



# The meeting teleconference will begin shortly

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**PASSCODE: 3802020**

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Please mute your microphone during the meeting to reduce background noise. Click on the microphone icon to unmute your microphone if needed.



# Call to Order

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Board of Directors Workshop - Resources  
Thursday, October 7, 2021

*Chairperson – Director Hayes*  
*Vice-Chair – Director Harrison*

# Introductions

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*Following the introduction of Directors and District staff, participants may use this time to state their name and agency/affiliation in order to be included in the formal record of attendees.*

# Public Comment

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Any person may address the Board on matters within its jurisdiction.

- *Please use the chat feature on the Zoom toolbar or digitally raise your hand to let the moderator know you would like to make a comment.*



# Summary of Previous Meeting (Pg. 3)

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Board of Directors Workshop – Resources – September 2, 2021

# Discussion Item 4.1 (Pg. 9)

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**Bob Tincher, PE, MS** – Chief Water Resources Officer/Deputy GM

Consider Agreement to Allow Inclusion of Sites Reservoir Costs on the State Water Project Statement of Charges

## **Staff Recommendation**

Authorize staff to place this agreement on an upcoming Board of Directors agenda for consideration.

# Sites Reservoir is an Extension/Enhancement of the State Water Project

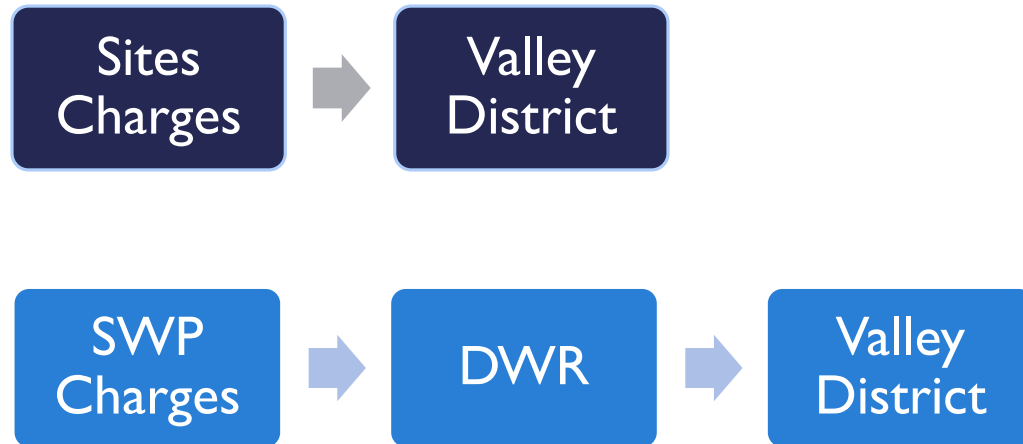
Sites would not be feasible for Valley District without the existing SWP facilities to transport the water.



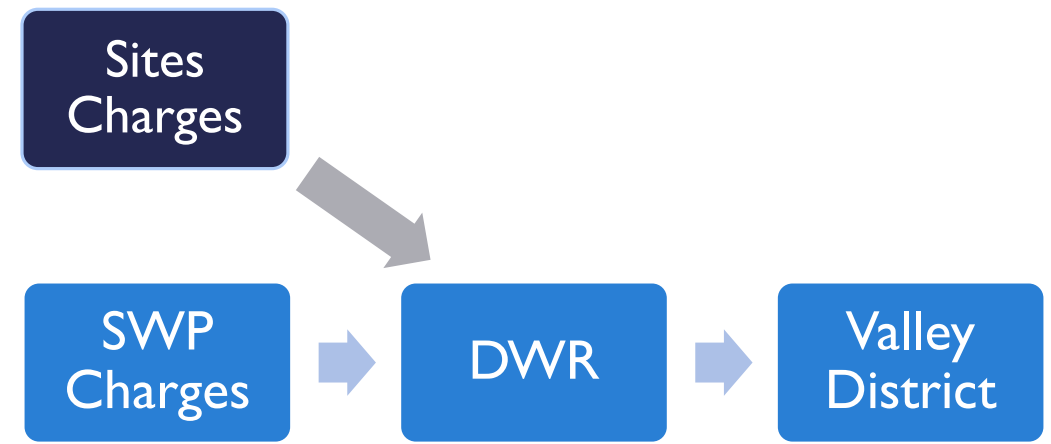
# Proposed Agreement

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## BEFORE AGREEMENT



## AFTER AGREEMENT





# Director Comments and Discussion

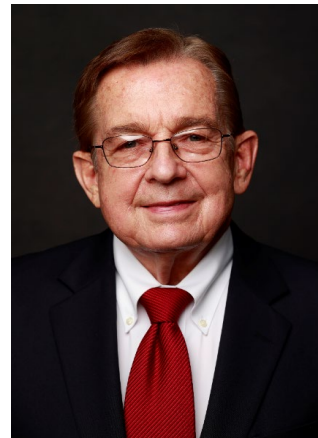
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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Authorize staff to place this agreement on an upcoming Board of Directors agenda for consideration.

# Discussion Item 4.2 (Pg. 25)

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**Bob Tincher, PE, MS – Chief Water Resources Officer/Deputy GM**

Presentation of the Results from the Study to Determine Whether Spills from the Big Bear Valley Water Sustainability Project Can Be Captured by the Enhanced Recharge Project

**Staff Recommendation**

Receive and file



# Evaluating Valley District Benefit from the Replenish Big Bear Project

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# Big Bear Lake

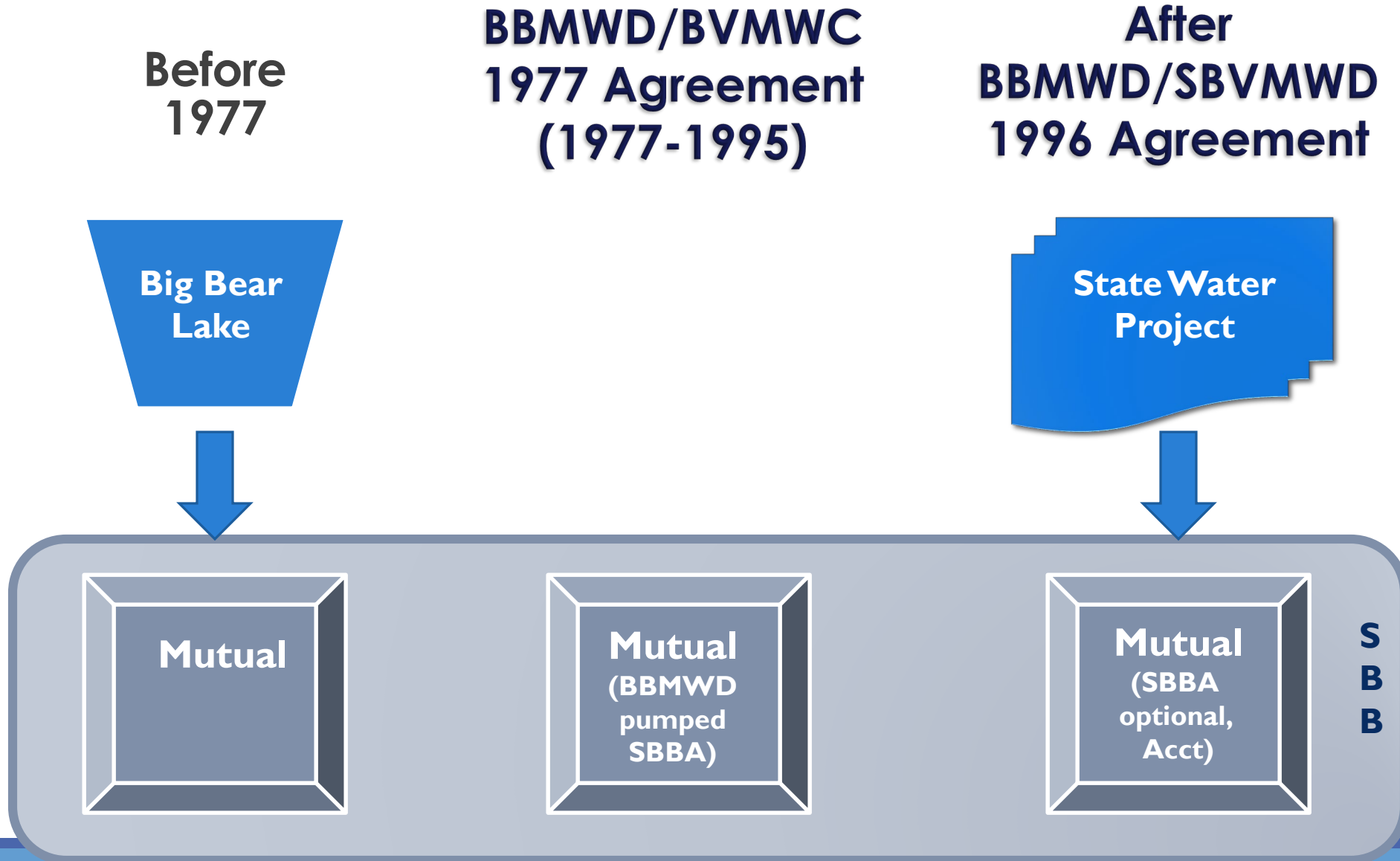
Dam constructed by Bear Valley Mutual Water Company (Mutual) in 1885.

Big Bear MWD purchased Bear Valley Dam and the right to deliver Mutual another source of water instead of, or “in-lieu” of, lake releases (1977).

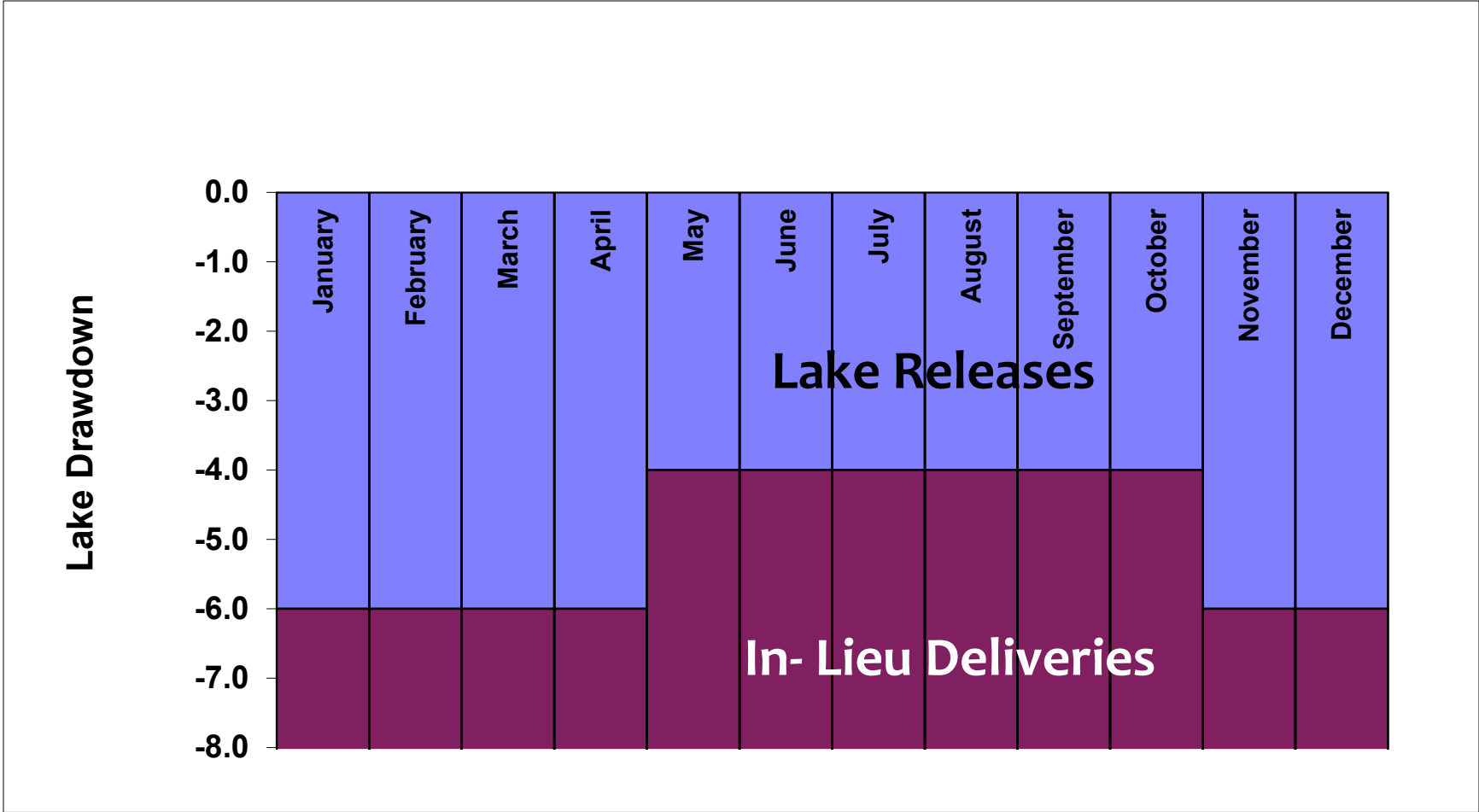
Big Bear MWD agrees to purchase SWP water from Valley District to deliver to Mutual (1996)



# BBMWD Goal: Reduce releases from Big Bear Lake



# Lake Release Policy



# Replenish Big Bear

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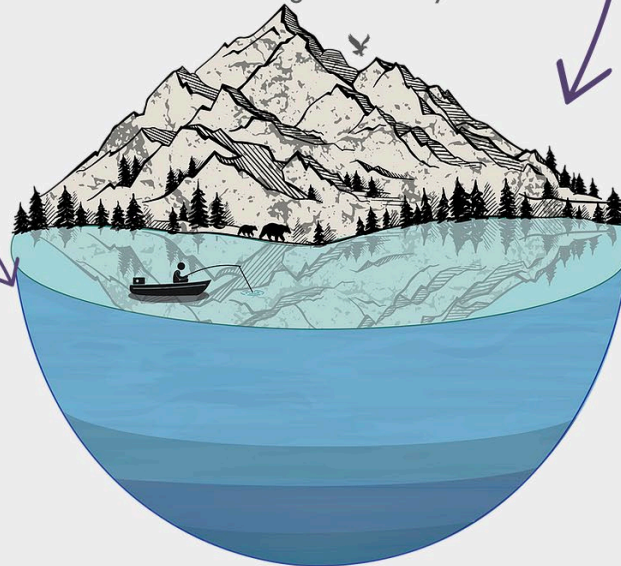
SUSTAINABLE, DROUGHT-  
PROOF WATER SUPPLY

**600**  
MILLION  
GALLONS

of additional clean water produced  
each year to supplement supplies in  
Big Bear Valley

REPLENISHED  
LAKE LEVELS

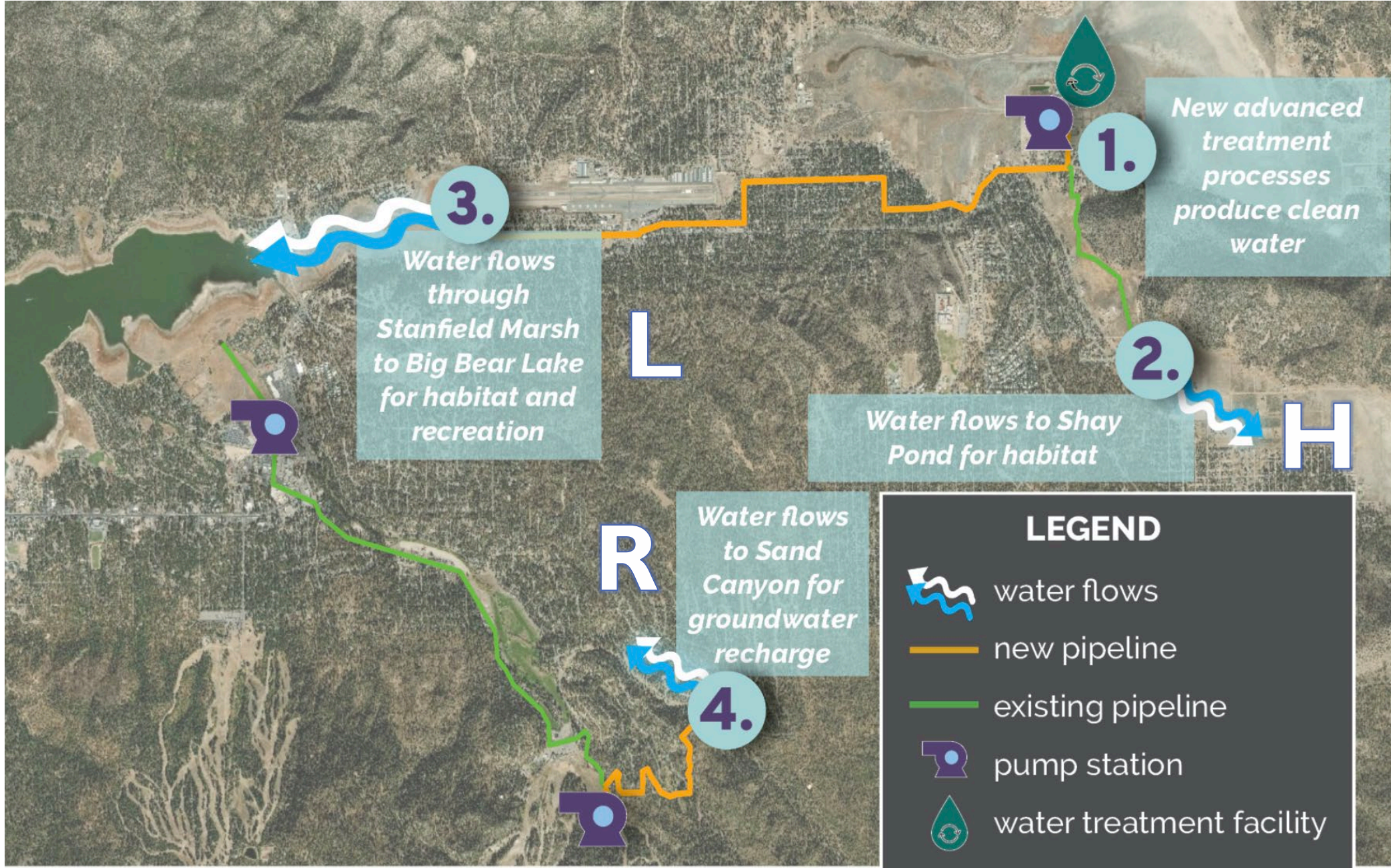
up to  
**5**  
FEET  
higher in  
dry years



PROTECTION FOR  
DRINKING WATER  
SUPPLIES

up to  
**20**  
PERCENT  
of our area's needed  
groundwater supply sustained,  
which is the Valley's sole  
source of drinking water







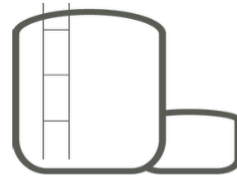
# Proposed infrastructure upgrades

Federal and state funding is being pursued to make the necessary improvements to provide Big Bear Valley with a reliable, high quality water source. Proposed infrastructure improvements include:



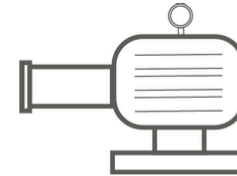
## NEW & EXTENDED PIPELINES

New pipeline and extensions to existing pipeline will be constructed to deliver water to Shay Pond, Stanfield Marsh, and Sand Canyon.



## WASTEWATER TREATMENT FACILITY UPGRADES

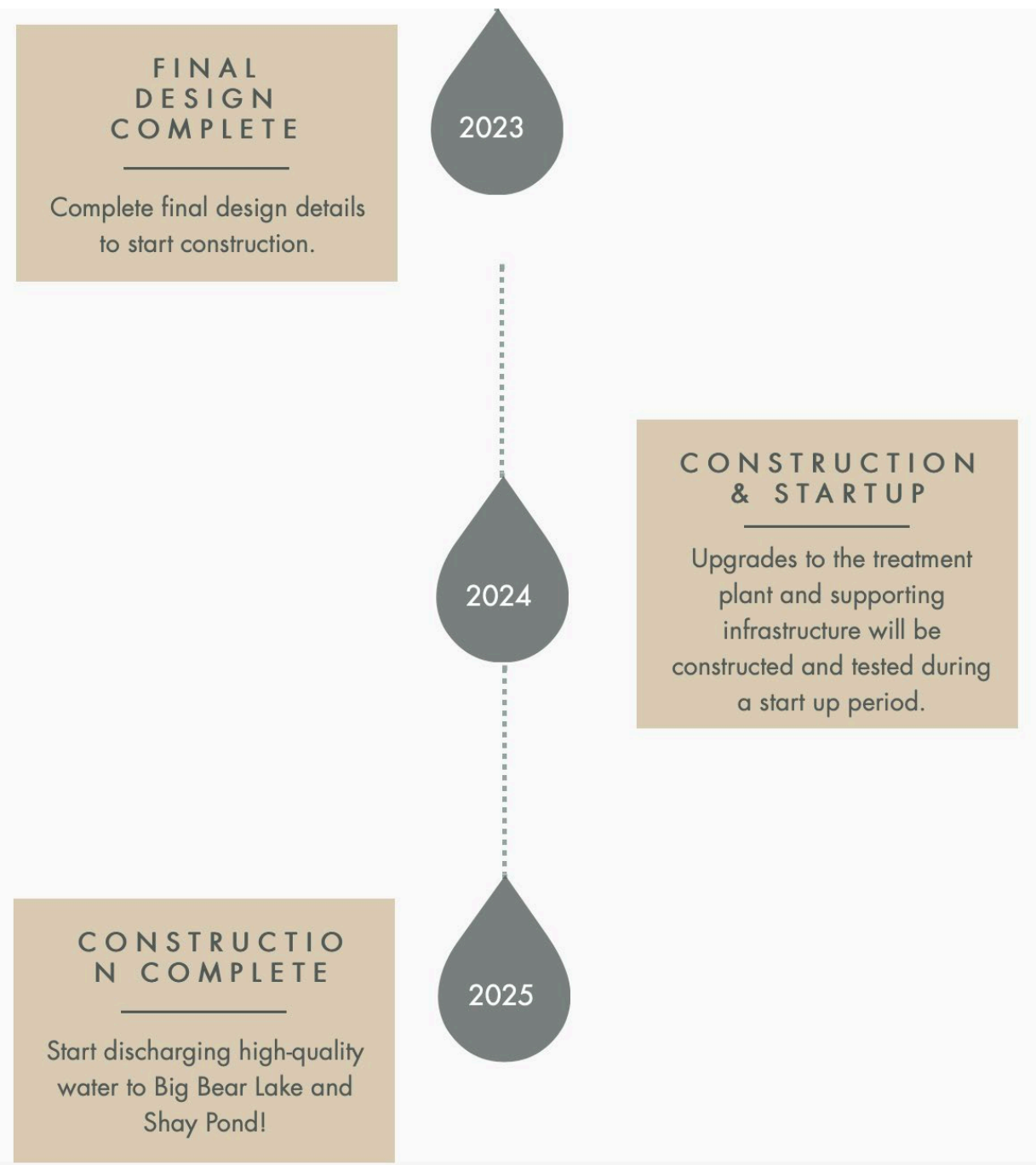
Upgraded advanced water treatment technology will purify water to exceed the highest water quality standards.



## NEW PUMP STATION

Two new pump stations will direct purified water to Shay Pond and Stanfield Marsh.

# Schedule



A NEW LEGACY OF



WATER SUSTAINABILITY

REPLENISH  
— *Big Bear* —

Working today to secure water for a  
*thriving Big Bear Valley*  
tomorrow

**Will the project benefit the Valley District service area?**

# Valley District Funded a Study to Evaluate the Possible Benefits

The Board authorized this study in February 2019

## Evaluate Spills from Big Bear Lake

### Summary Report

Prepared for:

San Bernardino Valley Municipal Water District

June 30, 2021

**GEOSCIENCE**

GEOSCIENCE Support Services, Inc. | P (909) 451-6650 | F (909) 451-6638  
620 Arrow Highway, Suite 2000, La Verne, CA 91750 | Mailing: P.O. Box 220, Claremont, CA 91711

[www.gssiwater.com](http://www.gssiwater.com)

# Scope of Work

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Task 1 – Develop Model

Task 2 – Estimate lake release and benefits without Project

Task 3 – Can the proposed Valley District stormwater capture program (Enhanced Recharge and Rubber Dam) capture the additional release amounts with the Project?

Task 4 – If all spills are not captured, explore Lake Release Schedules that would enable Valley District to capture as much of the spills as possible

Task 5 - Prepare Final Report

Task 6 - Project Management and Meetings





# Lake Operating Rules

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Description	Water Supply (BVMWC)	Environment (Fish)	Public Safety (Flood Control)	Releases in Dry Years to Maximize Recharge
Current (in use today)	X	X	X	
Option - Revised	Same	Same	Eliminate drawdown requirements in dry years	
Option - Optimized	Builds on Current or Revised, see Alternatives			X



# Alternatives

Operational Alternatives	Lake Operating Rules	Project Alternative Assumption
P1 - Project Alternative 1	Current	<ul style="list-style-type: none"> <li>2,000 acre-ft per year of reclaimed water into the Lake (Stanfield Marsh) L</li> </ul>
P2 - Project Alternative 2	Current	<ul style="list-style-type: none"> <li>2,000 acre-ft per year of reclaimed water into the Lake (Stanfield Marsh) L</li> <li>120 acre-ft per year of lake withdrawals for golf course irrigation as indirect recharge R</li> </ul>
P3 - Project Alternative 3B	Current	<ul style="list-style-type: none"> <li>80 acre-ft per year of reclaimed water to the Stickleback Pond E</li> <li>1,920 acre-ft per year of reclaimed water into the Lake (Stanfield Marsh) L</li> <li>120 acre-ft per year of lake withdrawals for golf course irrigation as indirect recharge R</li> </ul>
P4 - Project Alternative 4	Revised	<ul style="list-style-type: none"> <li>80 acre-ft per year of reclaimed water to the Stickleback Pond E</li> <li>1,920 acre-ft per year of reclaimed water into the Lake (Stanfield Marsh) L</li> <li>120 acre-ft per year of lake withdrawals for golf course irrigation as indirect recharge R</li> </ul>

# Current Facilities, No Enhanced Recharge or Riverside North Aquifer Storage and Recovery Project

Diversion rate: 200 cfs

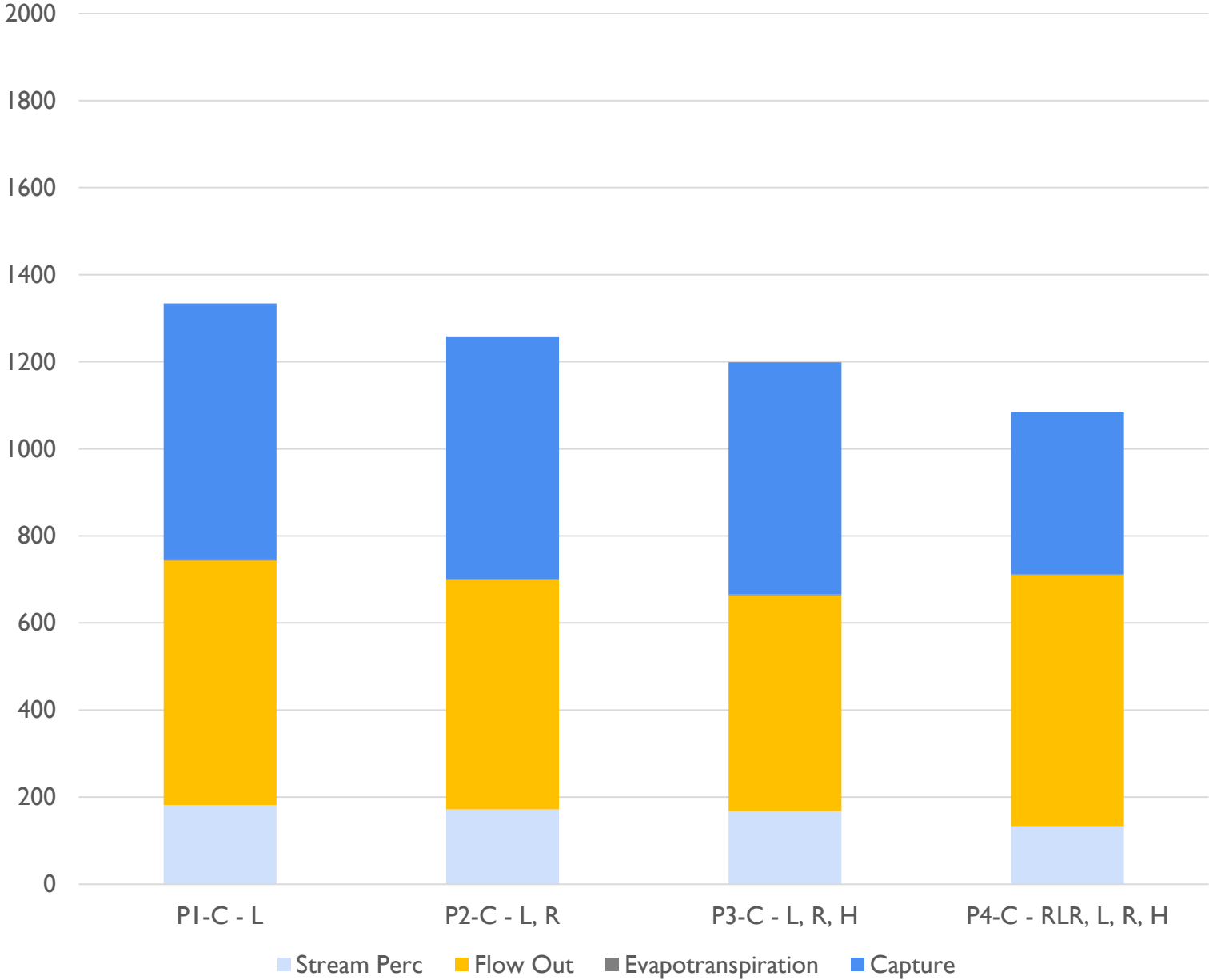
H = Habitat

L = Flow to the Lake

R = Recharge in Big Bear area

RLR = Revised lake operating rules

Table I - 2



# New Facilities Enhanced Recharge or Riverside North Aquifer Storage and Recovery Project

Diversion rate: 500 cfs

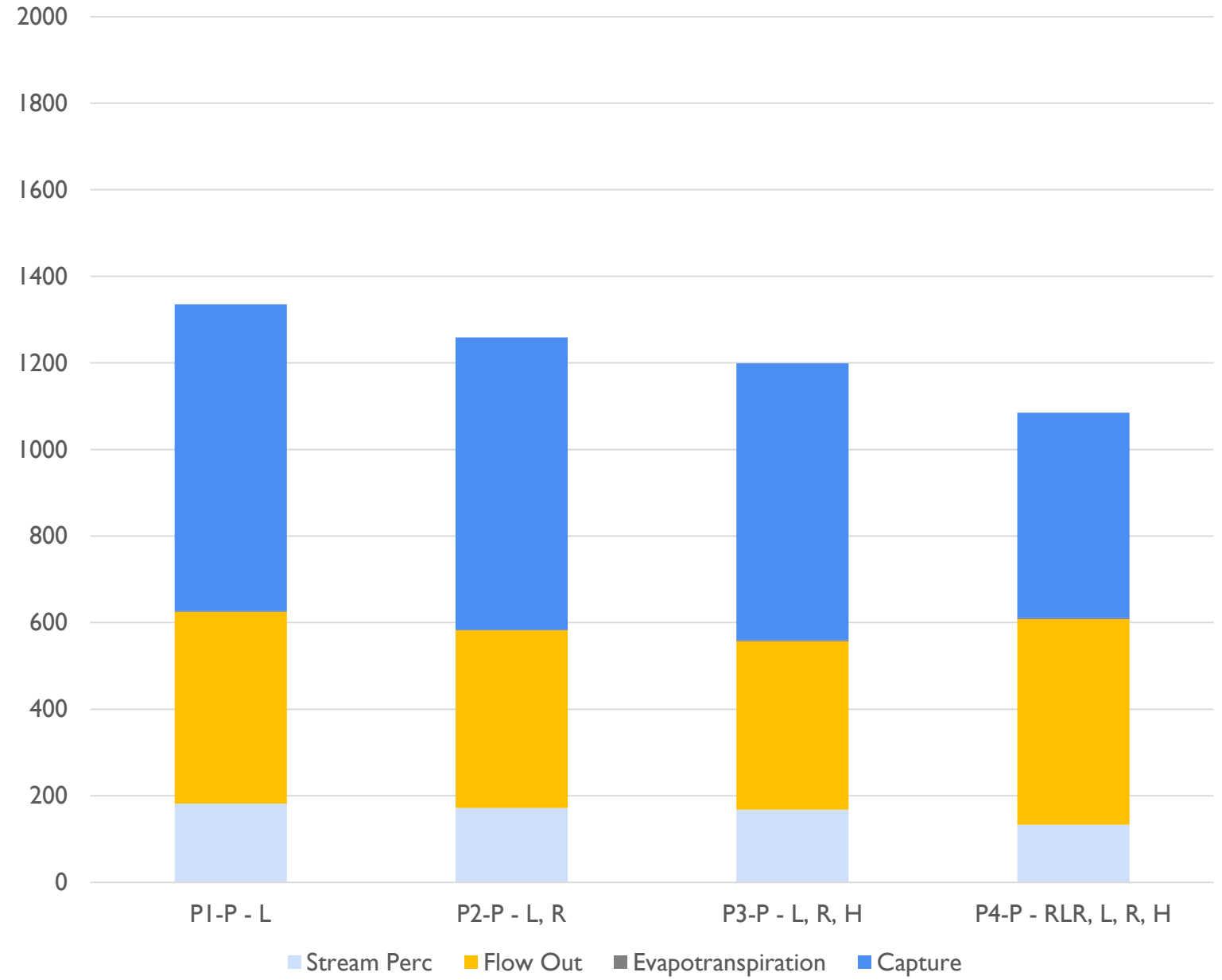
H = Habitat

L = Flow to the Lake

R = Recharge in Big Bear area

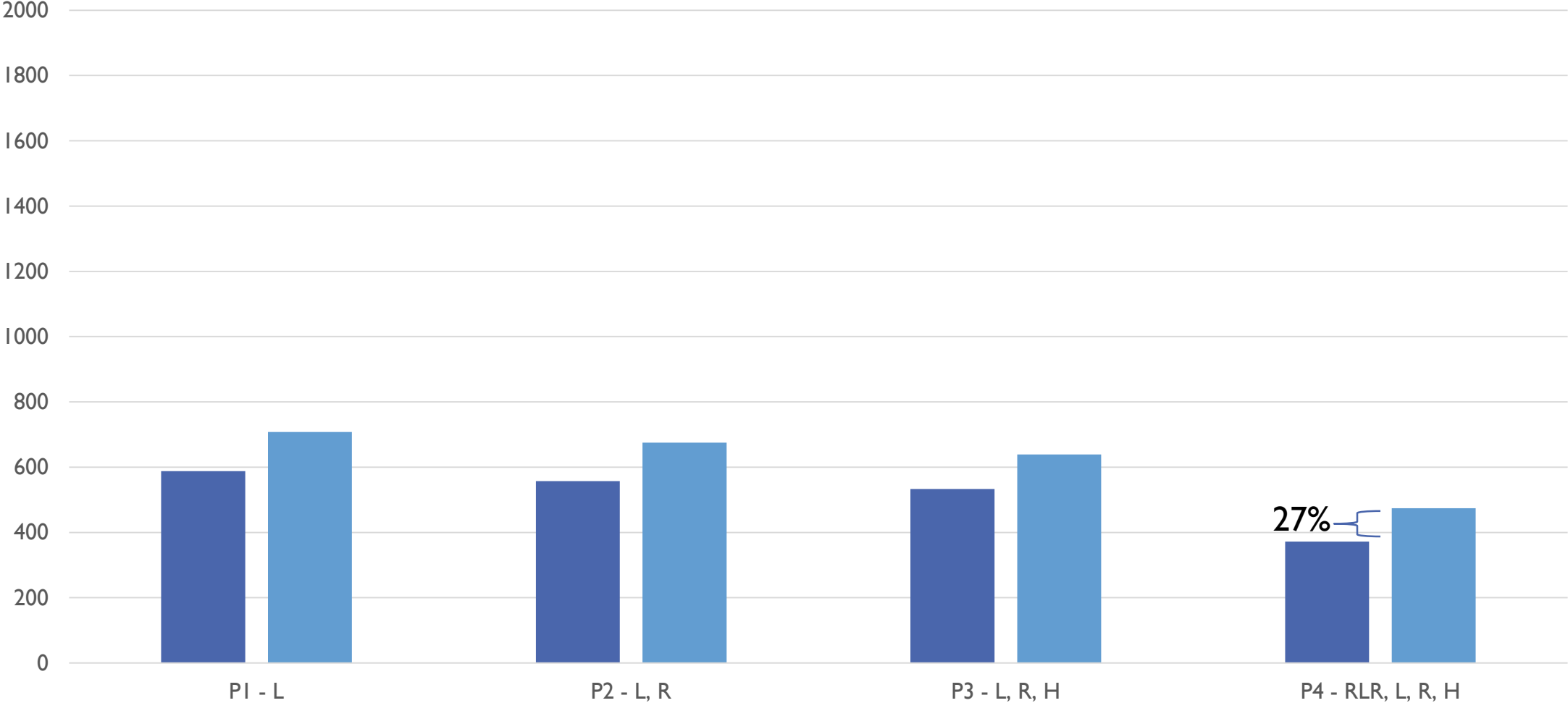
RLR = Revised lake operating rules

Table I - 3



# No Change to Lake Operating Rules

■ Current Facilities    ■ New Stormwater Capture Facilities



# Optimization Runs – Maximize Capture

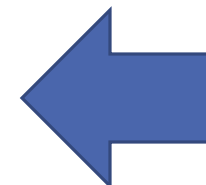
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EXPLORE DIFFERENT LAKE OPERATING RULES TO MAXIMIZE CAPTURE

Big Bear Lake Releases Assumptions

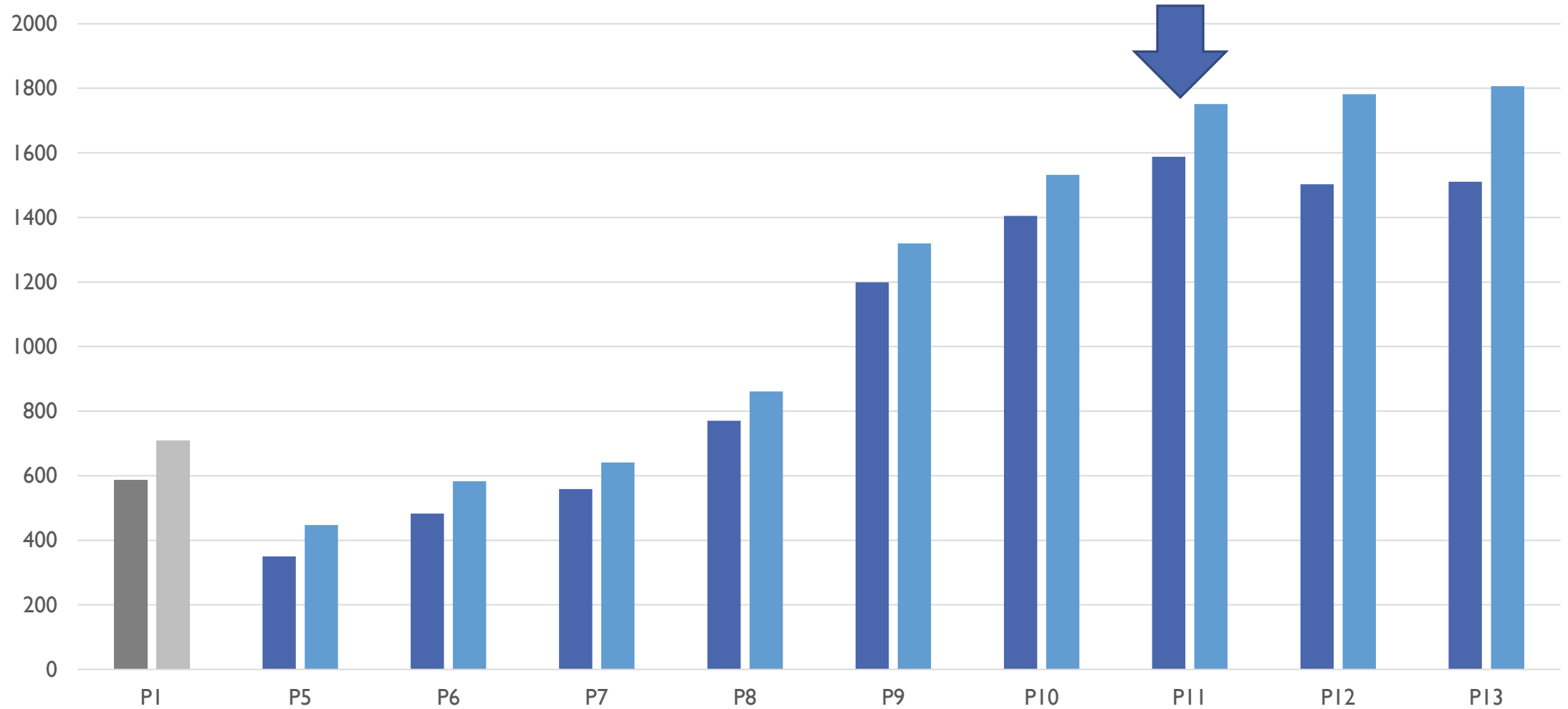
Alternative	Replenish Big Bear Project	Dry Year Release
Alternative 13	Project Alternative 1 •Current Lake Operating Rules •2,000 AFY reclaimed water into the Lake	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A minimum of 2,000 acre-ft combined FC Releases and Dry Year Releases should be satisfied for each year.</li> <li>•Dry Year Releases on Apr 1st at 1,008 cfs if available.</li> </ul>
Alternative 12	Same as Alternative 1	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A minimum of 2,000 acre-ft combined FC Releases and Dry Year Releases should be satisfied for each year.</li> <li>•Dry Year Releases distributed (at 500 cfs if available) in April.</li> </ul>
Alternative 11	Same as Alternative 1	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A minimum of 2,000 acre-ft combined FC Releases and Dry Year Releases should be satisfied for each year.</li> <li>•Dry Year Releases distributed (at 256 cfs if available) in April.</li> </ul>
Alternative 10	Same as Alternative 1	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A minimum of 2,000 acre-ft combined FC Releases and Dry Year Releases should be satisfied for each year.</li> <li>•Dry Year Releases distributed (at 68 cfs if available) in April.</li> </ul>
Alternative 9	Same as Alternative 1	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A 2,000 acre-ft combined FC Releases and Dry Year Releases should be satisfied when there is enough flow to be allocated.</li> <li>•Dry Year Releases distributed (at 68 cfs if available) in April.</li> </ul>
Alternative 8	Same as Alternative 1	<ul style="list-style-type: none"> <li>•Reduce early season FC Releases in wet years and allocate the flow into dry years beforehand.</li> <li>•A 700 acre-ft combined FC Releases and Dry Year Releases should be satisfied when there's enough flow to be allocated.</li> <li>•Dry Year Releases distributed (at 68 cfs if available) in April.</li> </ul>

Highest Capture



# Change Lake Releases to Maximize Capture

■ Current Facilities    ■ New Stormwater Capture Facilities

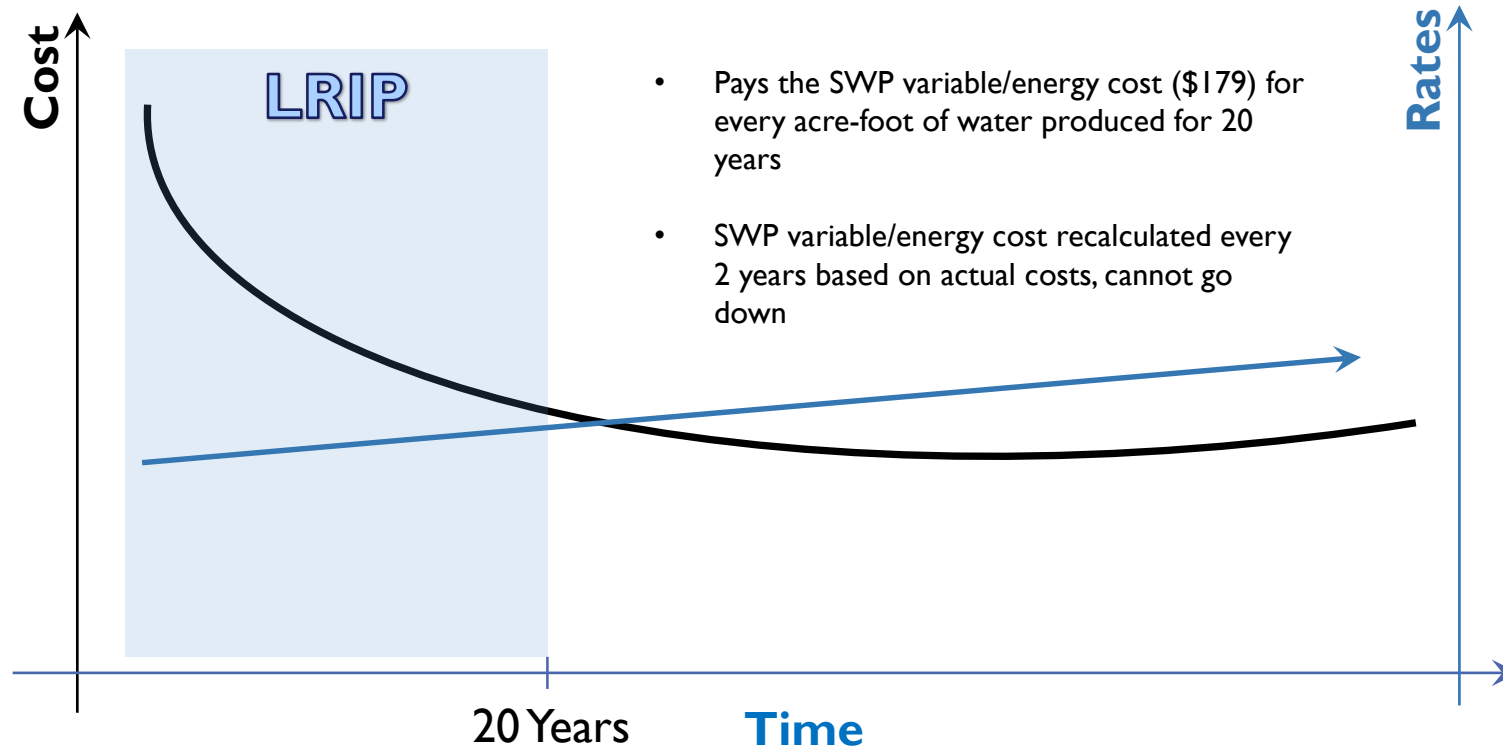


# Possible Participation by Valley District through LRIP

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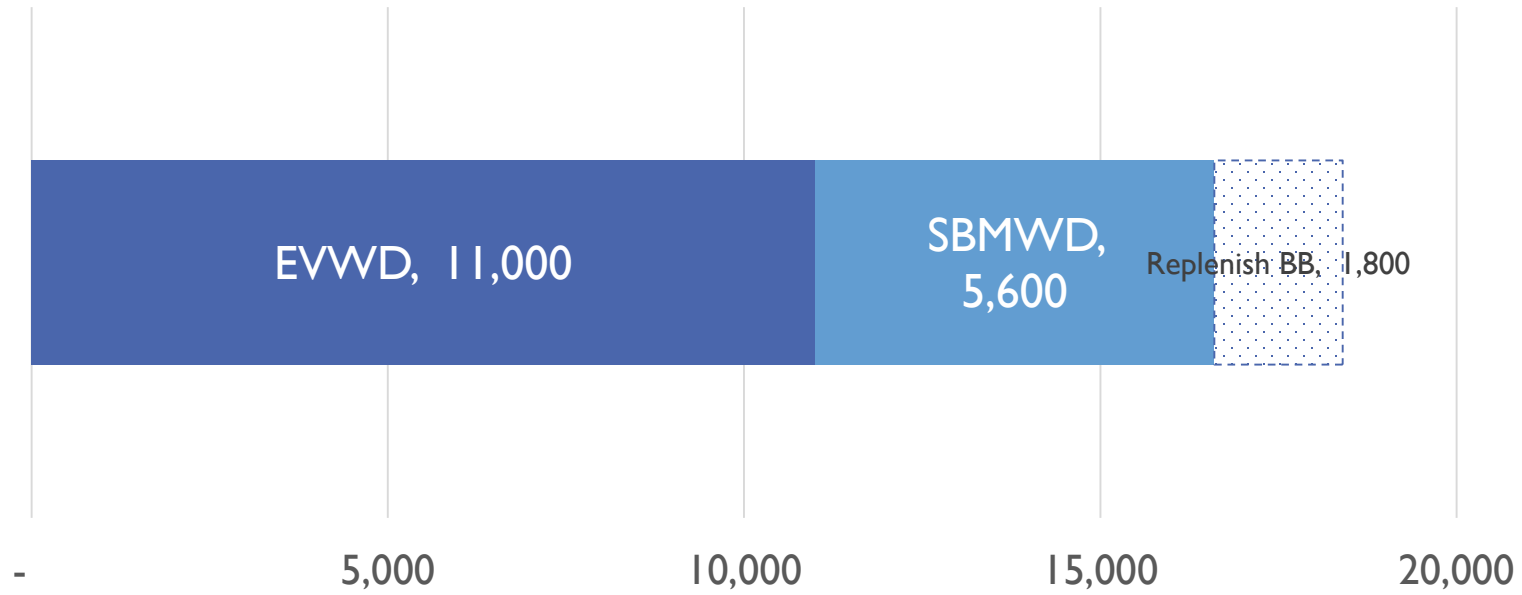


# LRIP Local Resources Investment Program (LRIP)



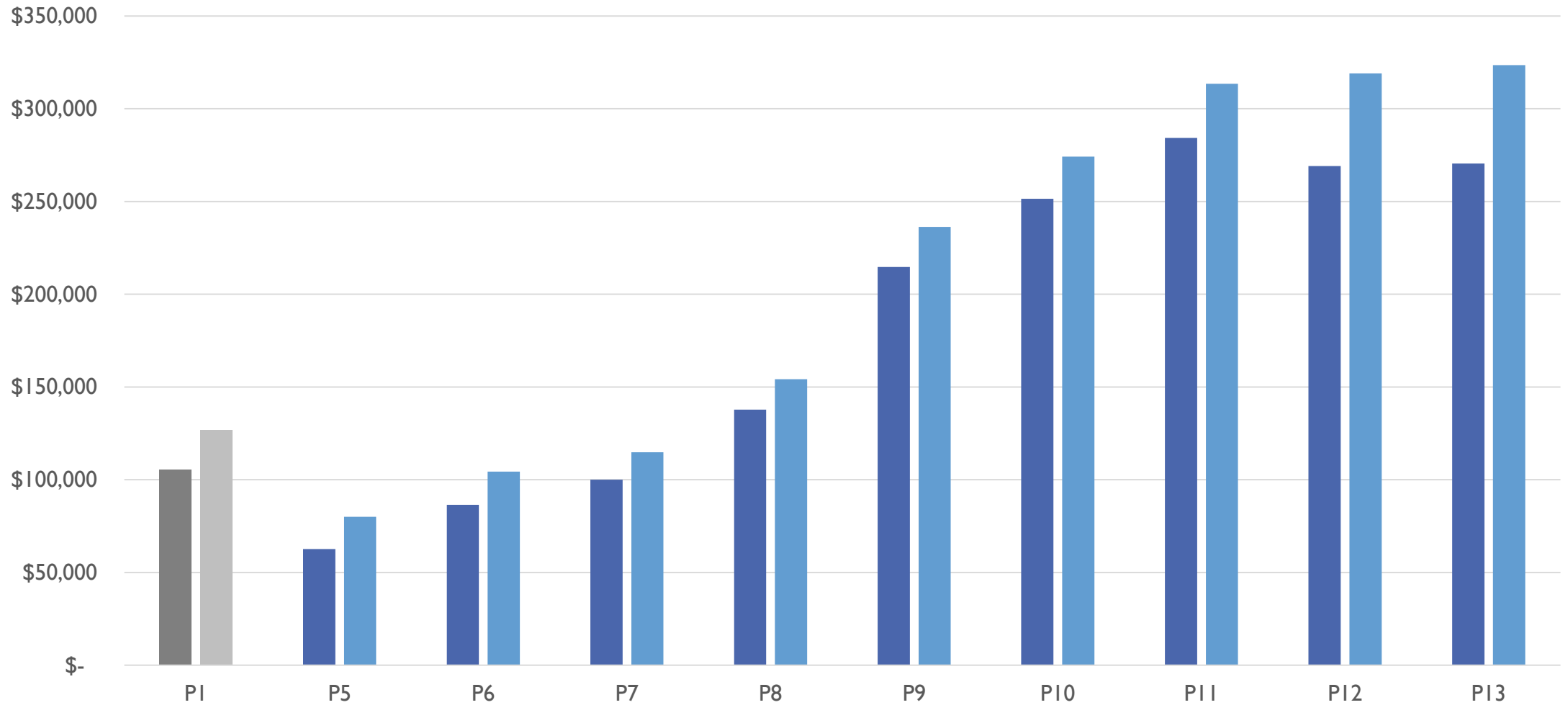
# Valley District LRIP Program

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# LRIP Amount (\$/year for 20 years)

■ Current Facilities    ■ New Stormwater Capture Facilities



# Next Steps Should Big Bear Sustainability Project Choose to Move Forward

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- Big Bear Sustainability Project would complete an LRIP application
  - Would include method used to determine the amount of water captured by Valley District
- Board considers LRIP application
- If approved by the Board:
  - LRIP agreement is prepared
  - Valley District does not pay until water is produced

# Director Comments and Discussion

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**Paul Kielhold**  
President



**June Hayes**  
Vice President



**T. Milford  
Harrison**  
Treasurer



**Gil J. Botello**  
Director



**Susan Longville**  
Director

## Staff Recommendation

Receive and file

# Discussion Item 4.3 (Pg. 39)

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**Kristeen Farlow, MPA** – Strategic Communications Manager

Discuss CSDA Committee Participation

## **Staff Recommendation**

Discuss the CSDA Committees and Expert Feedback Teams and consider which Committee(s), if any, the Directors are interested in serving on for the upcoming term. Direct Staff to submit the Committee Interest Form on behalf of the District as directed by the deadline.

# California Special Districts Association

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- CSDA was formed to promote good governance and improved core local services
- Offer professional development, advocacy, education and training, insurance programs, legal advice, public relations support, and legislative advocacy
- Get more out of our membership and support and strengthen the effectiveness of CSDA
- Seeking volunteers for Committees and Expert Feedback Teams
- Time commitments vary; travel may be involved
- Committees: need dedicated participants who spend time providing their expertise in directing activities and policies of CSDA
- Expert Feedback Teams: provide input to CSDA advocacy staff on areas of public policy facing special districts

# Committees and Expert Feedback Teams

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## COMMITTEES

- Audit
- Elections & Bylaws
- Fiscal
- Legislative
- Members Services
- Professional Development

## EXPERT FEEDBACK TEAMS

- Environment
- Governance
- Legal Revenue
- Formation & Reorganization
- Human Resources & Personnel
- Public Works & Facilities



# Director Comments and Discussion

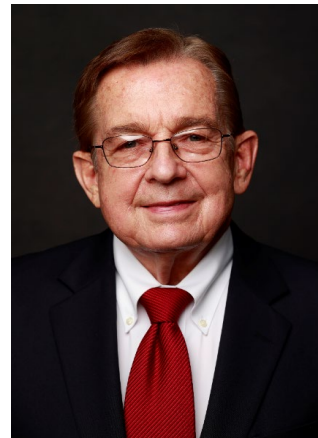
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Director

## Staff Recommendation

Discuss the CSDA Committees and Expert Feedback Teams and consider which Committee(s), if any, the Directors are interested in serving on for the upcoming term. Direct Staff to submit the Committee Interest Form on behalf of the District as directed by the deadline.

# Future Business

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# Adjournment

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