# Los Vaqueros Expansion Project Information


## Summary

The Santa Clara Valley Water District (Valley Water) continues to evaluate participating in the Los Vaqueros Reservoir Expansion Project (LVE Project) led by Contra Costa Water District (CCWD). Valley Water began evaluating the project in 2016 as part of the Water Supply Master Plan 2040 and most recently entered into a 2019 Multi-Party Agreement (MPA) that included a $314,782 cost share to fund LVE Project development through June 30, 2020. To continue project development and evaluation, CCWD has requested an amendment (A2) to extend the MPA through 2021 and includes an additional cost share (Attachment 3). The cost share for Valley Water is expected to be between approximately $800,000 and $1 million and depends on the number of project partners. At the July 2020 Water Storage Exploratory Committee meeting, the committee recommended that A2 to the 2019 MPA be presented to the full Board for consideration. The LVE Project may provide Valley Water regional storage, new water through CCWD's diversion rights, and increased operational flexibility in the conveyance of imported water. Given the potential operational flexibility that the regional storage and conveyance of the project may provide, Valley Water staff recommends that the Board of Directors (Board) continue participating in the project and provide the cost share funding. This document provides information on the water supply benefits of the LVE project, an update on LVE Project governance, and information on the 2019 MPA amendments and cost share.


## Background

The LVE Project would expand Los Vaqueros Reservoir (Los Vaqueros) storage from 160 thousand acre-feet (TAF) to 275 TAF and build the 300 cubic feet per second (cfs) Transfer-Bethany Pipeline to connect Los Vaqueros to the State Water Project's (SWP) South Bay Aqueduct (SBA) (Attachment 4). Additional LVE Project elements include upgrading pump facilities, improving conveyance, and improving ecological conditions in the San Francisco Bay Delta. Valley Water began participating in the LVE Project in 2016 to support CCWD's Proposition 1 Water Storage Investment Program (WSIP) funding application. The WSIP funding program is overseen by the California Water Commission (CWC). The CWC approved a maximum grant award of $459 million for LVE Project development and construction, including $22.95 million in early funding.

On December 20, 2019, $2.155 million of federal funding for the LVE Project was approved from the Water Infrastructure Improvements for the Nation Act (WIIN Act) through the federal government's Fiscal Year (FY) 2020. WIIN Act funding supports U.S. Bureau of Reclamation's (USBR) efforts to consult with federal permitting agencies, develop inter-agency agreements, and to advance engineering design and analysis of the LVE Project. CCWD and the Local Agency Partners (LAPs) are continuing efforts to procure WIIN Act funding beyond FY 2020, ultimately seeking $223 million in total.

To conduct preliminary evaluations of potential LVE Project benefits and to participate in project development, the Valley Water Board of Directors (Board) on March 26, 2019 authorized joining the LVE Project 2019 MPA, which included cost share funds not to exceed $355,000. The LVE Project 2019 MPA was fully executed on April 30, 2019 and committed Valley Water to $314,782 of an equally split cost share portion among the LAPs. As of June 2020, Valley Water has spent approximately $618,000 towards LVE Project cost sharing for the WSIP application and project development, including in-kind labor costs.

Several other 'Local Agency Partners' (LAPs), mostly other Bay Area water agencies and suppliers, are also evaluating LVE Project participation (Attachment 2). CCWD estimates the total LVE Project development and construction 40-year life cycle costs to be $868 million in constant 2018 dollars for proposed storage ($513 million) and conveyance ($355 million) components. Approximately 45% of LVE Project costs would be paid by the LAPs while the remaining 55% is from the WSIP and WIIN grant funding.

Since receiving WSIP, WIIN, and cost share funding, CCWD and LAPs have worked with consultants to develop preliminary engineering plans and timelines, negotiate agreements, evaluate project benefits and costs, and advance project permitting. On February 28, 2020, the Final Supplement to the EIR/EIS was published in the Federal Register. On August 14, 2020, CCWD submitted the Federal Feasibility Report to Congress. Neither the Federal Feasibility Report nor the EIR/EIS received legal challenges or significant public opposition. CCWD's Board adopted a resolution certifying the Final Supplement to the Final EIS/EIR and approved the LVE Project. The LVE Project is now proceeding with permitting and design.

LVE Project Benefits to Valley Water

Valley Water has continued to work with CCWD and the other LAPs to evaluate LVE Project long-term participation levels and how it translates to water storage and/or supply benefits. Many of these potential benefits depend on if and how much Valley Water participates in project storage or Transfer-Bethany Pipeline conveyance components. Valley Water is continuing to work with CCWD and the LAPs to better define and analyze LVE Project water supply and operational benefits, costs, and risks. In addition, Valley Water is also working with regional partners to evaluate how the LVE Project storage and conveyance components could support other regional projects, such as the Bay Area Regional Desalination Project and the Refinery Recycled Water Project. Below is a preliminary evaluation of how LVE Project storage and conveyance may provide operational flexibility, access to new water supplies, and/or improve Valley Water's ability to use its SWP and CVP contract supplies.

*Storage Component*

While the expanded reservoir has a 275 TAF storage capacity, CCWD plans to retain their 160 TAF of storage capacity in Los Vaqueros, leaving 115 TAF for the LAPs. CCWD is allowing LAPs to use either “dedicated storage” or “pooled” storage. Dedicated storage is a defined amount of storage available to be used at any time by the LAP who owns that dedicated storage. Pooled storage can be used by any LAP on a first come-first served basis. Those LAPs with dedicated storage will pay for the LVE Project proportional to the volume of storage purchased, independent of the volume of water in their dedicated storage. The pooled participants are expected to pay based on a ‘take-or-pay provision’ (i.e., pay the storage allocation rate for volume used or pay a lower fee for not using storage but continuing to participate in the LVE Project), which means costs would vary annually based on use. Priority for use of conveyance and diversion facilities by dedicated vs. pooled project participants still needs to be negotiated.

Latest CCWD LVE analysis has San Francisco Public Utilities Commission (SFPUC), Bay Area Water Supply & Conservation Agency (BAWSCA), San Luis Delta & Mendota Authority, and EBMUD requesting a total of 90 TAF of dedicated storage. The remaining 25 TAF is the available pooled storage.

Valley Water is evaluating the water supply benefits for using dedicated versus pooled storage. In collaboration with CCWD, Valley Water is conducting preliminary analyses for using LVE Project storage to diversify our Semitropic Bank storage or as a storage project that is in addition to our Water Supply Master Plan 2040 (Master Plan) proposed investments (improving/retrofitting existing infrastructure, Delta Conveyance Project, Pacheco Reservoir Expansion, water reuse projects, Transfer-Bethany Pipeline, and demand management and stormwater capture projects). Preliminary analysis of LVE storage with the Master Plan proposed investments, prior to the development of the new demand model, indicates that Valley Water rarely fills available storage space (Table 1). This is because Valley Water already has significant investments in storage (i.e., local groundwater and surface water storage and the Semitropic Water Bank storage), carryover storage in San Luis Reservoir, and the Master Plan recommended Pacheco Reservoir storage. However, the strategic location of the LVE Project may provide Valley Water an operational and emergency benefit if the storage is used to diversify Valley Water’s current Semitropic Water Bank investment; Valley Water staff are currently evaluating this option in light of the revised demands.

Table 1. Storage of Valley Water Supplies in LVE[1]

| *Preliminary Analysis* | *Dedicated Storage (30 TAF)* | *Pooled Storage (up to 20 TAF)* |
|---|---|---|
| PV Life Cycle Cost to Valley Water (2019$)[2] | $200 Million | $50 Million |
| Average Storage Volume[3] (TAF/yr) | 13 | 3 |
| PV life cycle unit cost ($/AF)[2,4] | $1,000 | $1,300 |

[1] Costs and impacts shown only for LVE storage components, based on values from Valley Water's Water Evaluation and Planning (WEAP) model and CCWD's CalSim II model and Proforma 3.0 financial model.
[2] Present Value (PV) life cycle cost calculated using Valley Water's 100-year life cycle cost methodology. LAPs have negotiated lower usage fees and CCWD is updating their financial model; Valley Water expects this to lower storage and conveyance costs.
[3] Average volume held in storage by Valley Water over 83-year CalSim II model period.
[4]Unit cost is calculated using the 100-year life cycle cost and the life cycle usable project supplies

*Conveyance Components*

There are multiple conveyance components as part of the LVE Project to facilitate water deliveries to and from Los Vaqueros, such as the new Delta-Transfer Pipeline and Transfer Facility that will connect to Transfer-Bethany Pipeline (Attachment 4). Deliveries from the LVE Project will largely depend on conditions in the Delta, CCWD operational needs, and LAP demands.

The Transfer-Bethany Pipeline is the primary conveyance component that could potentially provide Valley Water additional operational flexibility and access to new water during wetter years. To use the Transfer-Bethany Pipeline, the LAPs are expected to pay facilities construction and usage costs corresponding with total deliveries. Additional Transfer-Bethany Pipeline details are provided in a handout in Attachment 5. Preliminary model analysis of current LAP participation levels and planned infrastructure capacities suggest that Valley Water would use up to approximately 2% of the pipeline capacity. More analysis is underway to determine if and how Valley Water could benefit from increased Transfer-Bethany Pipeline use, such as to convey other imported water supplies (e.g., supplies from the Refinery Recycled Water Exchange Project). This information will inform the JPA service agreements and Valley Water staff will provide this analysis before JPA service agreements are presented to the Board for consideration.

*Water Supply Benefit from Conveyance Components*

Transfer-Bethany could provide Valley Water access to surplus Delta supplies in wetter years. While it may be possible to negotiate with the LVE partners to participate in Transfer-Bethany without the storage components of the project, the framework currently under discussion does assume a minimal buy-in to storage. Operational constraints related to storing additional wet year supplies will continuously be evaluated throughout the project. Table 2 summarizes estimated cost and yield for the Transfer-

Bethany Pipeline and associated conveyance components. Valley Water is working with CCWD to better evaluate the percent utilization of the available yield.

Table 2. New LVE Project Water Available to Valley Water through Transfer-Bethany Pipeline

| | *Valley Water Participation* |
|---|---|
| PV Life Cycle Cost to Valley Water (2018$)[1] | $50-250 Million |
| Years with Surplus Deliveries (out of 83 years[2]) | 14-62 |
| Average Surplus Yield for Years with Surplus Delivery[2] (TAF/year) | 4 – 8 |
| Average Surplus Yield Over 83-Year Model Period[2] (TAF/year) | 1-6 |
| Unit Cost for Surplus Conveyance[1] ($/AF) | $700 |

[1] Cost is for conveyance of Delta surplus supplies and does not include storage costs. The cost range represents the high and low end of Delta surplus available to Valley Water. The range of available Delta surplus is based on different future Valley Water's investment portfolios, where the different future projects impact Valley Water's system's storage and conveyance capacities. Cost is calculated using Valley Water's 100-year life cycle cost methodology. Cost inputs to develop the 100-year life cycle cost estimate are from CCWD's Proforma Model 3.0. In comparison, CCWD reports their costs as a 40-year life cycle estimate.

[2] Surplus deliveries are modeled in CalSim II, which has an 83-year model period. Deliveries and yield represent the volume of water available to be conveyed to Valley Water and is dependent on preliminary Valley Water capacity to accept the supplies and CCWD's analysis of available surplus and conveyance capacity. Further analysis is necessary to refine what proportion of the available supplies reported in Table 2 are able to be put to beneficial use within Valley Water's service area.

Valley Water is also evaluating whether Transfer-Bethany Pipeline could provide useful alternative conveyance pathways for receiving SWP and CVP supplies. In particular, Valley Water staff are determining if Transfer-Bethany Pipeline and associated conveyance facilities would not be subject to regulatory restrictions that impact certain SWP and CVP facilities.

SBA Capacity Analysis

The LVE Project operations will need to coordinate with SWP and CVP operations and facilities. Valley Water, Alameda County Water District, and Zone 7 Water Agency are SWP contractors that typically rely on Department of Water Resources (DWR)-owned SBA facilities to receive their imported SWP water supplies (collectively, the SBA Contractors). The SBA Contractors plan to receive their LVE Project water through the SBA. In addition, SFPUC and BAWSCA have expressed interest in using the SBA to wheel their LVE Project water either through Valley Water facilities to SFPUC or to SFPUC's Sunol Water Treatment Plant.

Portions of the SBA are becoming unreliable. SBA condition may influence LAP participation in the LVE Project but addressing SBA condition is beyond the direct scope of the LVE Project. The SBA Contractors have been coordinating with DWR to better understand SBA condition and future reliability. DWR has provided details of their program of SBA reliability improvements to the SBA Contractors. This program includes near-term improvements that may be completed later this year or early next year and additional studies to identify longer-term improvements for future SBA reliability, which are expected to be completed in late 2021 or early 2022.

In addition to looking into SBA condition, the SBA Contractors are also evaluating SBA capacity availability for conveyance of LVE Project water. The SBA Contractors procured consultant services to analyze available capacity for regional use (e.g., SFPUC or BAWSCA), without impacting reliability of deliveries for the SBA Contractors. The consultant analysis is complete, and the results shared with SFPUC and BAWSCA to inform their analysis of the LVE Project.

The SBA contactors will use this data to understand how non-SBA contractor LAPs may want to use the SBA to retrieve project water. One potential conveyance pathway for SFPUC and BAWSCA is through the SBA and Valley Water's treated water facilities. If SFPUC and BAWSCA remain interested in this pathway based on the SBA capacity analysis, Valley Water will need to evaluate potential capacity limitations within Valley Water's treatment and conveyance system.

<u>LVE Project Governance and Financing</u>

The LAPs are in the process of forming a JPA to lead LVE Project planning, construction, and operations. The development of the JPA has been led by independent counsel (Lagerlof, LLP) working with a Legal Working Group made up of legal staff from CCWD and the LAPs. The currently proposed JPA structure is provided in Attachment 6. Valley Water has been active in the LAP workshops to ensure Valley Water's interests are addressed.

Once the JPA is in place, responsibilities such as project financing and executing LVE Project agreements will transition from CCWD to the new JPA. CCWD's project schedule aims to have the JPA Agreement completed for consideration by the LAPs by winter 2020/2021. Subsequent service agreements that will transition project financing responsibilities to the JPA are expected to be completed by the end of 2021.

*MPA Amendments and Cost-Share*

The current MPA executed on April 30, 2019 between CCWD and the LAPs included a cost-share commitment to expire on June 30, 2020. Valley Water signed the MPA Amendment 1 (A1) in June 2020 to extend the existing agreement through December 31, 2020. A1 was only a time extension and did not require any additional cost share.

To continue project development through to when the JPA is formed, CCWD is requesting partners sign MPA A2 (Attachment 3). A2 extends the MPA through December 31, 2021, includes a revised scope of work, and requires an additional cost share to cover project costs through December 2021. The total cost for A2 is approximately $6.1 million and the cost share to Valley Water is expected to be approximately between $800,000 to $1 million, depending on the number of LAPs that continue participation and the allocation approach. The allocation proposal is to share the total cost equally among the LAPs, same as the allocation approach in the MPA. The additional cost share in A2 will fund: JPA formation, preparation of service agreements, developing permits and agreements necessary to secure full WSIP funding, operational or conveyance issues identified by LAPs (e.g., SBA conveyance), 90% level of LVE Project design, and other critical path items as required. Given that A2 is requesting a significant financial commitment, CCWD proposes to split the cost share into four payments: upon amendment execution, November 2020, March 2021, and July 2021. If approved in November, the first two payments would be due. There are provisions that allow LAPs to withdraw at any time, and if a decision to withdraw is made prior to any one of the payment due dates, those future payments would not need to be made.

Next Steps

The following are the key long-term decision points and milestones for the LVE Project:

- Fall 2020: Board committee meeting to discuss and recommend JPA Agreement for the Board's consideration.
- Early 2021: Board meeting to consider Valley Water participation in JPA.
- Late-2021: JPA executes Service Agreements (storage and/or conveyance services) with CCWD and the LAPs and the JPA executes Facilities Usage Agreements with CCWD and EBMUD for existing facilities (i.e., establishes user fees).
- 2023-2025: Construction of Transfer-Bethany Pipeline.
- 2027-2029: Construction of Los Vaqueros dam raise, upgraded pumping facilities, and other conveyance improvements

THIS PAGE INTENTIONALLY LEFT BLANK