



## **Santa Clara Valley Water District Water Supply and Demand Management Committee**

HQ. Bldg. Boardroom, 5700 Almaden Expressway, San Jose, California  
Join Zoom Meeting: <https://valleywater.zoom.us/j/92597340524#>

### **SPECIAL MEETING AGENDA**

**Monday, May 5, 2025  
12:00 PM**

**District Mission: Provide Silicon Valley safe, clean water for a healthy life, environment and economy.**

**COMMITTEE OFFICERS:**

Nai Hsueh, Chairperson  
Director, District 5  
Shiloh Ballard, Vice  
Chairperson Director, District 2  
Richard Santos  
Director, District 3

All public records relating to an item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the Office of the Clerk of the Board at the Santa Clara Valley Water District Headquarters Building, 5700 Almaden Expressway, San Jose, CA 95118, at the same time that the public records are distributed or made available to the legislative body. Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to attend Board of Directors' meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

**STAFF LIAISONS:**

Vincent Gin  
Kirsten Struve  
Ryan McCarter  
Stephanie Simunic  
COB Liaison  
Assistant Deputy Clerk  
[ssimunic@valleywater.org](mailto:ssimunic@valleywater.org)  
1-408-630-2408

**Note: The finalized Board Agenda, exception items and supplemental items will be posted prior to the meeting in accordance with the Brown Act.**

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**Santa Clara Valley Water District**  
**Water Supply and Demand Management Committee**  
**SPECIAL MEETING**  
**AGENDA**

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Monday, May 5, 2025	12:00 PM	HQ. Bldg. Boardroom 5700 Almaden Expressway, San Jose, California Join Zoom Meeting: <a href="https://valleywater.zoom.us/j/92597340524#">https://valleywater.zoom.us/j/92597340524#</a>
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Santa Clara Valley Water District (Valley Water) Board of Directors/Board Committee meetings are held as a “hybrid” meetings, conducted in-person as well as by telecommunication, and is compliant with the provisions of the Ralph M. Brown Act.

To maximize public safety while still maintaining transparency and public access, members of the public have an option to participate by teleconference/video conference or attend in-person. To observe and participate in the meeting by teleconference/video conference, please see the meeting link located at the top of the agenda. If attending in-person, you are required to comply with **Ordinance 22-03 - AN ORDINANCE OF THE SANTA CLARA VALLEY WATER DISTRICT SPECIFYING RULES OF DECORUM FOR PARTICIPATION IN BOARD AND COMMITTEE MEETINGS** located at <https://s3.us-west-2.amazonaws.com/valleywater.org.if-us-west-2/f2-live/s3fs-public/Ord.pdf>

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- Members of the Public are encouraged to review our overview on joining Valley Water Board Meetings at: <https://www.youtube.com/watch?v=TojJpYCxXm0>

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Under the Brown Act, members of the public are not required to provide identifying information in order to attend public meetings. Through the link below, the Zoom webinar program requests entry of a name and email address, and Valley Water is unable to modify this requirement. Members of the public not wishing to provide such identifying information are encouraged to enter "Anonymous" or some other reference under name and to enter a fictional email address (e.g., attendee@valleywater.org) in lieu of their actual address. Inputting such values will not impact your ability to access the meeting through Zoom.

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**<https://valleywater.zoom.us/j/92597340524>**

**Meeting ID: 925 973 40524**

**Join by Phone:**

**1 (669) 900-9128, 92597340524#**

**1. CALL TO ORDER:**

1.1. Roll Call.

**2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA.**

*Notice to the public: Members of the public who wish to address the Board/Committee on any item not listed on the agenda may do so by filling out a Speaker Card and submitting it to the Clerk or using the "Raise Hand" tool located in the Zoom meeting application to identify yourself to speak. Speakers will be acknowledged by the Board/Committee Chair in the order requests are received and granted speaking access to address the Board/Committee. Speakers' comments should be limited to three minutes or as set by the Chair. The law does not permit Board/Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. If Board/Committee action is requested, the matter may be placed on a future agenda. All comments that require a response will be referred to staff for a reply in writing. The Board/Committee may take action on any item of business appearing on the posted agenda.*

**3. APPROVAL OF MINUTES:**

3.1. Approval of March 24, 2025 Water Supply and Demand Management Committee (WSDMC) Minutes.

25-0402

Recommendation: Approve the minutes.  
Manager: Candice Kwok-Smith, 408-630-3193  
Attachments: [Attachment 1: 03242025 WSDMC Minutes](#)  
Est. Staff Time: 5 Minutes

#### 4. REGULAR AGENDA:

4.1. Receive Information and Discuss Proposed Storage Projects Contained in Valley Water's Water Supply Master Plan 2050. [25-0373](#)

Recommendation: Receive information and discuss proposed Storage Projects contained in Valley Water's Water Supply Master Plan 2050.  
Manager: Kirsten Struve, 408-630-3138  
Attachments: [Attachment 1: PowerPoint](#)  
Est. Staff Time: 20 Minutes

4.2. Receive an Informational Update on the Pacheco Reservoir Expansion Project With a Focus on Partnerships and the role of the Project in the Water Supply Master Plan [25-0182](#)

Recommendation: Receive an informational update on the Pacheco Reservoir Expansion Project with a focus on partnerships and the role of the project in the Water Supply Master Plan.  
Manager: Ryan McCarter 408-630-2983  
Attachments: [Attachment 1: PowerPoint](#)  
Est. Staff Time: 30 Minutes

4.3. Receive and Discuss Information Regarding the Status of Potential Groundwater Banking Projects. [25-0375](#)

Recommendation: Receive and discuss information regarding the status of potential groundwater banking projects.  
Manager: Vincent Gin, 408-630-2633  
Attachments: [Attachment 1: PowerPoint](#)  
Est. Staff Time: 15 Minutes

4.4. Receive Information on the Water Use Projections, Water Demand Elasticity and Customer Affordability Study and Provide Feedback to Staff. [25-0423](#)

Recommendation: Receive information on the Water Use Projections, Water Demand Elasticity and Customer Affordability Study (Study), including the Study scope, objectives, status updates, and provide feedback to Staff.  
Manager: Darin Taylor, 408-630-3041  
Attachments: [Attachment 1: PowerPoint](#)  
Est. Staff Time: 20 Minutes

4.5. Review and Discuss the Water Supply and Demand Management Committee (WSDMC) Work Plan and Upcoming Discussion Items. [25-0401](#)

Recommendation: Review and discuss the WSDMC Work Plan and upcoming discussion items.

Manager: Candice Kwok-Smith, 408-630-3193.

Attachments: [Attachment 1: 2025 WSDMC Work Plan](#)

Est. Staff Time: 10 Minutes

**5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS.**

*This is an opportunity for the Clerk to review and obtain clarification on any formally moved, seconded, and approved requests and recommendations made by the Committee during the meeting.*

**6. ADJOURN:**

6.1. Adjourn to Regular Meeting at 10:00 a.m., Monday June 2, 2025.



# Santa Clara Valley Water District

File No.: 25-0402

Agenda Date: 5/5/2025

Item No.: 3.1.

## COMMITTEE AGENDA MEMORANDUM Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

### SUBJECT:

Approval of March 24, 2025 Water Supply and Demand Management Committee (WSDMC) Minutes.

### RECOMMENDATION:

Approve the minutes.

### SUMMARY:

A summary of Committee discussions, and details of all actions taken by the Committee, during all open and public Committee meetings, is transcribed and submitted for review and approval.

Upon Committee approval, minutes transcripts are finalized and entered into the District's historical records archives and serve as historical records of the Committee's meetings.

### ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:

The approval of minutes is not subject to environmental justice and equity impact analysis.

### ATTACHMENTS:

Attachment 1: 03242025 WSDMC Minutes

### UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

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WATER SUPPLY AND DEMAND  
MANAGEMENT COMMITTEE MEETING

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# DRAFT MINUTES

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**REGULAR MEETING  
MONDAY, March 24, 2025  
10:00 AM**

(Paragraph numbers coincide with agenda item numbers)

**1. CALL TO ORDER:**

A regular meeting of the Santa Clara Valley Water District (Valley Water) Water Supply and Demand Management Committee (Committee) was called to order in the Valley Water Headquarters Building Boardroom at 5700 Almaden Expressway, San Jose, California, and by Zoom teleconference, at 10:00 a.m.

**1.1. Roll Call.**

Committee members in attendance were: District 5 Director Nai Hsueh, Chairperson, District 2 Director Shiloh Ballard, Vice Chairperson, and District 3 Director Richard Santos, constituting a quorum of the Committee.

Staff members in attendance were: Gina Adriano, Karen Adriano, Antonio Alfaro, Aaron Baker, Roselyn Bhudsabourg, Justin Burks, Vanessa De La Piedra, Gavin Downs, Andrew Garcia, Rachael Gibson, Vincent Gin, Josh Golka, Andy Gschwind, Jason Gurdak, Linh Huang, Cindy Kao, Matt Keller, Kaho Kong, Candice Kwok-Smith, Jess Lovering, Katherine Maher, Ryan McCarter, Nicole Merritt, Julianne O'Brien, Carlos Orellana, Steve Peters, Sarah Piramoon, Beatriz Portugal, Paola Reyes, Metra Richert, Ray Ruiz, Desiree Sausele, Ashley Shannon, Stephanie Simunic, Kirsten Struve, Charlene Sun, Sana Wazit, Jing Wu, Beckie Zisser.

Public in attendance were: Gabriel Alcantar, Kurt Elvert (San Jose Water Company), Katja Irvin (Sierra Club), Paul Sethy (Alameda County Water District).

**2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA:**

Chairperson Hsueh declared time open for public comment on any item not on the agenda. There was no one who wished to speak.

### **3. APPROVAL OF MINUTES:**

#### **3.1 Approval of January 27, 2025 Water Supply and Demand Management Committee (WSDMC) Minutes.**

**Recommendation:** **Approve the minutes.**

The Committee considered the minutes of the January 27, 2025 Water Supply and Demand Management Committee (WSDMC) meeting.

Public Comments: None.

It was moved by Director Santos, seconded by Vice Chairperson Ballard, and unanimously carried, to approve the January 27, 2025 WSDMC minutes.

### **4. REGULAR AGENDA:**

#### **4.1 Receive Update and Discuss the Water Conservation Program's Water Use Savings for Fiscal Year (FY) 2024.**

**Recommendation:** **Receive update and discuss the Water Conservation Program's estimated water use savings for FY 2024 (July 1, 2023-June 30, 2024).**

Justin Burks reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

The Committee discussed the following with staff input: the achievement of 3,000 acre-feet a year of water conservation savings in FY 2024, how costs compare to other water supply initiatives, conservation goals, program staffing levels, and efforts to keep the participation in the Landscape Rebate Program high and continue the \$2 per square foot rebate rate.

Public Comments: None.

The Committee received the information, provided positive feedback and took no formal action.

#### **4.2 Receive Update on Valley Water's New Water Conservation Program's and Pilots and Provide Feedback.**

**Recommendation:** **Receive an update on Valley Water's new water conservation programs and pilots and provide feedback.**

Ashley Shannon reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

The Committee discussed the following with staff input: new and enhanced conservation programs, balancing water conservation vs. agency funding, 2030 goals, partnering with training facilities including the International Association of

Plumbing and Mechanical Officials, and program staffing.

Public Comments: None.

The Committee received the information, provided positive feedback and took no formal action.

**4.3 Receive Update on Safe Clean Water Conservation Program – Project A2: Water Conservation Rebates and Programs Update.**

**Recommendation:** **Receive an update on the Safe Clean Water funded conservation programs.**

Ashely Shannon reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

The Committee discussed the planned demonstration garden at Valley Water headquarters. Director Santos suggested installing a plaque to honor past members of the landscape committee that recommended a demonstration garden.

The Committee further discussed the following with staff input: program data analysis plans, program funding for the next seven years, and the importance of funding consistency. Director Santos requested that water conservation is placed on a future Water Retailer Committee meeting agenda.

Public Comments: None.

The Committee received the information, provided positive feedback and took no formal action.

**4.4 Receive Update on Sustainable Groundwater Management Act (SGMA) Compliance related to the Kern County Subbasin.**

**Recommendation:** **Receive an update on SGMA compliance related to the Kern County Subbasin.**

Cindy Kao reviewed the information on this item, per the attached Committee Agenda Memo and in the attachments and she and Kaho Kong were available to answer questions.

The Committee discussed the following with staff input: the status of the Kern County Subbasin Semitropic Groundwater Storage Bank relating to regulations and banking impacts, and scenarios if the Basin is put on probation if State Water Board determines that the GSA's are inadequate.

Public Comments: None.

The Committee received the information and took no formal action.

**4.5. Receive Update and Discuss the B.F. Sisk Dam Raise and Reservoir Expansion Project; Recommend to the Board to Increase Valley Water's Storage Capacity to a Minimum of 63,560 Acre Feet (AF) and Up To 70,000 AF if Space Becomes Available; Recommend to the Board to Authorize Up To \$2,187,646 to Cover Valley Water's Share of Project Planning Costs.**

**Recommendation:**

- A. Receive an update and discuss the B.F. Sisk Dam Raise and Reservoir Expansion Project.**
- B. Recommend to the Board to increase Valley Water's storage capacity to a minimum of 63,560 Acre Feet (AF) and up to 70,000 AF if space becomes available.**
- C. Recommend to the Board to authorize up to \$2,187,646 to cover Valley Water's share of Project planning costs.**

Katherine Maher reviewed the information on this item, per the attached Committee Agenda Memo and in the attachment and was available to answer questions.

Public Comment: None.

The Committee discussed the following with staff input: a small increase in participation level to cover Valley Water's share of San Luis Water District's share of the project created by their withdrawal from the project, as well as possible future withdrawals that may result in additional small gaps in participation. Staff also discussed possible risks and high probability of completion of the project, partnership with the United States Bureau of Reclamation, and how this project differs from the Los Vaqueros project.

On a motion by Director Santos, seconded by Vice Chairperson Ballard, the Committee approved to recommend to the Board to increase Valley Water's storage capacity to a minimum of 63,560 Acre Feet (AF) and up to 70,000 AF if space becomes available; and recommend to the Board to authorize up to \$2,187,646 to cover Valley Water's share of project planning costs.

**4.6 Review and Discuss the Water Supply and Demand Management Committee (WSDMC) Work Plan and approve 2025 meeting schedule.**

**Recommendation:**

- Review and discuss the WSDMC Work Plan and upcoming discussion items.**

Public Comment: None.

The Committee received the information and noted that Item 4.7 (Semitropic Groundwater Bank) was heard, not Item 4.1 (Sustainable Groundwater Management Act (SGMA) Annual Update).

**5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS:**

Stephanie Simunic stated that the January 17, 2025 WSDMC minutes were

approved, Items 4.1 through 4.4 were received, and the Committee approved the staff recommendation for Item 4.5.

**6. ADJOURN:**

**6.1. Adjourn to Regular Meeting at 10:00 a.m. on Monday April 28, 2025.**

Chairperson Hsueh adjourned the meeting at 11:43 a.m.

Date Approved:

Stephanie Simunic  
Assistant Deputy Clerk II

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# Santa Clara Valley Water District

File No.: 25-0373

Agenda Date: 5/5/2025

Item No.: 4.1.

## COMMITTEE AGENDA MEMORANDUM Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

### **SUBJECT:**

Receive Information and Discuss Proposed Storage Projects Contained in Valley Water's Water Supply Master Plan 2050.

### **RECOMMENDATION:**

Receive information and discuss proposed Storage Projects contained in Valley Water's Water Supply Master Plan 2050.

### **SUMMARY:**

Storage is a critical component of Valley Water's water supply system. Storage helps compensate for supply variability and plays a vital role in ensuring water supply reliability into the future. Valley Water's storage program currently consists of 10 local surface water reservoirs, our local groundwater basins, and a contract with Semitropic Groundwater Bank allowing for up to 350,000 acre-feet (AF) of storage capacity. The Semitropic contract is set to expire in 2035.

Through the development of the Water Supply Master Plan (WSMP) 2050, Valley Water identifies the need to diversify and expand the existing storage programs to achieve long-term water supply reliability. This memorandum summarizes the storage need, potential project options, and the WSMP recommendations.

### **Need for Storage**

Storage projects include surface and groundwater storage projects that allow for capturing excess water supply in wet years to be used during drought years. Valley Water's basic water supply strategy to compensate for supply variability is to store excess wet year supplies in storage and draw on these reserve supplies during dry years to help meet demands. With the growing uncertainties of weather patterns and droughts due to climate change, the timing and magnitude of water availability could become extreme, shifting between prolonged droughts and big storms. Building sufficient storage to store excess water during big storms for use in dry years is essential for managing California's climate and hydrological cycles and securing water supply reliability. Both surface and groundwater storage are critical to be prepared for a future with climate change, because surface water storage

can accommodate large flows quickly, while groundwater storage has historically been more cost effective.

The WSMP analysis indicated that if relying only on existing supplies and infrastructure, Valley Water will experience water shortages during the later years of an extended drought beginning in 2035, mostly driven by changing demands, reduced supplies, and climate change. In 2050, the average shortage over a six-year drought could be as much as 75,000 acre-feet per year, depending on the projected demand and imported water supply conditions. These shortages are large and already take into account meeting drought calls and long-term conservation goals. Therefore, Valley Water needs to invest in new projects to address those shortages to ensure long-term water supply reliability for Santa Clara County.

Among investment options, **storage is identified as vital to water supply reliability under current and future conditions**. Diversifying and expanding existing storage programs is needed to help reduce risk and mitigate drought impacts. Storage, coupled with drought-resilient supply such as direct potable reuse, is effective in eliminating future water shortages. In addition to storage capacities, the put and take capabilities of both groundwater banks and surface storage facilities are also critically important, as they determine how effectively water can be stored and accessed when it is most needed.

### Storage Project Options

Valley Water evaluated three storage projects in the WSMP 2050, in addition to supply and recharge project options. They are Pacheco Reservoir Expansion, B.F. Sisk Dam Raise, and Out-of-County Groundwater Banking. The cost of each project is provided in Table 1 in 2025 dollars. The benefits and risks/challenges of these projects were evaluated and summarized in Table 2.

**Table 1 Cost for Storage Projects (2025\$)**

Project	Storage (AF)	Capital Cost (Million)	Annual O&M (Million)	PV Lifecycle Cost (Million)	Lifecycle Cost PV/Storage Capacity (\$/AF)
Pacheco Reservoir Expansion	140,000	\$2,310	\$2.6	\$1,720	\$12,300
B.F. Sisk Dam Raise	60,000	\$460	\$1.9	\$520	\$8,700
Groundwater Banking	350,000	\$290	\$2.9	\$380	\$1,100

**Table 2 Summary of Project Evaluation Findings**

Project	Benefits	Risks/Challenges
Pacheco Reservoir Expansion	<ul style="list-style-type: none"> <li>• 140,000 AF of locally controlled storage</li> <li>• Emergency storage with no annual carryover storage limit</li> <li>• Downstream environment benefits</li> <li>• Increases operational flexibility</li> <li>• Owned and operated by Valley Water</li> </ul>	<ul style="list-style-type: none"> <li>• Public opposition</li> <li>• High cost</li> <li>• Environmental impact on cultural resources</li> <li>• Difficulty in securing partners</li> <li>• Increased long-term environmental commitments</li> </ul>
B.F. Sisk Dam Raise	<ul style="list-style-type: none"> <li>• 63,560 AF of storage for imported supplies</li> <li>• Increases operational flexibility</li> <li>• Reliable storage for SWP and other non-CVP supplies</li> </ul>	<ul style="list-style-type: none"> <li>• Joint governance with 5 other water agencies and the San Luis and Delta Mendota Water Authority</li> <li>• Project owned and operated by US Bureau of Reclamation;</li> <li>• Storage of CVP water is not reliable in droughts</li> <li>• Requires moving a portion of Route 152</li> <li>• Small quantity of storage capacity available relative to Santa Clara County's overall need for storage.</li> </ul>
Out-of-County Groundwater Banking	<ul style="list-style-type: none"> <li>• Currently most cost-effective option</li> <li>• Would diversify existing groundwater storage program</li> </ul>	<ul style="list-style-type: none"> <li>• No identified projects yet</li> <li>• Significant institutional, technical, and political hurdles</li> <li>• Constraints on timing and rate of deliveries to storage and withdrawals</li> <li>• Water quality issues common</li> <li>• Potential competition with other agencies</li> </ul>

### Adaptive Management for Decision-Making

The WSMP 2050 developed three potential investment strategies: **lower cost, local control**, and **diversified** (Table 3). These three potential strategies represent different approaches to water supply reliability, but each comes with tradeoffs and risks and challenges. Each strategy assumes a certain level of reliable out-of-county groundwater banking, and either the B.F. Sisk Dam Raise

project or the Pacheco Reservoir Expansion project.

**Table 3 Multiple Strategies for Water Supply Reliability (Cost in 2025\$)**

Strategies	Projects	Portfolio Cost (Billion)
<b>Lower Cost</b>	San Jose Direct Potable Reuse, Delta Conveyance Project, B.F. Sisk Dam Raise, Groundwater Banking (250,000 AF), South County Recharge	<b>\$4.4</b>
<b>Local Control</b>	San Jose Direct Potable Reuse, Palo Alto Potable Reuse, Pacheco without Partners, Groundwater Banking (150,000 AF), South County Recharge	<b>\$6.4</b>
<b>Diversified</b>	San Jose Direct Potable Reuse, Delta Conveyance Project, Pacheco with Partners, B.F. Sisk Dam Raise, Groundwater Banking (350,000 AF), South County Recharge	<b>\$5.7</b>

Since many projects are still in the planning phase and will evolve, it is hard to predict which will ultimately be successful. In addition, assumptions regarding the reliability of future groundwater banking do not take into account the impact of recharge and pumping constraints that may be imposed in response to requirements under the Sustainable Groundwater Management Act (SGMA). Uncertainty with forecasted future supply and demand conditions brings further challenges in decision-making. Therefore, an adaptive management approach was developed to provide the Board of Directors (Board) with flexibility and the ability to make incremental investment decisions. With this approach, staff recommends the **lower cost strategy** while continuing to plan for Pacheco and other projects as a way to balance uncertainty and flexibility. This will allow for the status of several projects to become clearer and afford the Board with options and opportunities to make informed decisions.

### **Next Steps**

Staff will continue to coordinate the planning of the Pacheco project within the context of the WSMP 2050 and support the Board with decision-making through adaptive management.

### **ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:**

The Water Supply Master Plan addressed water supply equity by ensuring a cost-effective, high-quality supply is available for all of Santa Clara County, including disadvantaged communities.

### **ATTACHMENTS:**

Attachment 1: PowerPoint

### **UNCLASSIFIED MANAGER:**

Kirsten Struve, 408-630-3138



# Water Supply Master Plan Storage Projects

Water Supply and Demand Management Committee, May 5, 2025

# Importance of Storage

- Allow for capturing excess water supply in wet years to be used during drought years
- Provides storage for emergency supplies
- Compensate for supply variability
- Manage California's climate and hydrological cycles
- Mitigate climate change impacts

# Valley Water Storage Program

- 10 reservoirs
  - Total capacity – 166,000 Acre-Feet (AF)
  - Restricted capacity – 62,000 AF
- Two groundwater basins – 548,000 AF operational storage capacity
- Semitropic Contract – 350,000 AF storage (expires 2035)
- **Storage vital to water supply reliability under current and future conditions.**

# A Comprehensive, Flexible Water System

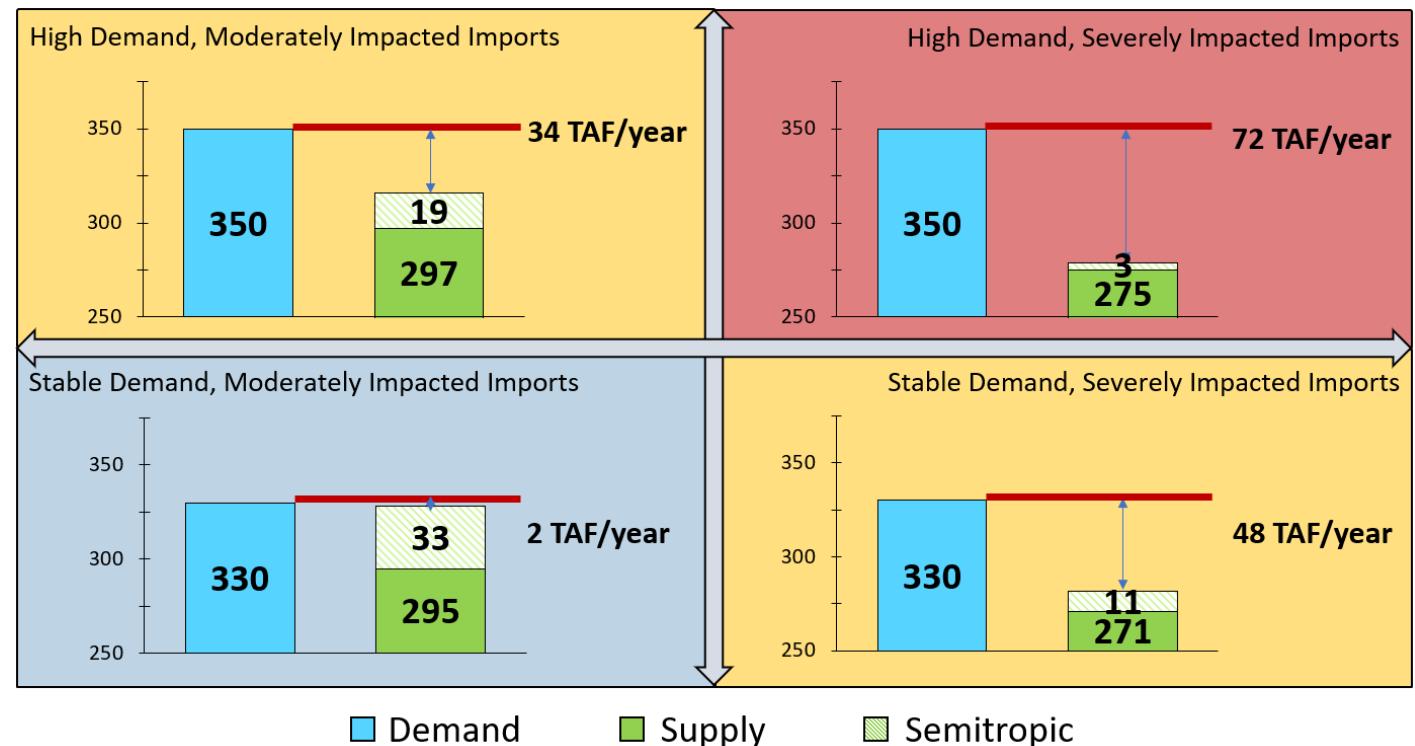


# Storage Need for Future Water Shortages

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- Diversifying and expanding existing storage programs reduces risk and mitigates drought impacts
- Storage coupled with drought-resilient supply is effective in eliminating future water shortages
- Put and Take capabilities of groundwater banks important

Annual shortage in a six-year drought in 2050



# Storage Options

Project	Storage (AF)	Capital Cost (Million)	Annual O&M (Million)	PV Lifecycle Cost (Million)	Lifecycle Cost PV/Storage Capacity (\$/AF)
<b>Pacheco Reservoir Expansion</b>	140,000	\$2,310	\$2.6	\$1,720	\$12,300
<b>B.F. Sisk Dam Raise</b>	60,000	\$460	\$1.9	\$520	\$8,700
<b>Groundwater Banking</b>	350,000	\$290	\$2.9	\$380	\$1,100

# Benefits and Risks/Challenges

Project	Benefits	Risks/Challenges
<b>Pacheco Reservoir Expansion</b>	<ul style="list-style-type: none"><li>Locally controlled storage</li><li>Emergency storage</li><li>Downstream environment benefits</li><li>Increases operational flexibility</li></ul>	<ul style="list-style-type: none"><li>Public opposition</li><li>High cost</li><li>Environmental impact on cultural resources</li><li>Difficulty in securing partners</li><li>Increased long-term environmental commitments</li></ul>
<b>B.F. Sisk Dam Raise</b>	<ul style="list-style-type: none"><li>Storage for imported supplies</li><li>Increases operational flexibility</li></ul>	<ul style="list-style-type: none"><li>Storage of CVP supplies not secure</li><li>Reliant on federal government to move project forward</li><li>Requires moving a portion of Route 152</li></ul>
<b>Out-of-County Groundwater Banking</b>	<ul style="list-style-type: none"><li>May be more cost-effective than other options</li><li>May extend or diversify existing banking program</li></ul>	<ul style="list-style-type: none"><li>No identified projects yet</li><li>Significant institutional, technical, and political hurdles</li><li>Puts/takes may not be guaranteed</li><li>Competition with other agencies</li></ul>

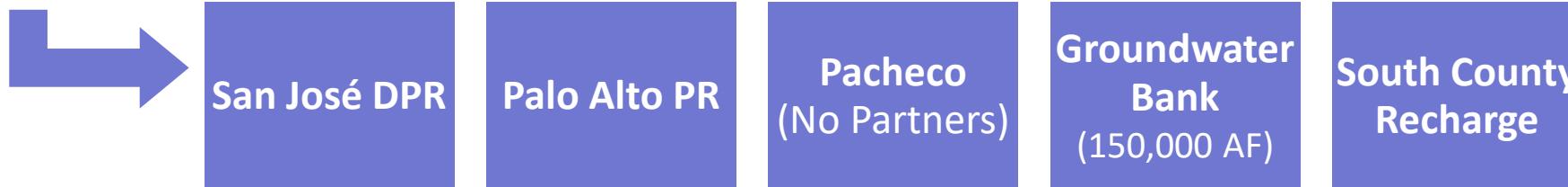
# Strategies for Water Supply Reliability

8

## Lower Cost (\$4.4 Billion)



## Local Control (\$6.4 Billion)



## Diversified (\$5.7 Billion)



# Adaptive Management with Recommendations

## NOW

- Focus on Lower Cost Portfolio
- Continue planning for other projects (Pacheco, Sites)
- Start Desal feasibility study
- Continue implementing conservation programs

## NEAR- TERM (2- 3 YEARS)

- Assess progress on project planning and implementation
- Make project decisions based on triggers, new information, and actual conditions
- Continue planning for other projects

## MID- TERM (5 YEARS)

- Assess progress on project implementation
- Update demand projections and water supply outlook
- Update WSMP

Annual MAP report

## INDICATORS



- Sisk project progress
- DPR project progress
- Project decisions

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# Santa Clara Valley Water District

File No.: 25-0182

Agenda Date: 5/5/2025

Item No.: 4.2.

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## COMMITTEE AGENDA MEMORANDUM Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

### **SUBJECT:**

Receive an Informational Update on the Pacheco Reservoir Expansion Project With a Focus on Partnerships and the role of the Project in the Water Supply Master Plan

### **RECOMMENDATION:**

Receive an informational update on the Pacheco Reservoir Expansion Project with a focus on partnerships and the role of the project in the Water Supply Master Plan.

### **SUMMARY:**

On October 13, 2023, staff and Committee Member Hsueh presented potential topics regarding the Pacheco Reservoir Expansion Project (Project or Pacheco Project) to be brought before the Water Storage Exploratory Committee (now the Water Supply and Demand Management Committee, or WSDM Committee) for more detailed discussion in future quarterly updates, and later, to be brought before the full Board of Directors (Board) for discussion. This approach and these proposed Project topics were discussed with and approved by the Board.

In acknowledgment of the new Board member and other Project updates, staff has prepared a presentation discussing partnerships and the role of the Project in the Water Supply Master Plan (Attachment 1).

Staff has previously presented on the following topics:

- Description of planned Project operations and benefits
- Discussion and review of Project costs
- Discussion and review of requirements unique to the Project
- Informational Project updates

Topics to be presented in future updates include:

- Review of the Project's environmental impacts and mitigation measures
- Review and discussion of cost-benefit analysis with updates
- Additional topics as requested by the Board or Committee

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In April 2021, the Board held a special meeting on Project partnerships in response to the 2020 cost estimate. At the time, staff presented water rate impacts for partnership participation levels from 0 to 38.5%. Staff also presented four different partnership options:

1. Valley Water retains ownership and forms partnerships via third-party contractual rights.
2. Create a Joint Exercise of Powers of Authority (JPA).
3. Partnerships with private entities who would invest in capacity and sell their benefits to others.
4. Partnerships with federal and/or state agencies.

The Board directed staff to use the 35% assumption from the water rate analysis for financial planning purposes; however no formal motion, resolution, or policy vote occurred.

Since then, staff have received interest from seven different agencies, held multiple meetings with six of those agencies and have received Letters of Interest from two. These efforts are in addition to the existing partnerships with San Benito County Water District and Pacheco Pass Water District.

While there is significant interest from potential partners in the opportunity to improve their water supply reliability in dry years, there are concerns about the project cost and a reluctance to commit to the Project at this point in its development. This uncertainty challenges the design team in modeling operations and identifying impacts for the Recirculated Draft Environmental Impact Report (RDEIR) and overall project design.

These challenges, along with the dissolution of the Los Vaqueros Expansion project, have contributed to staff's exploration of alternative partnership models. In addition to variations of the full partner model, staff is considering how a rental or merchant model could work for the Project. Staff would also consider a hybrid model consisting of some upfront capital to reserve storage capacity, competitive with groundwater banking programs.

One of the major benefits of the Project for Valley Water is that it would be locally controlled and operated by Valley Water. A rental or merchant model would allow Valley Water to retain greater control and flexibility over project operations while recouping a portion of its costs. These partnership approaches could also streamline the environmental, permitting, and construction phases of the Project as Valley Water would be the only owner.

From a potential partner's perspective, Valley Water's exchange capacity, or the ability to exchange stored supplies with other types of surface supplies, is advantageous relative to competing storage projects. The Project would also result in less water "leave-behind" compared to groundwater storage banks. A rental or merchant model offers potential partners a lower-risk, cost-effective way to participate in a more certain project without upfront capital commitments.

Staff is conducting further analysis on these additional partnership approaches and will present a more detailed update at a future meeting.

The Water Supply Master Plan (WSMP) is evaluating a suite of projects to ensure the reliability of Valley Water's water supply through 2050. The estimated Project life would begin in 2035 and extend

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to 2135. The Project is currently included in the local control and diversified portfolio strategies- one with partners and one without partners. The current WSMP recommendation is to focus on the low-cost portfolio while continuing to plan for other projects including Pacheco. Most projects within the various portfolios have not yet been built and, in many cases, are years away from construction. The adaptive management approach enables Valley Water to assess projects as new information and project conditions emerge and designs progress. This approach will allow Valley Water to make informed and timely decisions to ensure it can continue to meet its level of service in the future.

After this WSDM Committee meeting, staff intends to present this Project update to the Board in June 2025. Staff will plan to present another Project topic from the list to the WSDM Committee in July 2025 and to the Board in September 2025.

#### **ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:**

There are no Environmental Justice and Equity impacts associated with this item.

#### **ATTACHMENTS:**

Attachment 1: PowerPoint

#### **UNCLASSIFIED MANAGER:**

Ryan McCarter 408-630-2983

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# Pacheco Reservoir Expansion Project

Water Supply and Demand Management Committee

May 5, 2025

# Topics Previously Presented:

2

Topic	Committee Meeting Date	Board Meeting Date
Presentation of Potential Topics	13-Oct-23	14-Nov-23
Description of Project Operations and Benefits	8-Dec-23	22-Jan-24
Discussion and Review of Project Costs	17-May-24	11-Jun-24
Discussion and Review of Requirements Unique to the Project	26-Aug-24	10-Oct-24
Informational Project Update	27-Jan-25	11-March-25

# Future Topics:

3

- Review of the Project's environmental impacts and mitigation measures
- Review and Discussion of Cost Benefit Analysis with Update
- Additional topics as requested by the Board or Committee

# PREP Partnership | 2021 Objective

**Identify partners to invest in up to 35% (50,000 AF) of the expanded reservoir capacity to reduce the cost of PREP to Valley Water rate payers**

- Partner water supplies fills partner share of expanded Pacheco Reservoir
- Partner supplies in storage are subject to evaporative losses
- Partner withdraws supplies directly (SBCWD) or via exchange (others)



# PREP Partnership | Work to Date

5

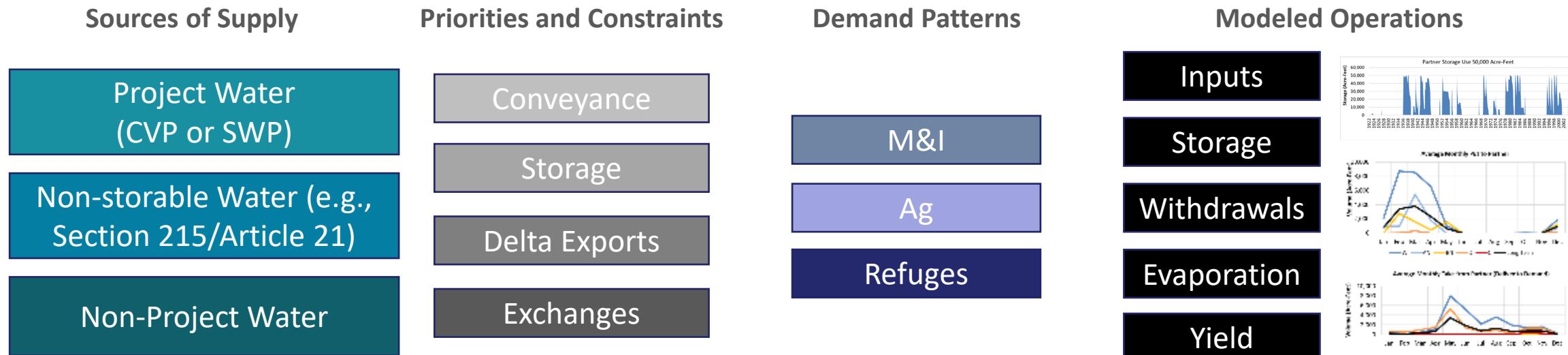
## Discussions with interested parties



# PREP Partnership | Work to Date

## Quantitative evaluation of select potential partnership scenarios

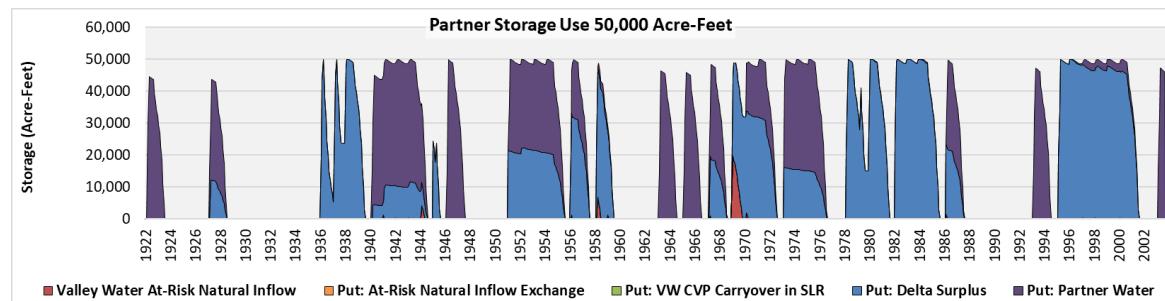
- Combination of system operations models (CalSim II, WEAP) and spreadsheet tools were developed to simulate Valley Water and Partner operations throughout an 82-year period based on the following inputs:



# PREP Partnership | Work to Date

## Economic evaluation of select potential partnership scenarios

- Layer economic analysis on top of quantitative operations analysis
- Quantify operational costs and revenues by water year type and total
- Develop framework to compare PREP partnership to other surface/groundwater storage projects based on estimated unit costs, water supply/storage, risks, and location



**Partner Mean Annual Puts**      **Mean Annual Cost**

13,048 AF

\$0

**Partner Mean Annual Takes**      **Mean Annual Revenue**

12,055 AF

\$7,338,141

**Partner Mean Annual Net Revenue**

\$7,338,141

**Partner Present Value**

\$290,896,679

**Term (yrs)**

100

**Interest Rate**

2.25%

Assemble Storage Project  
Specifications



Willow Springs  
Water Bank

Assemble Costs

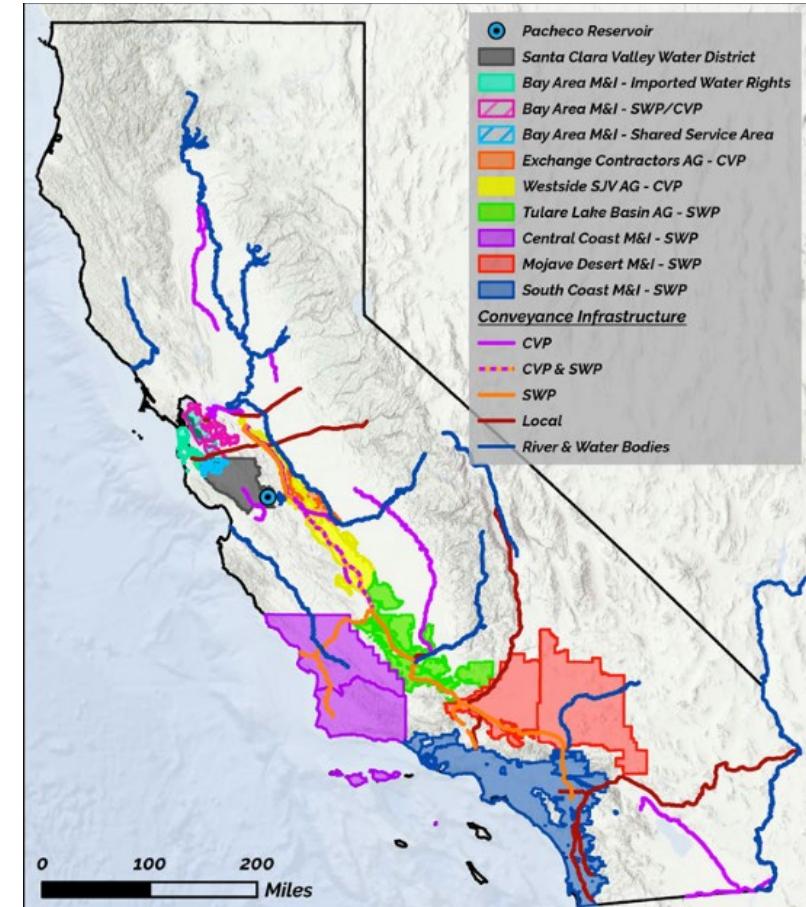
Adjust Costs to Consistent  
2021 Dollars

Compare Results

# PREP Partnership | Work to Date

- Developing regional partnership profiles
- Assessing/identifying high priority partner candidates for outreach

Partner Category	Partner Category Score	Water Type(s)	Estimated Storage Demand		
			Storage (AF)	Put (AFY)	Take (AFY)
Central Coast M&I	19	SWP	30,000	10,000	10,000
Central Coast M&I	19	SWP	Limited	Limited	Limited
South Coast M&I	18	SWP	300,000	100,000	100,000
South Coast M&I	18	SWP	90,000	30,000	30,000
South Coast M&I	18	SWP	35,000	22,500	7,500
South Coast M&I	18	SWP	80,000	22,000	20,000
South Coast M&I	18	SWP	3,000	1,000	1,000
Westside SJV AG - CVP	18	CVP, Water Rights	TBD	TBD	TBD
Tulare AG - SWP	17	SWP	TBD	TBD	TBD
Bay Area M&I	16	Water Rights	TBD	TBD	TBD



# PREP Partnership | Feedback to Date

## Varied characteristics of partners

- **Demand Pattern:** Beneficial use and demand time
- Shore up water supply reliability in dry/drought years
- **Water Type:** Store pre- and post-1914 water, SWP water, CVP water, and Delta surplus

## Valley Water Benefits to Partners

- Access to CVP and SWP supplies and connection to San Luis Reservoir
  - Increases flexibility to exchange with partners
- Advantageous exchange capacity relative to competing storage projects
- Provide flexible contract terms
  - Shorter duration
  - Less water leave-behind (than groundwater storage banks)
  - Rental vs high upfront capital requirement

## Challenges to partners

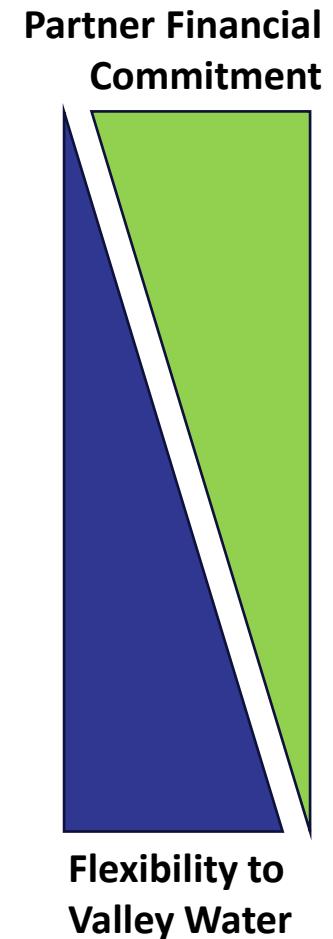
- Relative costs compared to other storage opportunities
- Upfront capital costs with a traditional partnership
- Taking on risk
  - Implementation
  - Construction
  - Future operation

# Conceptual Partnership Approaches

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## Range of options for use of storage capacity:

- **Full Project Partner**  
Pay for proportionate share of capital and O&M costs.
- **Interim Project Partner**  
Pay for less than a proportionate share of costs for a shorter duration than the project life.
- **Hybrid**  
Some upfront capital to reserve storage capacity with a fee for storage and return that is competitive with banking programs.
- **Rental**  
Annual fees for storage and return with a leave-behind component that VW could utilize internally or monetize through subsequent sale.
- **Merchant Model**  
Valley Water opportunistically acquires surplus supplies to store in PREP and then sells excess water supplies to other water entities.



# Conceptual Partnership Approaches

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## Next Steps

### Impacts to be studied:

- Costs
  - Capital Cost
  - Operational Cost
  - Groundwater production charges
- Environmental Releases
- Emergency Storage

# Water Supply Master Plan

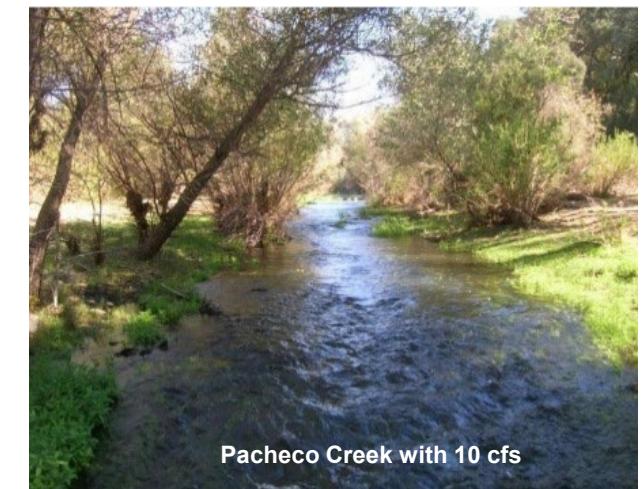
- WSMP 2050 to evaluate different projects resulting in three preferred portfolios that would ensure the reliability of Valley Water's water supply into the 2050 future.
- Estimated Project life 2035-2135
- Currently in two of the portfolios
  - 1 with partners
  - 1 without partners
- Staff recommendation is to focus on lower cost portfolio and continue planning for all projects
- Next Board engagement point
  - Certification of DLGI EIR summer 2025

# PREP Benefits

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## Primary Project Objectives

- **Increase water supply reliability and system operational flexibility** to help meet municipal and industrial (M&I) and agricultural water demands in Santa Clara County during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions
- **Increase suitable habitat in Pacheco Creek for federally threatened South-Central California Coast (SCCC) steelhead** through improved water temperature and flow conditions



# Expanded Pacheco Reservoir Benefits

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## Emergency Water Supply

*WSIP Public Benefit*



- Dedicated emergency water supply for severe droughts and Delta export outages and other emergencies
- Increases emergency water supply by acre-feet 117,480 acre-feet

## M&I Water Supply (non-emergency)



- 8,830 acre-feet in critical years (average); 5,130 acre-feet all years (average)
- Greatest water supply increases in drier water years and drought conditions

## M&I Water Quality



- 94% reduction of impaired water quality deliveries from San Luis Reservoir over analysis period

## Environmental Enhancement: Pacheco Creek Fisheries

*WSIP Public Benefit*



- Increases South Central California Coast Steelhead cohort score of 157%
- Enables development of an independent population in the Pajaro River watershed

## Environmental Enhancement: San Joaquin Watershed Wildlife Refuges

*WSIP Public Benefit*



- Increased water supplies to Delta watershed wildlife refuges
- Dedicates 2,000 acre-feet for wetlands in below-normal water years

# QUESTIONS





# Santa Clara Valley Water District

File No.: 25-0375

Agenda Date: 5/5/2025

Item No.: 4.3.

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## COMMITTEE AGENDA MEMORANDUM

### Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

#### **SUBJECT:**

Receive and Discuss Information Regarding the Status of Potential Groundwater Banking Projects.

#### **RECOMMENDATION:**

Receive and discuss information regarding the status of potential groundwater banking projects.

#### **SUMMARY:**

Semitropic Water Bank (Semitropic) is currently Valley Water's only out-of-county groundwater banking program, and Valley Water depends on Semitropic to meet its storage needs in years with excess imported water supplies and to meet its dry year demands. Valley Water's contract with Semitropic is set to expire in 2035, and current Water Supply Master Plan analysis suggests that Valley Water needs to maintain access to groundwater banking storage in the future to meet future water supply needs. Diversification of groundwater banking investments and an increase in the ability to deliver water to storage ("put") and ability to retrieve banked supplies ("take") would also reduce risks and optimize supplies available through Valley Water's existing imported water contracts. However, risks and challenges associated with groundwater banking continue to be identified as staff evaluates future participation in new and existing projects. These include the implementation of Sustainable Groundwater Management Act (SGMA) requirements at banks in subbasins with historical lowering of groundwater levels; institutional, technical and political challenges for securing approvals and operational agreements; conveyance capacity limitations; and water quality issues. The Committee was updated at its November 4, 2024 and March 24, 2025 meetings on SGMA and groundwater banking issues for the Kern County subbasin.

In October 2023's Water Storage Exploratory Committee meeting, staff highlighted two groundwater banking projects being evaluated for potential investments: the Sacramento Regional Water Bank and Antelope Valley-East Kern Water Bank (Phase 1 and Phase 2). Staff continues to coordinate with the agencies developing the projects, and updates are provided below. In addition, staff continues to coordinate and hold discussions with parties across California that are currently planning or developing banking programs, compile new project information, and evaluate project operations and benefits to Valley Water.

#### **Sacramento Regional Water Bank**

The Sacramento Regional Water Authority (RWA) is a Joint Powers Authority representing approximately two dozen water agencies and affiliates in the greater Sacramento region, including the City of Roseville, the City of Sacramento, and others. Previously, agencies within the region supported dry year transfers to Valley Water and other south-of-Delta (SOD) entities. The Sacramento Regional Water Bank would coordinate and expand the conjunctive use practices of its member agencies within the local groundwater basins.

In 2023, Valley Water staff drafted a pilot program through the RWA and engaged with approving agencies to understand the review and approval process for implementing the pilot program. Staff learned of potential challenges specifically relating to the feasibility of storing project supplies north-of-Delta. The pilot program was put on hold until these issues can be resolved. Currently, the RWA continues to engage with the United States Bureau of Reclamation (Reclamation) to seek recognition as an Acknowledged Water Bank for banking and recovering Central Valley Project (CVP) water for the proposed project.

### **Antelope Valley-East Kern Water Bank (Phase 1 and Phase 2)**

In 2019, Antelope Valley-East Kern Water Agency (AVEK) executed an agreement with Metropolitan Water District (Metropolitan) allowing Metropolitan to store up to 280,000 AF of its State Water Project (SWP) supplies in Phase 1 of the High Desert Water Bank, with planned put and take capacity of 70,000 AF annually. Recently, water quality and other operational concerns were identified. Construction of the project is currently ongoing. AVEK has begun recharging water on behalf of Metropolitan but does not anticipate the ability to recover water from the project until a later year.

AVEK had proposed to build a separate facility as Phase 2 of the High Desert Water Bank. Valley Water began discussion with AVEK on participation in Phase 2 of the project and drafted tentative terms for a partnership in 2023. However, AVEK has since put the project on hold, citing further internal evaluation of the project.

### **Other Projects**

Staff continues to evaluate a list of other potential projects, including Willow Springs Water Bank (WSWB). WSWB is also located within AVEK's boundaries and has been conditionally awarded grant funding through the California Proposition 1 Water Storage Investment Program. The goal of the project is to provide ecosystem and emergency response public benefits through infrastructure upgrades to conveyance systems along with building out of groundwater recharge basins and extraction wells. In November 2024, Valley Water expressed a non-binding interest in securing storage capacity at the water bank, and WSWB staff is currently developing program parameters based on the received interest. Staff will provide additional updates as information on the project becomes available.

Staff has begun evaluating potential extension of the Semitropic agreement. Valley Water continues to follow SGMA developments that may impact future banking operations within Kern County, where

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Semitropic operates. Similarly, a number of proposed banks are being planned or evaluated in areas with historical declines in groundwater levels, and staff is assessing the impacts local pumping and the implementation of SGMA may have in future groundwater banking programs.

**ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:**

There are no environmental justice and equity impacts associated with this item.

**ATTACHMENTS:**

Attachment 1: PowerPoint

**UNCLASSIFIED MANAGER:**

Vincent Gin, 408-630-2633

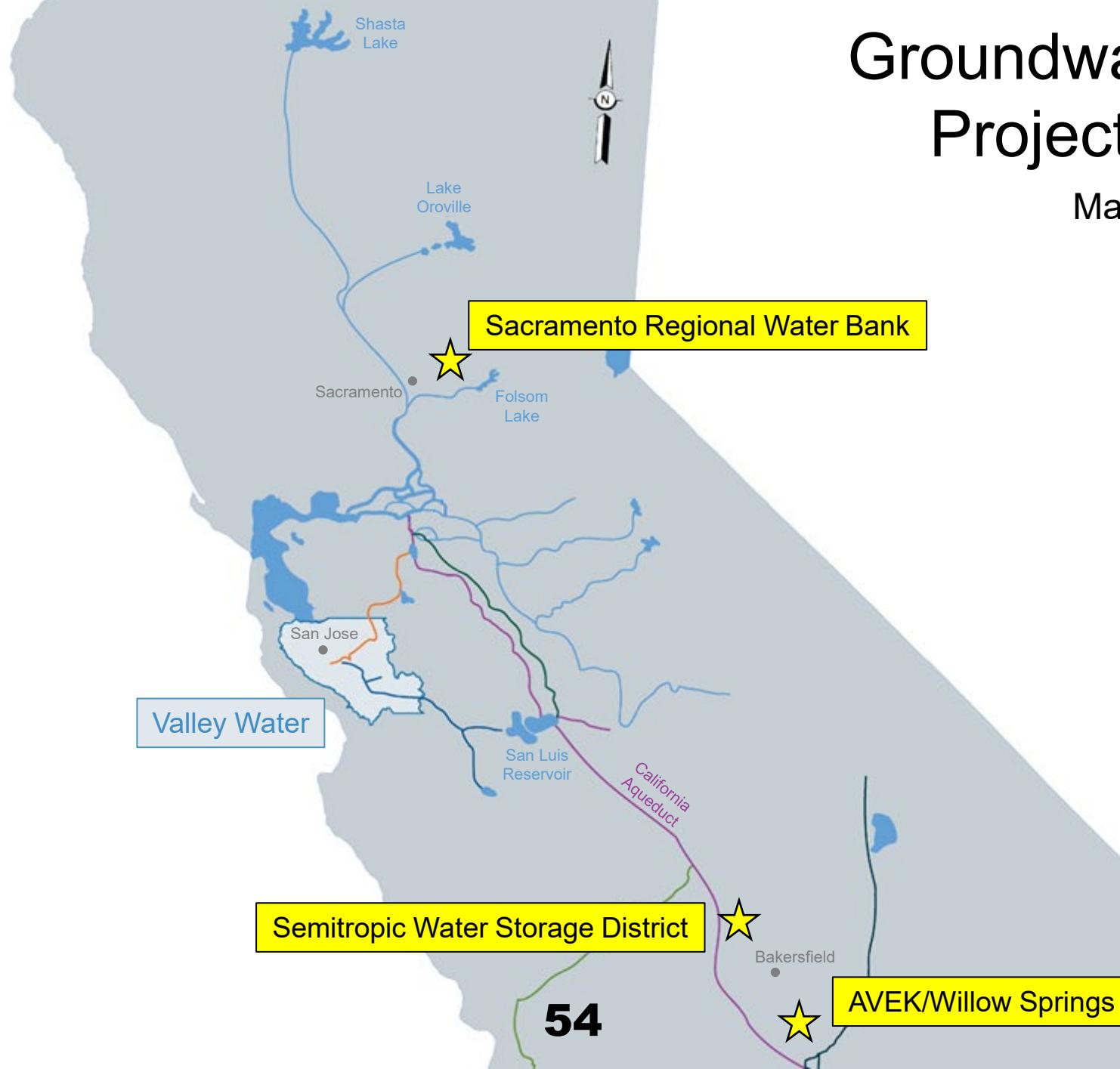
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# Update on Potential Groundwater Banking Projects

Water Supply and Demand Management Committee, May 5, 2025

# Groundwater Banking Projects Update

May 5, 2025





# Santa Clara Valley Water District

File No.: 25-0423

Agenda Date: 5/5/2025

Item No.: 4.4.

## COMMITTEE AGENDA MEMORANDUM Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

### **SUBJECT:**

Receive Information on the Water Use Projections, Water Demand Elasticity and Customer Affordability Study and Provide Feedback to Staff.

### **RECOMMENDATION:**

Receive information on the Water Use Projections, Water Demand Elasticity and Customer Affordability Study (Study), including the Study scope, objectives, status updates, and provide feedback to Staff.

### **SUMMARY:**

Santa Clara Valley Water District (Valley Water) has engaged consultants to: validate and/or suggest refinements to current water use projections for Valley Water-managed water use; perform a water demand elasticity analysis; and determine the affordability of water to residents and businesses within Santa Clara County. The majority of County residents and businesses receive water service from a retailer, while Valley Water acts as the water wholesaler. Study results may impact future Valley Water groundwater charges.

### Background:

The Financial Planning and Revenue Collection office manages long-term forecast models and the annual rate setting process for the Water Utility. Water charges are adopted annually. Based upon feedback received from the Board during previous long-term forecasting cycles, staff decided to pursue a Study to inform future rate setting cycles.

The consultants - Raftelis Financial Consultants, Inc. and Hazen and Sawyer - are tasked to provide analyses for the following Study scope and objectives:

1. Analyze water use projections in Santa Clara County, for retailers, their direct customers, and private well owners to better determine Valley Water-managed water use projections. Valley Water-managed water use translates to revenue for the Water Utility.
2. Prepare a water demand elasticity analysis to better understand how rates impact water

demand.

3. Determine the affordability of water provided by Valley Water to Santa Clara County residents and businesses now and based on future rate projections.

Valley Water staff and the consultants both recognize that the scope of this Study presents unique challenges, one of which is obtaining detailed water usage data from non-Valley Water sources.

Staff anticipates technical memorandums for each of the three (3) analyses to be completed, followed by a final report documenting the study.

Staff anticipates that Study updates will be presented to the Water Supply and Demand Management Committee periodically with final Study results presented to the full Board.

Study Updates:

Task One is largely completed. Results will be presented to the Committee along with a PowerPoint. A technical memorandum has been drafted and will be included as part of the final report documenting the study. The key takeaways are:

- Valley Water's approach to projecting water use is consistent with peers
- Forecast-to-actual water use has been largely accurate, with reduced variance in recent years
- High level statistical analyses demonstrate that the current approach yields reasonable ranges for near-term demand
- Water use overall continues to trend downward
- Tools exist to refine the forecasting method, if desired

Tasks Two and Three are currently underway; the Committee can expect future updates on preliminary results.

Staff seeks feedback from the Committee regarding timing for the next Board update.

**ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:**

Further analysis is necessary to determine the environmental justice and equity impacts associated with results of the Study. Updated environmental justice and equity determinations will be included in future Study update to the Water Supply and Demand Management Committee and ultimately the Board.

**ATTACHMENTS:**

Attachment 1: PowerPoint

**UNCLASSIFIED MANAGER:**

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File No.: 25-0423

Agenda Date: 5/5/2025  
Item No.: 4.4.

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Darin Taylor, 408-630-3041

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# Valley Water

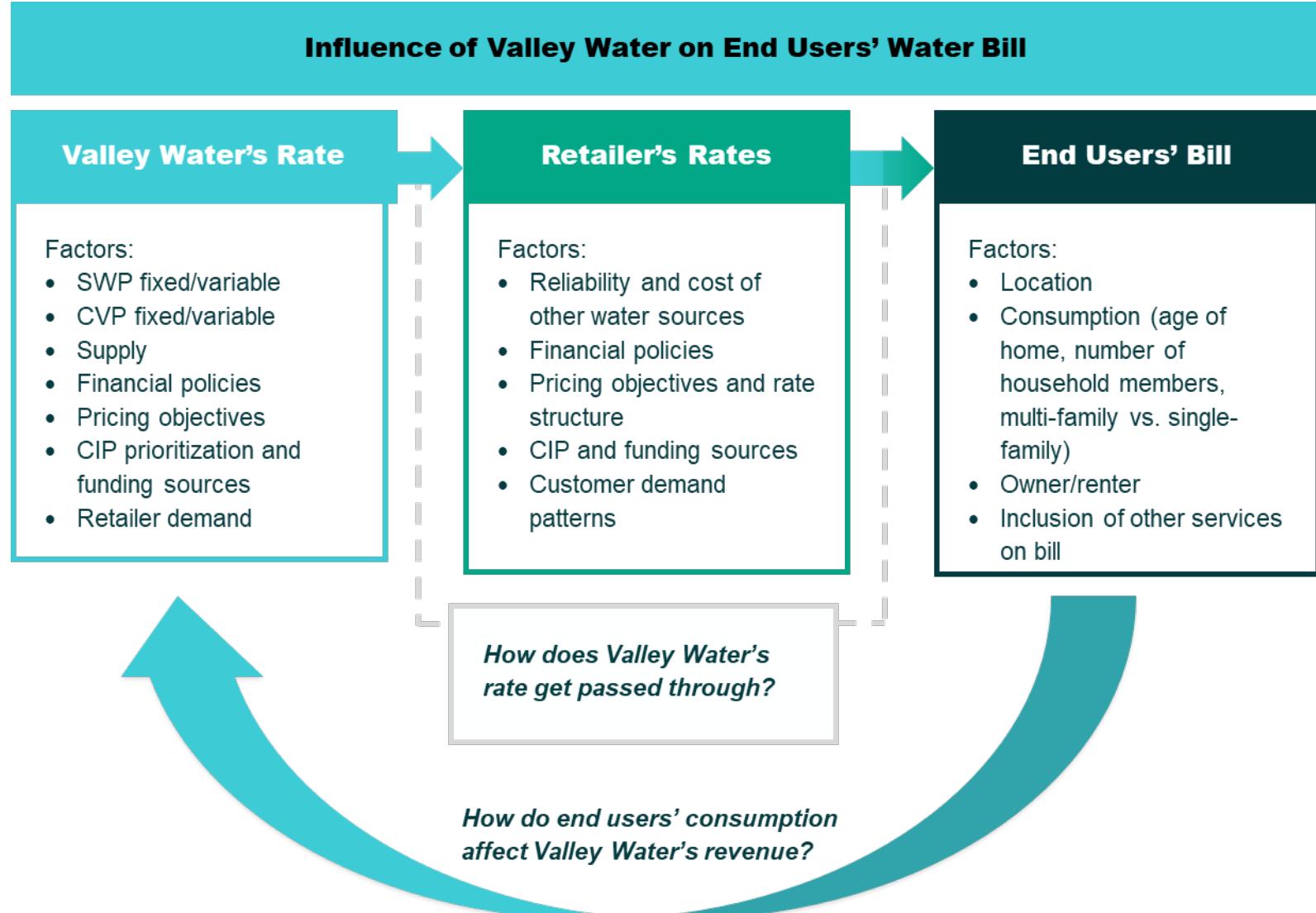
**Water Use Projections,  
Water Demand Elasticity,  
and Customer Affordability Study**

Water Supply and Demand Management Committee Meeting

May 5, 2025

# Project Goals

- Identify how Valley Water's rates impact water demand (elasticity) and affordability of water service in Santa Clara County
- Validate and/or refine water demand forecasting for purposes of annual rate setting and long-term capital planning



# Task 1: Review and Make Recommendations for Water Use Projections

- Review the existing District-managed water demand forecast which informs Valley Water's rate setting process
- Review how expected changes in the service area are utilized
- Evaluate the performance of prior water use projections
- Analyze alternative approaches against the current approach
- Identify potential improvements to Valley Water's demand forecasting
- Consider other quantitative and qualitative tools to help inform annual demand forecasting

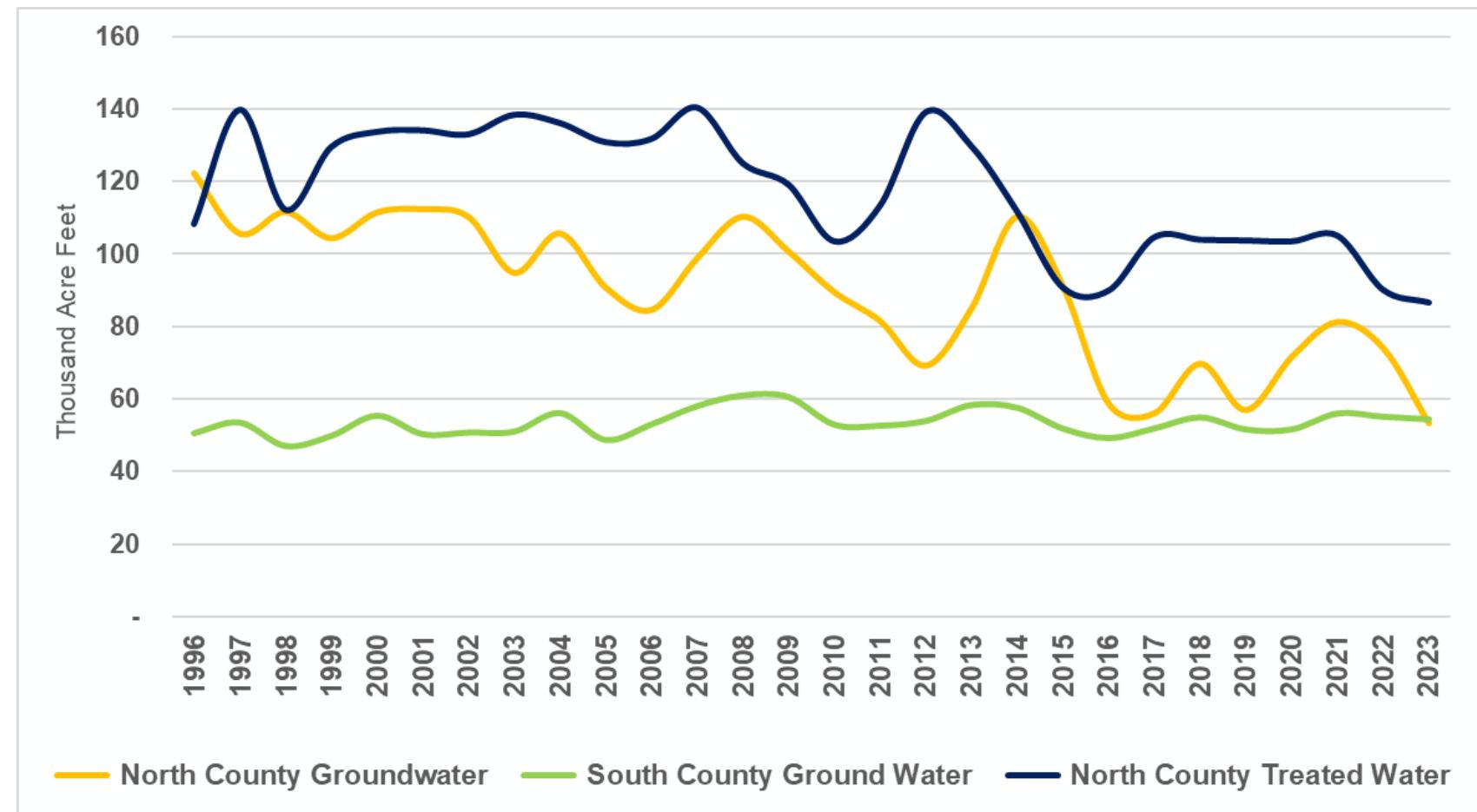
# Existing Forecasting Method (Summarized)

- ***Rate Setting Year*** (Year 1): Uses historical demand weighted toward prior year actuals, and staff's institutional knowledge and discussions with Retailers
- ***Interim Years*** (Years 2-3): Uses historical demand, the most recent year's hydrology, and staff's institutional knowledge and discussions with Retailers
- ***Longer-Term*** (Year 4 and beyond): Builds from the *Interim Years* forecast to align with incremental growth rate assumptions from the Urban Water Management Plan (UWMP)

# Historical Water Demand – Valley Water

## Observations:

- South County Groundwater demand is stable over time,
- Treated Water and North County Groundwater have declined over time (per capita reductions, drought, other supplies)
- North County Groundwater has declined by roughly half since 1996
- Water usage has not trended upward with population growth for all water types
- Drought periods result in lower demands after a return to normal hydrology (i.e. demand hardening at lower levels)



# Benchmarking to Peer Agencies

- Reviewed demand forecasting approach and water use trends against SFPUC, SDCWA, EBMUD, and MWD
- For rate setting projections, peer utilities utilize a similar approach to Valley Water's that combines historical data with forward-looking adjustments on annual climate, drought conditions, and local growth estimates
- Similar trends are observed in water sales over time

*SFPUC: San Francisco Public Utilities Commission*

*SDCWA: San Diego County Water Authority*

*EBMUD: East Bay Municipal Utility District*

*MWD: Metropolitan Water District of Southern California*

# Peer Agency Water Demand Trends – Annual Change

Agency	2015	2016	2017	2018	2019	2020	2021	2022	2023	2015 - 2023 % Change
<b>MWD</b>	N/A	-16%	-7%	5%	-12%	-1%	17%	4%	-22%	<b>-31%</b>
<b>Valley Water</b>	N/A	-15%	7%	8%	-7%	7%	7%	-9%	-12%	<b>-16%</b>
<b>SFPUC</b>	N/A	-13%	8%	11%	-3%	1%	2%	-5%	-8%	<b>-7%</b>
<b>EBMUD</b>	N/A	-7%	7%	7%	-1%	3%	0%	-7%	-6%	<b>-5%</b>
<b>SDCWA</b>	N/A	-19%	5%	-5%	-5%	-6%	9%	7%	-15%	<b>-3%</b>

# Alternatives Analysis Methods

- Objective:
  - › Compare results against Valley Water's existing approach
  - › Support Valley Water staff in identifying a range of near-term water demand estimates
  - › Provide a foundation / forensic analysis for more complex modeling that could be conducted in the future

# Water Demand Forecasting – Alternative Methods

## 1. Weather Normalization

- › Identify what volume of sales would be expected in a typical water year using historical water demand, annual rainfall, and temperature

## 2. Regression

- › Identify the relationship between the four-year moving average demand and rainfall and drought

## 3. Time Series Analysis

- › Uses a moving-average and water year categorization

*Disclaimer: All analyses are high-level, exploratory exercises, using limited data for forensic and illustrative purposes. Developing a robust water demand forecast would require additional data collection, preprocessing, and inclusion of more variables*

# Comparison of Alternative Methods – FY 2025 District-Managed Water in Thousand Acre-Feet (TAF)

FY 2025 Ranges	Valley Water Method	Time Series Method	Regression Method	<i>Average of Methods</i>
Low Range	<b>208</b>	187	221	205
Medium Range	<b>217</b>	198	230	215
High Range	<b>223</b>	204	234	220

Ranges are delineated by annual precipitation levels and classified as low (<33rd percentile), median (33rd–67th percentile), and high (>67th percentile).

# Key Takeaways

- Valley Water's Approach is consistent with peers
- Forecast-to-Actual water sales have been largely accurate, with reduced variance in recent years
- High level statistical analyses demonstrate that the current approach yields reasonable ranges for near-term demand
- Water sales overall continue to trend downward
- Tools exist to refine the forecasting method, if desired

# Potential Refinements

- Improved referencing of data sources and explicit forecasting assumptions
- Alignment of long-term demand forecast with current Urban Water Management Plan projected growth
  - › i.e., incremental growth rates
- Incorporate future anticipated conservation by water type (i.e., Treated Water, North County Groundwater, South County Groundwater, Agricultural water use)
- Additional statistical methods to supplement the existing approach

# Other Considerations

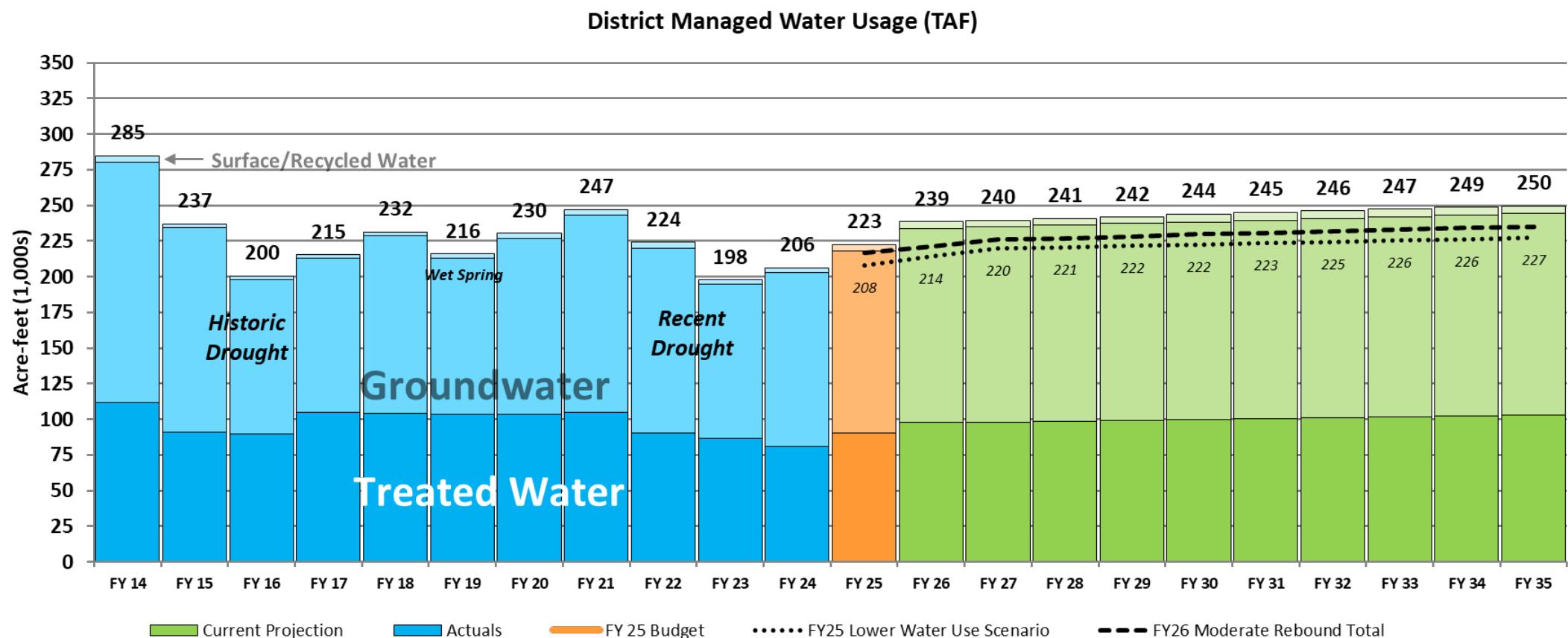
- Retailer specific adjustments in demand projections
- Consideration of spatial and sector segmentation
- Further analysis on drought rebound
- Treated Water contract provisions
- Retailer Urban Water Use Objectives
- Reserves policies

# Next Steps

- Tasks:
  - Water Use (Demand) Projections:
    - Draft of technical memorandum completed
  - Elasticity Analyses
    - Modeling and developing elasticities for Treated Water and Groundwater by zone, specific to Retailer
  - Affordability Analyses
    - Modeling local/statewide affordability metrics – AR20, hours at minimum wage, and lowest quintile income for Santa Clara county, by Retailer
- Next:
  - Elasticity and Affordability Updates to the WSDM Committee



# District Managed Water Usage





# Santa Clara Valley Water District

File No.: 25-0401

Agenda Date: 5/5/2025

Item No.: 4.5.

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## COMMITTEE AGENDA MEMORANDUM Water Supply and Demand Management Committee

Government Code § 84308 Applies: Yes  No   
(If "YES" Complete Attachment A - Gov. Code § 84308)

### **SUBJECT:**

Review and Discuss the Water Supply and Demand Management Committee (WSDMC) Work Plan and Upcoming Discussion Items.

### **RECOMMENDATION:**

Review and discuss the WSDMC Work Plan and upcoming discussion items.

### **SUMMARY:**

Under direction of the Clerk, Work Plans are used by Board Committees to increase Committee efficiency, provide increased public notice of intended Committee discussions, and enable improved follow-up by staff. Work Plans are dynamic documents managed by Committee Chairs and are subject to change.

### **ENVIRONMENTAL JUSTICE AND EQUITY IMPACT:**

The Committee's Work Plan is not subject to environmental justice and equity impact analysis.

### **ATTACHMENTS:**

Attachment 1: 2025 WSDMC Work Plan

### **UNCLASSIFIED MANAGER:**

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## Water Supply and Demand Management Committee 2025 WORKPLAN

Task	Agenda Item	January	February	March	April	May	June	July	August	September	October	November	December
<b>FY 25 Drought Preparation</b>													
1.1	Drought Response Plan												
<b>FY 23 WSMP Strategy 1: Secure Existing Supplies - 99,000 AF Conservation by 2030</b>													
2.1	Water Conservation Savings Model/Annual Water Conservation Savings												
2.2	Water Conservation as a Way of Life recommendations (including water waste restrictions)												
2.3	New Programs (Lawn Busters, Pilot programs, landscape design assistance, demonstration garden, + affordability discussion/supporting underserved communities)												
2.5	SCW Funding (LRP & Demo Garden)												
2.6	Collaboration with Retailers+outreach, including Renters/Landlords												
2.7	Water Use Demand, Elasticity, and Rate Affordability Study												
<b>FY 24 WSMP Strategy 2: Increase Water Conservation (109,000 AF) and Stormwater Capture (1,000 AF) by 2040</b>													
3.1	Investments in no-regrets package, including stormwater resource plan												
3.2	Stormwater Capture/ FloodMAR												
3.3	Find opportunities to ensure new development has improved water wise features (MWENDO, land use coordination)												
<b>FY 24 WSMP Strategy 3 Optimize the Use of Existing Supplies and Infrastructure (SGMA/groundwater management and storage projects)</b>													
4.1	Sustainable Groundwater Management Act (SGMA) - annual update												
4.2	South County Recharge												
4.3	Los Vaqueros Reservoir Expansion Project												
4.4	Sites Reservoir Expansion												
4.5	BF Sisk Dam Raise												
4.6	Groundwater Banking Opportunities												
4.7	Semitropic Groundwater bank												
4.8	Pacheco Reservoir Expansion Project												

Red - item added

✗ - Item moved or deleted

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