ALAMEDA COUNTY WATER DISTRICT

43885 So. Grimmer Boulevard
Fremont, CA  94538

WATER RESOURCES AND CONSERVATION COMMITTEE

AGENDA

Wednesday, July 28, 2021
4:15 p.m.

ACCESSIBLE PUBLIC MEETINGS: Upon request, ACWD will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please send a written request at least 72 hours before the meeting to the District Secretary, ACWD, 43885 S. Grimmer Blvd., Fremont, CA 94538, or to gina.markou@acwd.com stating your name, mailing address, phone number, and brief description of the requested materials and preferred alternative format or auxiliary aid or service.


MEMBERS OF THE PUBLIC MAY NOT ATTEND THIS MEETING IN PERSON. DUE TO THE COVID-19 PANDEMIC AND IN ACCORDANCE WITH GOVERNOR NEWSOM’S EXECUTIVE ORDER N-25-20 WHICH SUSPENDS PORTIONS OF THE BROWN ACT, THIS MEETING WILL BE CONDUCTED BY WEBINAR/TELECONFERENCE ONLY.

1. Drought Update
   Presenter: Leonard Ash

2. Update on Los Vaqueros Expansion Partnership Opportunity and Review of Past Lake Del Valle Reoperation Analyses
   Presenter: Devon Becker

3. Water Supply Assessment for the Station District Specific Plan
   Presenter: Devon Becker

4. Public Comments
Water Resources and Conservation Committee
July 28, 2021
Agenda Item 1

Drought Update

Photo Credit: DWR, 2021
Recent Updates

• Weather forecast modeling indicates increased temperatures through the summer and into 2022

• Governor’s July 8 actions:
  o called for 15% voluntary water conservation
  o Drought Emergency Proclamation adds nine more counties to drought emergency

• Dept. of Water Resource (DWR) coordinating with U.S. Bureau of Reclamation to optimize Projects’ operations
• DWR projected to maintain 2021 deliveries as requested
• District updating contingency plans for 2022
• SFPUC waiving minimum purchase requirement
• DWR’s Delta Field Division is keeping Lake Del Valle as full as possible
• Continued close coordination with DWR, Semitropic, San Francisco, and other agencies
• Continued coordination with Public Affairs staff
We continue to collaborate with the Public Affairs team to provide content, information and direction for the water conservation campaign “One Saves Water.” Campaign outreach is increasing with implementation of more marketing initiatives that also emphasize the State’s Executive Order for voluntary conservation.

**Printed Collateral**
- Fact Sheet for Businesses - indoor/outdoor saving tips to hotels and restaurants, program and rebate info
- Yard Signage - messaging to encourage water conservation
- Bill Message
- Seniors & Underrepresented Group Outreach

**Digital**
- Engaged Customer Outreach: Email sent to 5,907 recipients
- Media: Earned and Paid
- Social Media: Facebook, Twitter & Instagram
  - Nextdoor/5,000+ impressions
- Drought & Water Conservation Resource Center Webpage/5500+ views

**Next Steps**
- Aqueduct newsletter
- Bill inserts
- Target Outreach: HOA’s, Multi-family Residential, Businesses
- Drought Townhall
- Explore creative outreach – possible events
Upcoming:

- Program renewal with expanded leak detection services for the income-qualified Water Savings Assistance Partnership Program (WSAPP)
  - Leak services include hose bib, sprinkler, faucet, and flapper repair or replacement
  - $200,000 for 300 homes served
2021 Demand Tracking

Monthly Demands

- 2013 Demand (monthly avg.)
- 2020 Actual (monthly avg.)
- 2015 Actual (monthly avg.)
- July 2021 Projected
- 2021 Year-to-date

Projected as of July 21, 2021

As of July 1, 2021

Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec

Daily Demand (mgd)

20, 25, 30, 35, 40, 45, 50, 55, 60, 65

Water Resources and Conservation Committee, July 28, 2021
Agenda Item 1, Slide 6

www.acwd.org
Analysis of 2021 Demands

- Developed a linear mixed-effects model to analyze water demands.
- At present, no changes in demand that cannot be attributed to weather and COVID-19.
Update on Los Vaqueros Partnership Opportunity and Review of Lake Del Valle Analyses

Photo credit: Marco Siragusa

Water Resources & Conservation Board Committee Meeting
July 28, 2021
Purpose:
• Review current analyses of Los Vaqueros Reservoir Expansion (LVE) to support a decision on whether to join a Joint Powers Authority (JPA)

Outline:
• LVE Overview
• Review Finance and Water Resources analyses
• Revisit past Lake Del Valle (LDV) studies in the context of a project comparison for the LVE consideration
Los Vaqueros Reservoir Overview

- Owned and operated by Contra Costa Water District (CCWD)
- “Off-stream” reservoir, adjacent to the Delta
- 160,000 acre-feet (AF) of existing storage
- Phase 2 expansion to 275,000 AF storage proposed
  - Multiple partners & benefits
  - Uses existing, shared & new facilities
  - California Water Commission (Prop 1) Funding Awarded in 2018, including Early Funding
  - Estimated total project cost of $895M*

*Estimate in 2018 dollars; does not include outside funding
Source: February 2021 Project Fact Sheet, available www.ccwater.com/lvstudies
What are ACWD’s interests in Los Vaqueros?

- **Location**
  - Adjacent to SWP
  - South of Delta yet “Upstream” of ACWD
- Provides emergency/resiliency for Delta outage
- Potential to capture Delta surpluses
- Could provide more operational flexibility
- Facilitate easy transfers to and from any and all LVE partners and sources of water
Preliminary Costs & Benefits Analysis

- Water Resources and Finance staff have analyzed currently available data for cost and operations developed by CCWD together with the Local Agency Partners.

- All content in this section of the presentation reflects critical inputs that are subject to change.

- At this stage, an analysis constitutes little more than a “gut check” - sufficient to support a decision on whether to continue LVE participation.
Financial Analysis

• ACWD's LVE costs are comprised of:
  – Share of fixed costs for new storage and conveyance facilities
  – Operating costs to convey water
  – Usage fees to compensate EBMUD and CCWD for use of their existing facilities
  – JPA administrative costs
  – Amortization of pre-2030 costs

• Agency-specific costs are currently estimated by Clean Energy Capital (CEC), a consultant working on the project

• Where appropriate, staff has adjusted CEC estimates
• Current financial estimates are subject to uncertainty:
  – Preliminary estimates for cost to construct new facilities – detailed engineer's estimate to be developed prior to firm project commitment
  – Cost allocation for new facilities still to-be-developed (will be finalized by the JPA)
  – Methodology for usage fees not yet finalized
  – Potential for ACWD to change its participation
• Unclear whether these factors would lead to higher or lower costs for ACWD
• Not all relevant financial decisions and information will be available prior to JPA formation
Water Resources Analysis
Overview

• Developed two computer models to simulate:
  1. “Future without LVE”
  2. “Future with LVE”

• Compared reliability performance, cost, and other operational elements of the two scenarios
Water Resources Analysis
“Future without LVE” Model

An updated version of the UWMP buildout model for 2045. Reflects:

• Lower demand associated with reduced buildout numbers from the Final Plan Bay Area 2050 (~1.5 mgd lower than UWMP)

• Refinement and reoperation of ACWD’s future supplies to best meet reliability policy criterion.
Water Resources Analysis
“Future with LVE” Model

Conceptualized future using our existing supplies and facilities plus LVE

- LVE capture of surplus SWP supply (*provided by CCWD and using CALSIM*)
- Includes Mission San Jose Treatment Plant at 8 mgd
- Includes draft operating rules to maximize ‘new supply’ while also improve local storage for dry years
- No new or unique partnerships are modeled
### Narrative Description of Future Operations

<table>
<thead>
<tr>
<th></th>
<th>Future without LVE</th>
<th>Future with LVE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Operations</strong></td>
<td>In order to offset lost SWP supply, ACWD must purchase full SFPUC contract in all years as SFPUC is “use it or lose it”. Allows ACWD to keep water in Semitropic for use in droughts. Requires heavy annual use of direct SFPUC supply, creating greater WQ inconsistency between north and south end of system</td>
<td>LVE supply helps mitigate lost SWP supply, however SFPUC purchases will likely still need to be higher than today’s levels. Overall operations look largely like today’s preferred operations, in part with the return of TP1 which avoids distribution system improvements needed to serve upper zones</td>
</tr>
<tr>
<td></td>
<td>Low SWTP production will likely require upper zone storage and boosting enhancements</td>
<td>LVE local storage provides improved south of Delta storage - or “insurance” against Delta failure</td>
</tr>
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</table>
### Narrative Description of Future Operations

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<tr>
<td><strong>Reliability</strong></td>
<td>Able to meet single critical year shortage criteria of between 10 and 15%</td>
<td>Similar result. Conclusion is sensitive to global modeling assumptions &amp; staff believes individual dry-year reliability performance will be easier to optimize with LVE*</td>
</tr>
<tr>
<td></td>
<td>Increased SFPUC usage does result in larger allocated share during droughts, based on the current formula which favors higher demonstrated use. <em>(This formula is regularly renegotiated however)</em></td>
<td>Addition of Delta based supply from LVE provides for healthier Semitropic storage. <em>(Note: acquiring transfers contracts could similarly provide this benefit)</em></td>
</tr>
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*Current year is a good example; if LVE were online, Staff would have begun delivering available Semitropic returns to LVE in December of 2020*
Semitropic Storage Comparison

ST Storage (AF)

- Future without LVE_07.2021
- Future with LVE_07.2021

140,000
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
# Narrative Description of Future Operations

<table>
<thead>
<tr>
<th>Annual Cost (in $2020)</th>
<th>Future without LVE</th>
<th>Future with LVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Operating</td>
<td>$51.4M</td>
<td>$46.1M</td>
</tr>
<tr>
<td>LVE partnership cost:</td>
<td>$0M</td>
<td>$3.3M</td>
</tr>
<tr>
<td>TP1*</td>
<td>$ 0 M</td>
<td>$2.3 M</td>
</tr>
<tr>
<td>Other Enhancements**</td>
<td>$2.9M - $5.7</td>
<td>$0 M</td>
</tr>
<tr>
<td>Total</td>
<td>$54.3 M – $57.1 M</td>
<td>$51.7 M</td>
</tr>
</tbody>
</table>

* Amortization of $40M (CIP)

** Amortization of $50M - $100M for boosting, storage and distribution system enhancements *(rough estimate for purposes of this analysis)*
### Narrative Description of Future Operations

<table>
<thead>
<tr>
<th>Other Operational Elements</th>
<th>Future without LVE</th>
<th>Future with LVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heavy use of direct SFPUC creates greater distribution system WQ inconsistency between North and South of System (similar to 1980s)</td>
<td>By providing a somewhat ‘in-kind’ replacement of lost SWP supply, this scenarios makes better use of existing assets including Semitropic, TP2, SBA Capacity, current distribution system</td>
</tr>
</tbody>
</table>
SFPUC Usage Comparison

- Used for blending with local GW
- Used to supplement insufficient production or water supply

### Average Annual SFPUC Usage Comparison

- Current Usage with Future Costing: $20.6M/yr
- Future without LVE: $35.8M/yr
- Future with LVE: $29.9M/yr

**AF**

- Blending
- Direct Takeoff

Visit www.acwd.org for more information.
LVE – Conclusions

• Estimated net reduction in future operating costs of $2.6 – 5.4M in (2020$)
• Improves offsite reserves in Semitropic
• Uncosted benefits:
  – Provides “insurance” against a Delta outage*
  – New flexibility to optimize local storage & reliability
  – Opens new partnering opportunities with other water agencies
• Note: None of this applies to a Transfer-Bethany Pipeline only project
• LVE appears to remain a good investment for ACWD; appears to warrant participation in JPA

* Value of insurance can be estimated from ‘cost of failure of supply’ which is not included
Lake Del Valle Analyses

• Per Board request, staff is providing a high-level refresher on prior analyses that reevaluated storage usage in LDV

• LDV analyses included:
  – Expand storage by reallocating designated flood storage in LDV for water supply and adopt Forecast-Informed Reservoir Operations (“LDV Raise w/ FIRO”)
  – Lower the annual minimum operating level to increase capture of local run-off (“LDV Lowering”)
Important Constraints about Lake Del Valle

- LDV owned and operated by DWR
- ACWD & Zone 7 each have 7.5 TAF of storage and can only store local runoff from the Arroyo Valle Watershed
- Increased storage likely a ‘system’ benefit for all South Bay Contractors and DWR operations.
- ** Increased storage in LDV would not operate under ACWD’s discretion
<table>
<thead>
<tr>
<th>Concept / Description</th>
<th>LVE</th>
<th>LDV raise w/ FIRO</th>
<th>LDV lowering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invest in 5 to 10 TAF of Storage in Expanded reservoir</strong></td>
<td>Invest in 5 to 10 TAF of Storage in Expanded reservoir</td>
<td>Reallocate 25 TAF of flood storage for regular water supply storage. Increases south of delta storage; FIRO operation increases yield for ACWD and Zone 7. Concept benefits from existing, reservoir capacity and therefore a low $/AF for new water supply storage</td>
<td>Modify EBRPD facilities (lower treatment plant intake and boat ramp/dock facilities) so that the annual operational low-point can be further reduced. Allows EBRPD to remain operational when LDV drawn down below normal conservation pool; allows ACWD &amp; Zone 7 to capture more local water</td>
</tr>
<tr>
<td><strong>Primary Benefits</strong></td>
<td>Increased south of Delta storage ACWD new supply Enhanced Flexibility</td>
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</tr>
<tr>
<td><strong>Enhance resilience for Delta Outage</strong></td>
<td>Yes - increased south of Delta Storage</td>
<td>Yes - increased south of Delta Storage</td>
<td>No - same level of south of Delta Storage</td>
</tr>
<tr>
<td><strong>Estimated water supply benefit (TAF/yr.)</strong></td>
<td>1.6</td>
<td>2.3 (upper bound)</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Estimated ACWD cost</strong></td>
<td>~$120M</td>
<td>Share of $50M (likely more)</td>
<td>Share of $10M (likely more)</td>
</tr>
<tr>
<td><strong>Ability for ACWD to manage storage?</strong></td>
<td>Yes. Can place State Water Project supplies into LVE. Most notably the ability to recover extra Semitropic supply for dry years</td>
<td>Only Arroyo Valle water. Cannot “park” our State Water Project supplies</td>
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</tr>
<tr>
<td><strong>Implementability</strong></td>
<td>MODERATE - HIGH Large and complex project with many partners. However enjoys: - State and Fed participation - Prop 1 &amp; other funding secured - Advanced discussions including partner funding and governance</td>
<td>LOW - Requires federal approval - Requires DWR to lead (currently not engaged) - Objections from EBRPD - Concerns from flood management agencies regarding high volume releases needed as part of 'normal' operations</td>
<td>LOW – MODERATE - Requires DWR to lead (currently not engaged) - Potential objections from EBRPD - Not supported by all SBCs due to increased risk exposure (Delta outage)</td>
</tr>
</tbody>
</table>
Status of LDV Discussions

- LDV scenarios have potential benefit but require political coalition to advance
- ACWD cannot operate additional storage in LDV at its own discretion, unlike LVE
- Staff did not make a recommendation
- Direction has been
  - To continue to discuss these concepts with interested parties
  - Be ready to advance them if future opportunities arise
- Staff assessment: There is not enough potential to merit increased effort on LDV; staff recommends maintaining current direction
Next Steps for LVE

• Staff to continue:
  – Refinement of cost & benefit analyses
  – Participation in JPA agreement finalization

• Staff will be bringing future items to the Board for consideration, including:
  – Approval of JPA Agreement to continue participating as a Project partner in planning & design activities
  – Approval of Multiparty Agreement Amendment No. 3 to continue funding for planning & design activities through 2022
Water Supply Assessment for the Station District Specific Plan
On 6/4/2021, the District received a request for a Water Supply Assessment (WSA) from the City of Union City for the Station District Specific Plan (Project).

The Purpose of a WSA is to determine the sufficiency of water supply during normal, single dry, and multiple dry water years for the next 20 years for the proposed project, in addition to existing and planned future uses.

Water Code Sec. 10910 requires the District to complete a WSA within 90 days, or 9/2/2021

Staff requested an extension pursuant to the Water Code and will bring the WSA to the 9/9/2021 regular Board meeting
• The Project proposes infill and intensification of existing planned land use on 471 acres around the Union City BART Station
• The Project is included in Plan Bay Area 2050

<table>
<thead>
<tr>
<th></th>
<th>Existing + Previous Plans</th>
<th>New with Project</th>
<th>Total at Build Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential units</td>
<td>3,130</td>
<td>2,520</td>
<td>5,650</td>
</tr>
<tr>
<td>Non-residential Building area (ft²)</td>
<td>2,254,000</td>
<td>3,173,000</td>
<td>5,427,000</td>
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</tbody>
</table>
Estimated Water Demand for the Project

• Full buildout is projected to use:

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<tr>
<td>Water Demand (AF/yr.)</td>
<td>830</td>
<td>955</td>
<td>1,785</td>
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</table>

• The estimated new water demand as a result of the Project is 955 acre-feet/year.
• Because the Project was included in Plan Bay Area 2050, it is included in the District’s most recent water demand forecast and Urban Water Management Plan.
Findings of WSA

- All Project demands are included in the District’s Demand Forecast and UWMP (2020-2025), therefore:
  - The District has sufficient supplies for the Project in normal years.
  - The Project will not result in increased shortages from those already included in the District’s UWMP during dry periods.
  - Staff is evaluating if there are any additional water conservation enhancements that can be made as part of the Project.
Next Steps

- WSA will be brought to the regular September Board meeting and is recommended for consent
- Upon Board approval of the WSA, the District will provide the WSA to the City of Union City
- City of Union City to draft EIR and include WSA; public review and comment
- A written verification of sufficient water supply may be needed for individual elements of the Project