bernardino Valley Municipal Water District	27,991
San Geronio Pass Water Agency	18,312
Santa Clara Valley Water District	654
Santa Clarita Valley Water Agency	6,540
Westside Water District	6,700
Wheeler Ridge-Maricopa Water Storage District	3,989
Zone 7 Water Agency	13,080
Total	215,321

Note:

1. This table shows Table 3 POF Update in future\$, with Table 4 costs added. All notes from Tables 3 and 4 still apply.

Analysis as of 05-10-2023

Table 6A

Plan of Finance -- May 2023 Update

Participant Costs if Financing (\$1000s)																	
Entity	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2040	2050	2060	2070
	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)
Antelope Valley-East Kern Water Agency	47	123	77	159	246	316	370	471	532	635	637	635	642	638	717	704	224
City of American Canyon	375	986	613	1,271	1,968	2,525	2,957	3,767	4,252	5,080	5,098	5,081	5,138	5,108	5,735	5,630	1,790
Coachella Valley Water District	937	2,464	1,531	3,177	4,920	6,312	7,392	9,417	10,631	12,701	12,746	12,703	12,845	12,770	14,339	14,075	4,475
Colusa County	937	2,423	1,458	3,025	4,685	6,010	7,038	8,966	10,122	12,094	12,136	12,095	12,231	12,159	13,653	13,402	4,261
Colusa County Water District	867	2,243	1,350	2,800	4,336	5,563	6,515	8,299	9,369	11,194	11,233	11,195	11,321	11,254	12,637	12,405	3,944
Cortina Water District	42	109	66	136	211	270	317	403	456	544	546	544	550	547	614	603	192
Davis Water District	187	485	292	605	937	1,202	1,408	1,793	2,024	2,419	2,427	2,419	2,446	2,432	2,731	2,680	852
Desert Water Agency	609	1,602	995	2,065	3,198	4,103	4,805	6,121	6,910	8,256	8,285	8,257	8,349	8,300	9,320	9,149	2,909
Dunnigan Water District	278	720	433	899	1,392	1,786	2,092	2,665	3,008	3,594	3,607	3,595	3,635	3,614	4,058	3,983	1,266
Glenn-Colusa Irrigation District	468	1,212	729	1,512	2,342	3,005	3,519	4,483	5,061	6,047	6,068	6,048	6,115	6,080	6,826	6,701	2,130
Irvine Ranch Water District	94	246	153	318	492	631	739	942	1,063	1,270	1,275	1,270	1,285	1,277	1,434	1,408	447
La Grande Water District	94	242	146	302	468	601	704	897	1,012	1,209	1,214	1,210	1,223	1,216	1,365	1,340	426
Metropolitan Water District of Southern California	4,685	12,321	7,657	15,883	24,601	31,561	36,960	47,084	53,154	63,506	63,729	63,514	64,225	63,849	71,693	70,377	22,373
Reclamation District 108	375	969	583	1,210	1,874	2,404	2,815	3,587	4,049	4,837	4,854	4,838	4,892	4,864	5,461	5,361	1,704
Rosedale-Rio Bravo Water Storage District	47	123	77	159	246	316	370	471	532	635	637	635	642	638	717	704	224
San Bernardino Valley Municipal Water District	2,005	5,274	3,277	6,798	10,529	13,508	15,819	20,152	22,750	27,181	27,276	27,184	27,488	27,327	30,685	30,121	9,576
San Geronio Pass Water Agency	1,312	3,450	2,144	4,447	6,888	8,837	10,349	13,184	14,883	17,782	17,844	17,784	17,983	17,878	20,074	19,705	6,265
Santa Clara Valley Water District	47	123	77	159	246	316	370	471	532	635	637	635	642	638	717	704	224
Santa Clarita Valley Water Agency	468	1,232	766	1,588	2,460	3,156	3,696	4,708	5,315	6,351	6,373	6,351	6,423	6,385	7,169	7,038	2,237
Westside Water District	504	1,303	784	1,626	2,518	3,231	3,783	4,819	5,441	6,500	6,523	6,501	6,574	6,535	7,338	7,204	2,290
Wheeler Ridge-Maricopa Water Storage District	286	752	467	969	1,501	1,925	2,255	2,872	3,242	3,874	3,887	3,874	3,918	3,895	4,373	4,293	1,365
Zone 7 Water Agency	937	2,464	1,531	3,177	4,920	6,312	7,392	9,417	10,631	12,701	12,746	12,703	12,845	12,770	14,339	14,075	4,475
Total	15,600	40,867	25,205	52,284	80,982	103,890	121,663	154,989	174,969	209,046	209,780	209,071	211,413	210,175	235,995	231,662	73,647

Notes:

1. POF Update displayed
2. 2023 is a cash call, 2024 is a cash call plus advance payment to satisfy reserves

Analysis as of 05-10-2023

Table 6B

Plan of Finance -- May 2023 Update

Participant Costs if 'Pay-Go' (\$1000s)

Entity	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2040	2050	2060	2070
	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)
Antelope Valley-East Kern Water Agency	47	80	602	1,543	2,405	2,508	2,126	975	548	127	92	90	86	97	123	157	200
City of American Canyon	375	644	4,812	12,340	19,243	20,067	17,011	7,799	4,385	1,015	735	717	685	773	985	1,255	1,599
Coachella Valley Water District	937	1,610	12,030	30,851	48,107	50,166	42,526	19,497	10,963	2,539	1,837	1,792	1,713	1,933	2,462	3,137	3,997
Colusa County	937	1,610	11,455	29,375	45,806	47,767	40,492	18,565	10,438	2,417	1,749	1,707	1,631	1,841	2,345	2,987	3,806
Colusa County Water District	867	1,490	10,603	27,190	42,398	44,213	37,480	17,184	9,662	2,237	1,619	1,580	1,510	1,704	2,170	2,765	3,523
Cortina Water District	42	72	515	1,322	2,061	2,150	1,822	835	470	109	79	77	73	83	106	134	171
Davis Water District	187	322	2,291	5,875	9,161	9,553	8,098	3,713	2,088	483	350	341	326	368	469	597	761
Desert Water Agency	609	1,046	7,820	20,053	31,269	32,608	27,642	12,673	7,126	1,650	1,194	1,165	1,113	1,257	1,600	2,039	2,598
Dunnigan Water District	278	478	3,404	8,730	13,613	14,196	12,034	5,517	3,102	718	520	507	485	547	697	888	1,131
Glenn-Colusa Irrigation District	468	805	5,728	14,688	22,903	23,883	20,246	9,282	5,219	1,209	875	853	816	920	1,172	1,493	1,903
Irvine Ranch Water District	94	161	1,203	3,085	4,811	5,017	4,253	1,950	1,096	254	184	179	171	193	246	314	400
La Grande Water District	94	161	1,146	2,938	4,581	4,777	4,049	1,856	1,044	242	175	171	163	184	234	299	381
Metropolitan Water District of Southern California	4,685	8,048	60,152	154,255	240,534	250,832	212,632	97,487	54,814	12,693	9,185	8,962	8,565	9,666	12,311	15,685	19,987
Reclamation District 108	375	644	4,582	11,750	18,322	19,107	16,197	7,426	4,175	967	700	683	652	736	938	1,195	1,522
Rosedale-Rio Bravo Water Storage District	47	80	602	1,543	2,405	2,508	2,126	975	548	127	92	90	86	97	123	157	200
San Bernardino Valley Municipal Water District	2,005	3,445	25,745	66,021	102,948	107,356	91,006	41,724	23,460	5,433	3,931	3,836	3,666	4,137	5,269	6,713	8,554
San Geronio Pass Water Agency	1,312	2,253	16,843	43,191	67,349	70,233	59,537	27,296	15,348	3,554	2,572	2,509	2,398	2,706	3,447	4,392	5,596
Santa Clara Valley Water District	47	80	602	1,543	2,405	2,508	2,126	975	548	127	92	90	86	97	123	157	200
Santa Clarita Valley Water Agency	468	805	6,015	15,425	24,053	25,083	21,263	9,749	5,481	1,269	919	896	856	967	1,231	1,568	1,999
Westside Water District	504	865	6,157	15,789	24,621	25,675	21,765	9,979	5,611	1,299	940	917	877	989	1,260	1,605	2,046
Wheeler Ridge-Maricopa Water Storage District	286	491	3,669	9,410	14,673	15,301	12,971	5,947	3,344	774	560	547	522	590	751	957	1,219
Zone 7 Water Agency	937	1,610	12,030	30,851	48,107	50,166	42,526	19,497	10,963	2,539	1,837	1,792	1,713	1,933	2,462	3,137	3,997
Total	15,600	26,800	198,006	507,768	791,776	825,675	699,931	320,901	180,434	41,784	30,236	29,502	28,194	31,817	40,526	51,631	65,792

Note:

1. POF Update is displayed
2. 2022-2024 are cash calls

Analysis as of 05-10-2023

Table 6C

Plan of Finance -- May 2023 Update

Entity	Participant Costs if Financing (\$1000s): Capitalized Interest Case (until 2033)																
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2040	2050	2060	2070
	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)	(future\$)
Antelope Valley-East Kern Water Agency	47	80	-	-	-	-	-	52	110	573	812	778	783	779	857	845	260
City of American Canyon	375	644	-	-	-	-	-	420	877	4,581	6,495	6,228	6,260	6,229	6,857	6,761	2,082
Coachella Valley Water District	937	1,610	-	-	-	-	-	1,049	2,191	11,451	16,237	15,570	15,650	15,573	17,141	16,903	5,204
Colusa County	937	1,610	-	-	-	-	-	999	2,087	10,904	15,460	14,825	14,902	14,828	16,322	16,094	4,955
Colusa County Water District	867	1,490	-	-	-	-	-	925	1,931	10,093	14,310	13,722	13,793	13,725	15,107	14,897	4,587
Cortina Water District	42	72	-	-	-	-	-	45	94	491	696	667	671	667	734	724	223
Davis Water District	187	322	-	-	-	-	-	200	417	2,181	3,092	2,965	2,980	2,966	3,264	3,219	991
Desert Water Agency	609	1,046	-	-	-	-	-	682	1,424	7,443	10,554	10,120	10,173	10,122	11,142	10,987	3,383
Dunnigan Water District	278	478	-	-	-	-	-	297	620	3,241	4,595	4,406	4,429	4,407	4,851	4,783	1,473
Glenn-Colusa Irrigation District	468	805	-	-	-	-	-	499	1,043	5,452	7,730	7,412	7,451	7,414	8,161	8,047	2,478
Irvine Ranch Water District	94	161	-	-	-	-	-	105	219	1,145	1,624	1,557	1,565	1,557	1,714	1,690	520
La Grande Water District	94	161	-	-	-	-	-	100	209	1,090	1,546	1,482	1,490	1,483	1,632	1,609	496
Metropolitan Water District of Southern California	4,685	8,048	-	-	-	-	-	5,246	10,957	57,257	81,183	77,848	78,252	77,863	85,707	84,513	26,021
Reclamation District 108	375	644	-	-	-	-	-	400	835	4,362	6,184	5,930	5,961	5,931	6,529	6,438	1,982
Rosedale-Rio Bravo Water Storage District	47	80	-	-	-	-	-	52	110	573	812	778	783	779	857	845	260
San Bernardino Valley Municipal Water District	2,005	3,445	-	-	-	-	-	2,245	4,690	24,506	34,746	33,319	33,492	33,325	36,683	36,171	11,137
San Geronio Pass Water Agency	1,312	2,253	-	-	-	-	-	1,469	3,068	16,032	22,731	21,797	21,911	21,802	23,998	23,664	7,286
Santa Clara Valley Water District	47	80	-	-	-	-	-	52	110	573	812	778	783	779	857	845	260
Santa Clarita Valley Water Agency	468	805	-	-	-	-	-	525	1,096	5,726	8,118	7,785	7,825	7,786	8,571	8,451	2,602
Westside Water District	504	865	-	-	-	-	-	537	1,122	5,861	8,310	7,968	8,010	7,970	8,773	8,651	2,663
Wheeler Ridge-Maricopa Water Storage District	286	491	-	-	-	-	-	320	668	3,493	4,952	4,749	4,773	4,750	5,228	5,155	1,587
Zone 7 Water Agency	937	1,610	-	-	-	-	-	1,049	2,191	11,451	16,237	15,570	15,650	15,573	17,141	16,903	5,204
Total	15,600	26,800	-	-	-	-	-	17,268	36,068	188,477	267,233	256,255	257,586	256,306	282,127	278,194	85,655

Note:

1. POF Update is displayed
2. 2022-2024 are cash calls

Analysis as of 05-10-2023