

**MEMORANDUM**

FC 14 (01-02-07)

**TO:** Board of Directors**FROM:** Water Storage Exploratory Committee**SUBJECT:** Water Storage Exploratory Committee Meeting  
Summary for January 15, 2020**DATE:** February 25, 2020

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This memorandum summarizes agenda items from the regular meeting of the Water Storage Exploratory Committee held on January 15, 2020.

**Attendees:**

Valley Water Board Members in attendance were: Director Gary Kremen-District 7, Director Richard P. Santos-District 3, and Director John L. Varela-District 1.

Valley Water Staff in attendance were: Bradly Arnold, Glenna Brambill, Jerry De La Piedra, Andrew Garcia, Garth Hall, Nina Hawk, Brian Hopper, Dana Jacobson, Eric Leiterman, Kathleen Low, Bill Magleby, Ryan McCarter, Steven Peters, Metra Richert, Eli Serrano, Charlene Sun and Beckie Zisser.

Guests in attendance were: Maureen Martin, Ph.D. (Contra Costa Water District-CCWD, Steve Jordan and Tim Francis (BAWSCA) and Katja Irvin (Sierra Club-Loma Prieta Chapter).

**INFORMATION ITEMS:****5.1 STANDING ITEMS INFORMATION**

Mr. Bradly Arnold review the following:

1. Update on Los Vaqueros Reservoir Expansion Project (LVE) Transfer Bethany Pipeline (TBP) (Metra Richert) and Update on Management of South Bay Aqueduct (SBA) Facilities (Erin Baker)

**Report:**

- Valley Water staff attended the Joint Powers Authority (JPA) and Service Agreement (i.e., term sheet) workshop held by Clean Energy Capital (CEC) and Contra Costa Water District (CCWD). Topics discussed included the allocation of fixed and variable costs, Local Agency Partner (LAP) creditworthiness, and other project cost-related topics; as well as the term and post-term of the agreement, off-ramps, and services to be provided.
- Independent reviewers of the project (existing facility) usage fees released a draft evaluation report to the LAPs and facility owners CCWD and East Bay Municipal Utility District (EBMUD). The report provides commentary on the calculation and application of various fee components proposed by CCWD and EBMUD. The final report is expected to be circulated by early 2020.
- Selection of legal counsel to develop the draft JPA formation documents is underway, and expected to be complete in December.
- Staff are evaluating Bay Area Water Supply & Conservation Agency (BAWSCA)/San Francisco Public Utilities Commission request to convey, treat and transfer their LVE Project water through the South Bay Aqueduct (SBA), Valley Water's Water Treatment Plants, and the Milpitas Intertie. Several concept scenarios have been provided to Valley Water staff for analysis, many which differ in timing and reliance on SBA and Valley Water facilities. Staff have requested additional details and refined scenarios from SFPUC and BAWSCA.
- Valley Water executive management met with General Managers of other LAPs on December 9, 2019 to discuss proposed use of SBA facilities to convey LVE project water for BAWSCA and SFPUC. The meeting focused on discussion of current SBA infrastructure conditions and assessments, and the potential issues with increased reliance on the SBA given current facility limitations (e.g., reduced operational capacity).
- Valley Water staff is coordinating a meeting between DWR Director Karla Nemeth, the South Bay Aqueduct Contractors (SBC), and other Los Vaqueros Expansion project partners including BAWSCA

and SFPUC to discuss the use of the South Bay Aqueduct for the LVE project. Additionally, the SBC are working to hire a consultant to assess available SBA capacity to use as part of the LVE project.

2. Lake Del Valle (Cindy Kao)  
**Report:** There is nothing to report at this time.
3. Del Puerto (Cindy Kao)  
**Report:** There is nothing to report at this time.
4. Water Banking Opportunities including but not limited to Pleasant Valley Water District (Cindy Kao)  
**Report:** See Agenda Item 6.1.
5. Pacheco (Christopher Hakes)  
**Report:** There is nothing to report at this time.
6. Semitropic (Cindy Kao)  
**Report:** Staff will be giving a verbal update at the January 15, 2020, meeting.
7. Sites (Cindy Kao)  
**Report:** Staff will be giving a verbal update at the January 15, 2020, meeting.
8. San Luis Reservoir Low Point (Christopher Hakes)  
**Report:** There is nothing to report at this time.
9. B.F. Sisk Dam Raise Project (Cindy Kao)  
**Report:** Staff will be giving a verbal update at the January 15, 2020, meeting.
10. Shasta (Cindy Kao)  
**Report:** There is nothing to report at this time.

**The Committee discussed the following:** LVE user groups/fees, final report review, hiring of attorney for the JPA, Transfer Bethany Pipeline (TBP) are investing in TBP or TBP storage ("bookends"), timelines, limitations, Prop 1 funding, current SBA Leak-fixing per schedule and partners—range of volume/capacity (BAWSCA-scenario).

Ms. Metra Richert, Maureen Martin, Ph.D. Mr. Garth Hall and Mr. Jerry De La Piedra were available to answer questions.

Mr. Jerry De La Piedra introduced newest staff, Mr. Andrew Garcia who reported on Del Puerto, estimate 82,000 acre-feet of new off stream storage-CVP-worth estimate \$420 m-current partners are Del Puerto and San Joaquin River Exchange Contractors Water Authority, draft EIR, project development, design and land acquisition and construction 6 years and Del Puerto received \$1.5 mil federal funding.

**The Committee discussed the following:** location-off I 5 by City of Patterson, potential opposition and Ms. Katja Irvin responded on behalf of Sierra Club-Loma Prieta Chapter.

Dr. Maureen Martin reported on the Transfer Bethany Pipeline (TBP)-benefits-references start and end of the pipeline, CCWD project is to connect their transfer station tie into the TBP and SBA, Prop 1 funding and environmental benefit-improve some mechanical features/small reduction of intake of salmonid and major water supply for wildlife refuges in Central Valley south of the Delta, adds additional points of diversion for Valley Water Climate change/sea level rise and salinization in the Delta. Bring desalination pilot study report to Committee.

Ms. Katja Irvin would like to receive updates on Pacheco.

Mr. Ryan McCarter gave update on Pacheco's environmental benefits which is habitat improvement for steelhead in releasing more water to enhance habitat Pacheco Creek runs in Pajaro River, colder water temperatures sustains the reproductive cycle of the species (public benefits as filed with Prop 1 funding).

Potential private investments need an update for next meeting.

Ms. Nina Hawk was available to answer questions.

**The Committee took the following action:**

The Committee voted unanimously to recommend that the Board consider accelerating the partnerships discussions for Pacheco Project.

Mr. Bradly Arnold reported on Semitropic update, as of October 31, 2019, there is full 350,000 in semitropic bank in Kern County, Valley Water staff worked with Zone 7 and Alameda County Water District to meet with Jason Gianquinto (General Manager of Semitropic) discussed future banking operations over SGMA, GSP content and submission Kern Groundwater Authority (KGA) to DWR, Semitropic with KGA, there is a MOU in place semitropic would maintain authority with enforcement activities of SGMA, staff attending Semitropic/KGA meetings, 3<sup>rd</sup> party banking concepts letter and Semitropic contract sunsets December 2035.

Mr. Eric Leitterman reported on, Sites Reservoir update, project description being updated and will be a smaller/less expensive project, funding decisions, amendment to extend current project agreement at no cost through June 30, 2020, received additional \$6 mil for project, Governor's New Year's release as a smart storage project could benefit water supply and the environment. Ms. Nina Hawk reported on the visit to Sites Reservoir and a potential Joint Board Meeting, strategic planning, Prop 1 funding and partnerships.

Ms. Beckie Zisser available to answer questions.

Mr. Dana Jacobson reported on, B.F. Sisk Dam Raise Project, beginning in 2007 Reclamation/DWR assessed seismic stability concerns, preferred alternative is to raise dam 12 feet, sure up embankment dam, extend for additional water supply storage, technical memorandum, modeling to determine potential benefits and staff will bring updated information at a later date.

Mr. Andrew Garcia reported on the Shasta Dam Raise Project, in November 2019 Westlands Water District signed a stipulation barring them from participating in the project resulting from the Attorney General's lawsuit, Reclamation is searching for non-federal/non-state partners - potentially a public private partnership (50% requirement), and project is on hold pending an executed record of decision.

**ACTION ITEMS:**

**6.1 PROPOSED GROUNDWATER BANKING PROJECTS (COMPARISON MATRIX)**

Mr. Bradly Arnold review the following:

**Summary:**

Santa Clara Valley Water District (Valley Water) staff have been exploring different groundwater banking opportunities as well as surface storage projects to diversify and potentially expand its storage capabilities. This effort is relevant given that projections of climate change impacts indicate that future water supplies will likely come in concentrated and shorter wet periods that will result in large slugs of water that may require additional storage facilities to capture. At the same time, sea level rise will likely increase salinity intrusion into the Delta, which may reduce the availability of SWP and CVP supplies during drier years, increasing Valley Water's reliance on stored supplies.

**Groundwater Banking Projects**

The current groundwater banking projects under investigation by Valley Water are as follows:

- Antelope Valley-East Kern 'High Desert' Groundwater Bank in Antelope Valley near Mojave;
- North San Joaquin Valley;
- Buena Vista Water Storage District (WSD) Groundwater Bank in Northern Kern County;
- Friant area banking;
- Mojave Water Agency Groundwater Bank in Apple Valley (Mojave Desert);
- Sacramento Regional Water Bank proposed near Roseville and Sacramento;
- Pleasant Valley Water District Groundwater Bank near Coalinga and Avenal.

A map of these projects relative to Valley Water is provided as Attachment 1. The location of the Semitropic Groundwater Bank, which Valley Water has already invested in, is also shown in Attachment 1. Valley Water staff are actively coordinating with banking program representatives to review operational and proposed financial details of each project and are evaluating the compatibility of these projects with other Valley Water water supply and storage projects. These projects differ by physical location, storage and recovery mechanics, local groundwater management under SGMA, and several other factors.

#### ***Comparison Matrix***

To assist in the comparison of potential groundwater banking projects, staff are developing a 'comparison matrix' table (Attachment 2) used to outline key factors and considerations. The comparison matrix is intended to help guide Valley Water's discussions and review in a consistent format.

Attachment 2 provides a sample comparison matrix filled out for Semitropic. Staff will continue to refine the evaluation criteria and fill in the table as the analysis for other groundwater banking projects progresses.

Attachment 1: Map of Groundwater Banking Projects



\* Service area(s) shown as outline. Groundwater banking locations are smaller, with location shown using star icon.

Attachment 2:

Potential Matrix for Comparison of Groundwater Banking Projects

		Semitropic Groundwater Bank	Antelope Valley-East Kern (AVEK) 'High Desert' GW Bank	North San Joaquin Valley	Buena Vista WSD Groundwater Bank	Friant Area Bank	Mojave Water Agency Groundwater Bank	Sacramento Regional Water Bank	Pleasant Valley WD Groundwater Bank
<i>Location</i>	Northern Kern County								
<i>Status</i>	Established								
<i>Direction (Convey Pathway)</i>	Indirect/Exchange								
<i>Valley Water Rights and Ownership</i>	Contract (Priority)								
<i>Operations</i>	<i>Max Storage</i>	350,000 AF							
	<i>Put Limit</i>	31,675 AF/yr							
	<i>Storage Water Types</i>	SWP, CVP, Purchased (Future?)							
	<i>Take Limit</i>	31,675 AF/yr Minimum							
<i>Losses</i>	<i>Managing Agencies</i>	KCWA							
	<i>Withdrawal Setup</i>	SWP Supply Exchange							
	<i>Storage</i>	10% Leave-Behind							
	<i>Conveyance</i>	None							
<i>Costs</i>	<i>Put Costs</i>	\$89/AF (CPI-adjust)							
	<i>Take Costs</i>	\$89/AF (CPI-adjust)							
	<i>Capital Investment</i>	None							
	<i>Recurring O&amp;M</i>	Approx. \$2.4 Mil/yr Flat (Covers Put/Take Costs)							
<i>Issues</i>	<i>Other Costs</i>	Variable pumping/energy recovery costs.							
	<i>SGMA Basin Info</i>	Kern County SB 'High Priority'							
	<i>Water Quality</i>	Moderate Quality (TDS/Arsenic)							
	<i>Key Risks and Considerations</i>	- SGMA management changes/constraints? - KCWA control of storage and recovery (e.g., 2014 drought).							

**The Committee discussed the following:** adding political implications and the strain on the Delta, pumping restrictions (reverse flow), groundwater banking opportunities, partnerships and SGMA concerns.

Ms. Nina Hawk was available to answer questions.

**The Committee took no action.**

**2. CLOSED SESSION:**

**CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION**

Govt. Code Sec. 54956.9(d)(1)

SCVWD v. Jin, et al., Santa Clara County Superior Court, No. 19CV352227

If you have any questions or concerns, you may contact me at, [gbrambill@valleywater.org](mailto:gbrambill@valleywater.org) or 1.408.630.2408.

Thank you.

Glenna Brambill, Management Analyst II,  
Board Committee Liaison  
Office of the Clerk of the Board