



Water Supply Master Plan 2050

Board of Directors Meeting, January 9, 2024

WSMP 2050 Updates

Goals

Planning horizon

Wider range of values

Portfolio approach

Recognition of uncertainty



Recap of Last Update to Board

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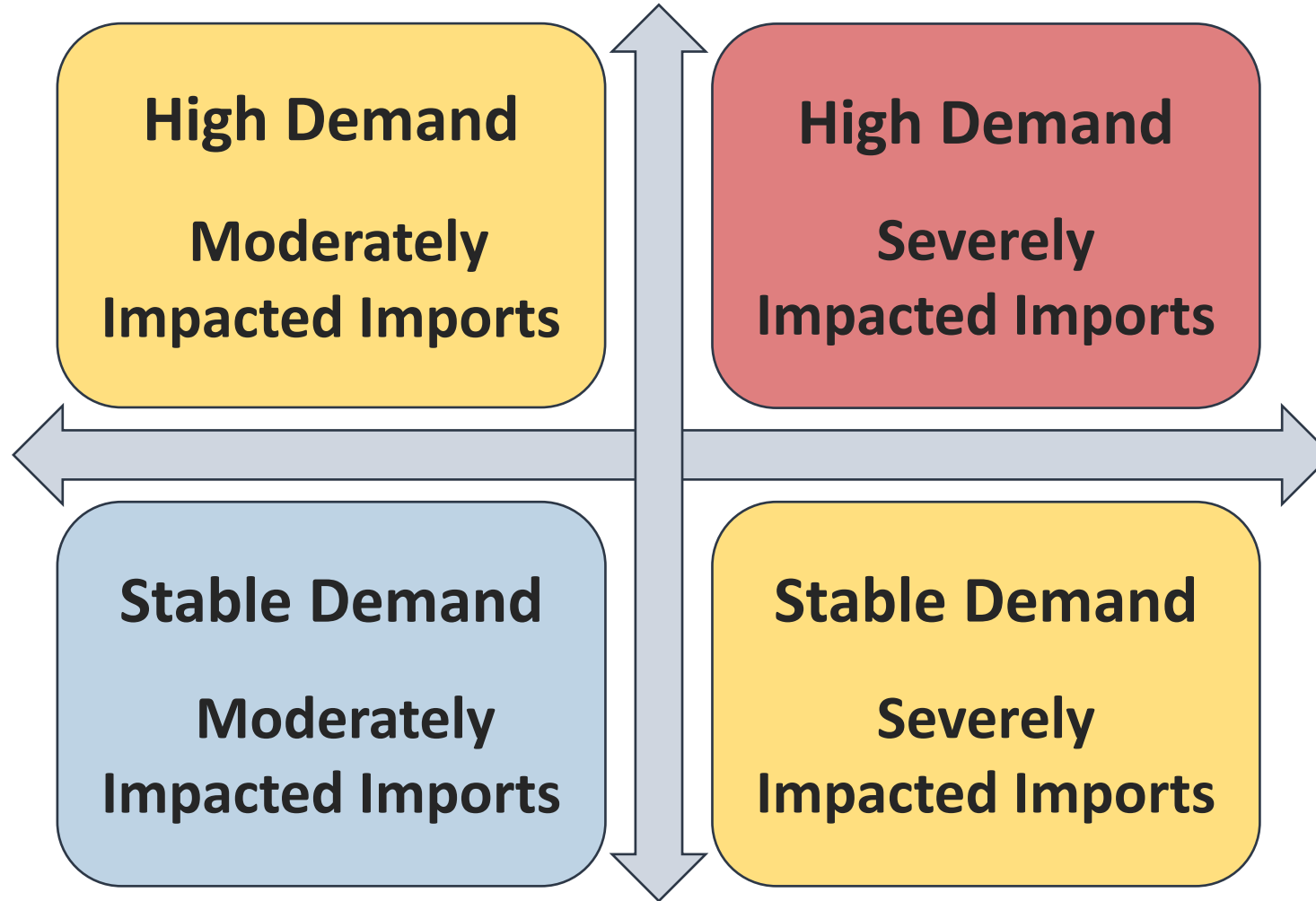
- Planning goals
- Water supply strategy
- Planning approach
- Baseline water supply needs assessment
- Project list and evaluation criteria
- Preliminary cost
- Board/committee and public engagement plans

Topics for This Update

- Water supply needs assessment
- Portfolio analysis
- Next steps for developing recommendations

Planning Approach – Scenario Planning

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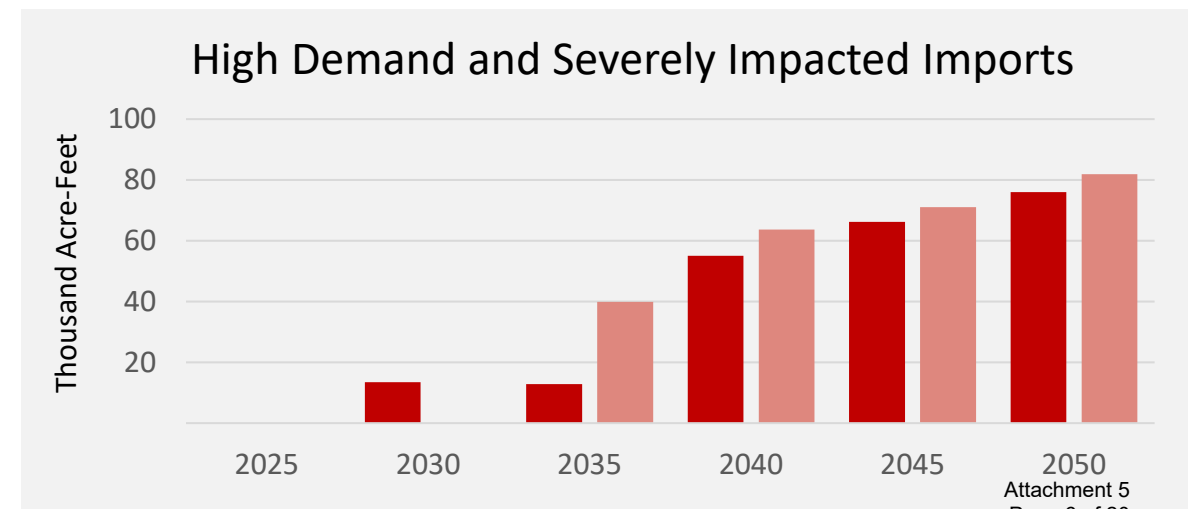
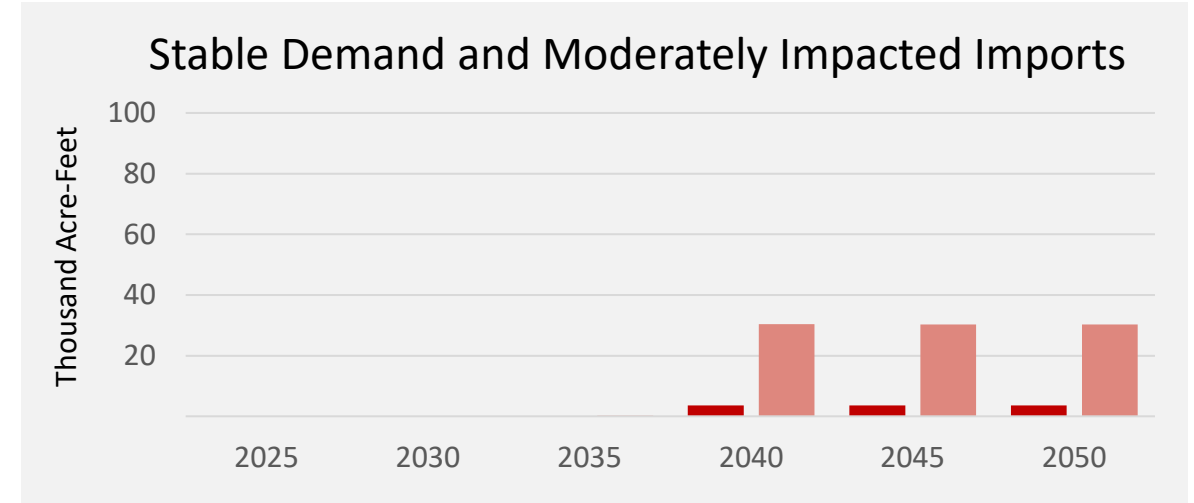


Baseline Assessment

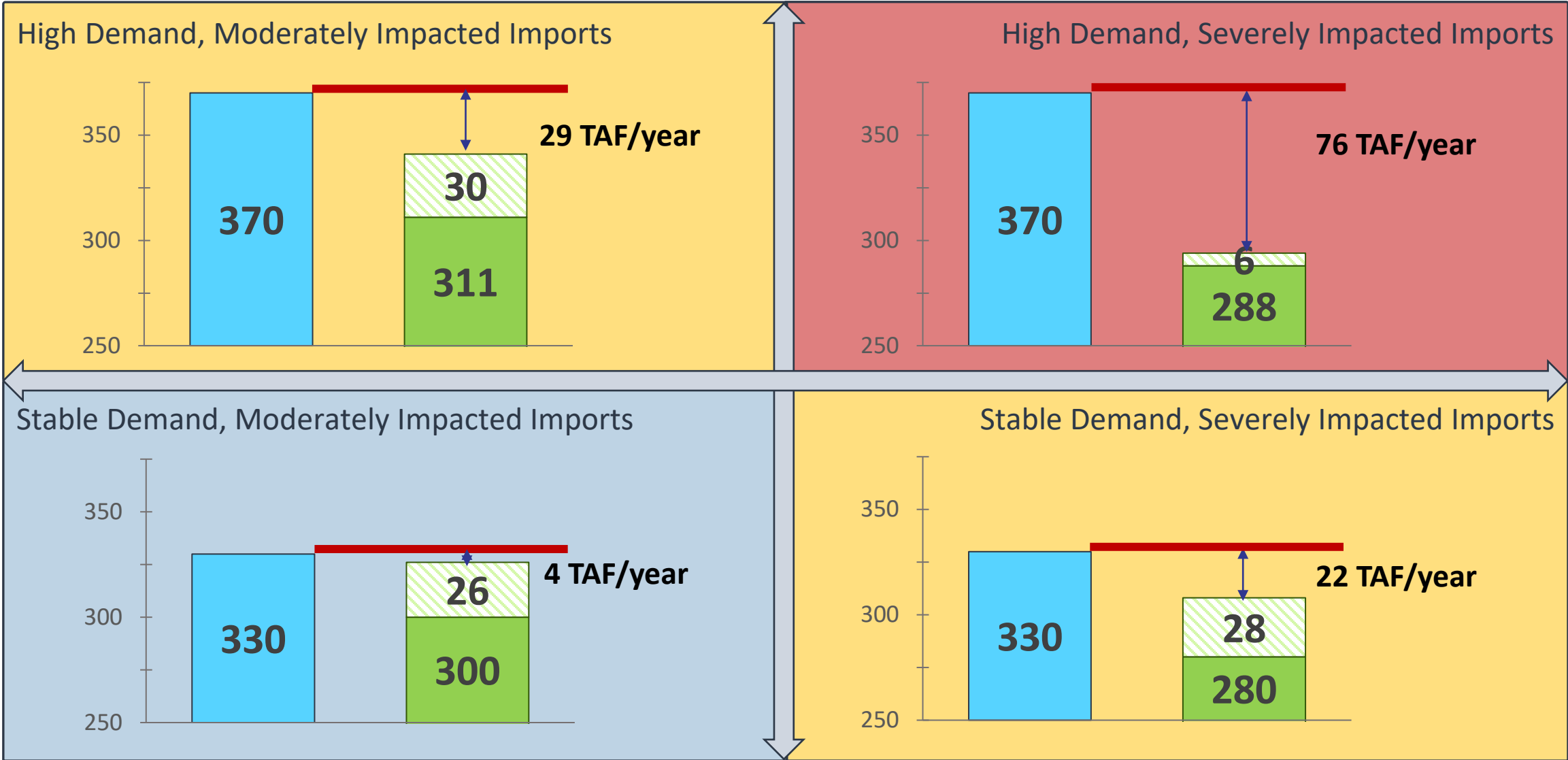
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- Shortage in all scenarios and as early as 2030
- Average annual shortages 4-76 TAF in 2050
- Out-of-County groundwater storage important

■ With Semitropic ■ Without Semitropic



Annual Shortage in Six-year Drought in 2050



■ Demand ■ Supply ■ Semitropic

Project List Grouped by Primary Benefits

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Alternative Supply

Potable Reuse – Palo Alto

Potable Reuse – San Jose

Refinery Recycled Project

Local Seawater Desalination Project

Surface Supply

Delta Conveyance Project

Sites Reservoir

Stormwater – Agricultural Land Recharge
(FloodMar)

Stormwater Capture

Storage

Pacheco Reservoir Expansion

Los Vaqueros Expansion

Groundwater Banking

B.F. Sisk Dam Raise

Recharge and Pipelines

Coyote Valley Recharge Pond

Lexington Pipeline

Lexington-Montevina Water Treatment Plant
Connection

Butterfield Channel Managed Aquifer Recharge

Madrone Channel Expansion

San Pedro Ponds Improvement Project

Project and Portfolio Analysis

- 50+ portfolios formulated
- Modeling analysis to evaluate water supply benefit
- Iterative process



Example Portfolios

High Demand
Moderately
Impacted
Imports

High Demand
Severely
Impacted
Imports

Stable
Demand
Moderately
Impacted
Imports

Stable
Demand
Severely
Impacted
Imports

	<div><div></div></div> <div>Rate Baseline</div> <div>1</div>	<div><div></div><div></div></div> <div>2</div>	<div><div></div><div></div></div> <div>3</div>	<div><div></div><div></div><div></div></div> <div>4</div>
Project Name				
Alternative Supply				
Potable Reuse – Palo Alto	★			
Potable Reuse – San Jose		★	★	★
Refinery Recycled Project				★
Local Seawater Desalination				★
Surface Supply				
Delta Conveyance Project	★		★	★
Sites Reservoir				★
Storage				
Pacheco Reservoir Expansion	★		★	
Los Vaqueros Expansion	★	★	★	★
B.F. Sisk Dam Raise	★	★	★	★
Groundwater Banking (TAF)	350	275	250	0
Recharge and Pipelines				
Coyote Recharge Pond		★	★	★
San Pedro Ponds Improvement		★	★	★

Preliminary findings

- Drought resilient supply coupled with storage effective
- Maintaining out-of-county groundwater storage critical
- Some projects work better when paired with other projects, while others are independent of each other
- Multiple options under each future, other factors into play
- More portfolios needed to provide a full range of options.

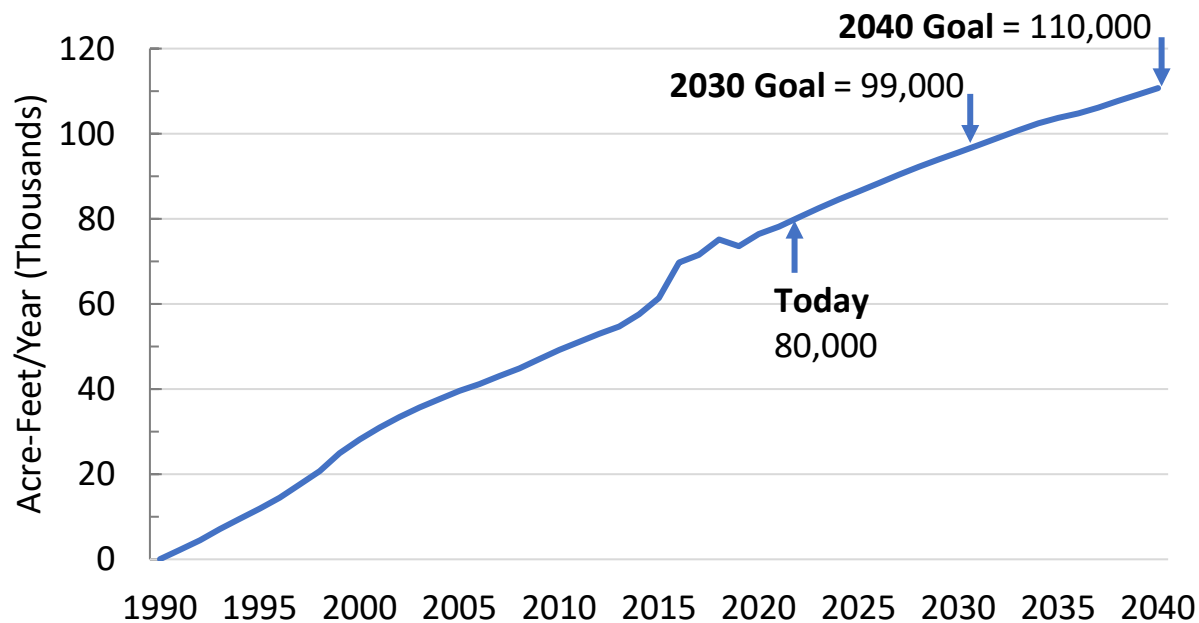
Cost analysis

- Updating project cost estimates
 - Total lifecycle cost
 - Unit cost
- Develop cost of portfolios
- Analyze impact on water rate

Conservation Effort and Reuse

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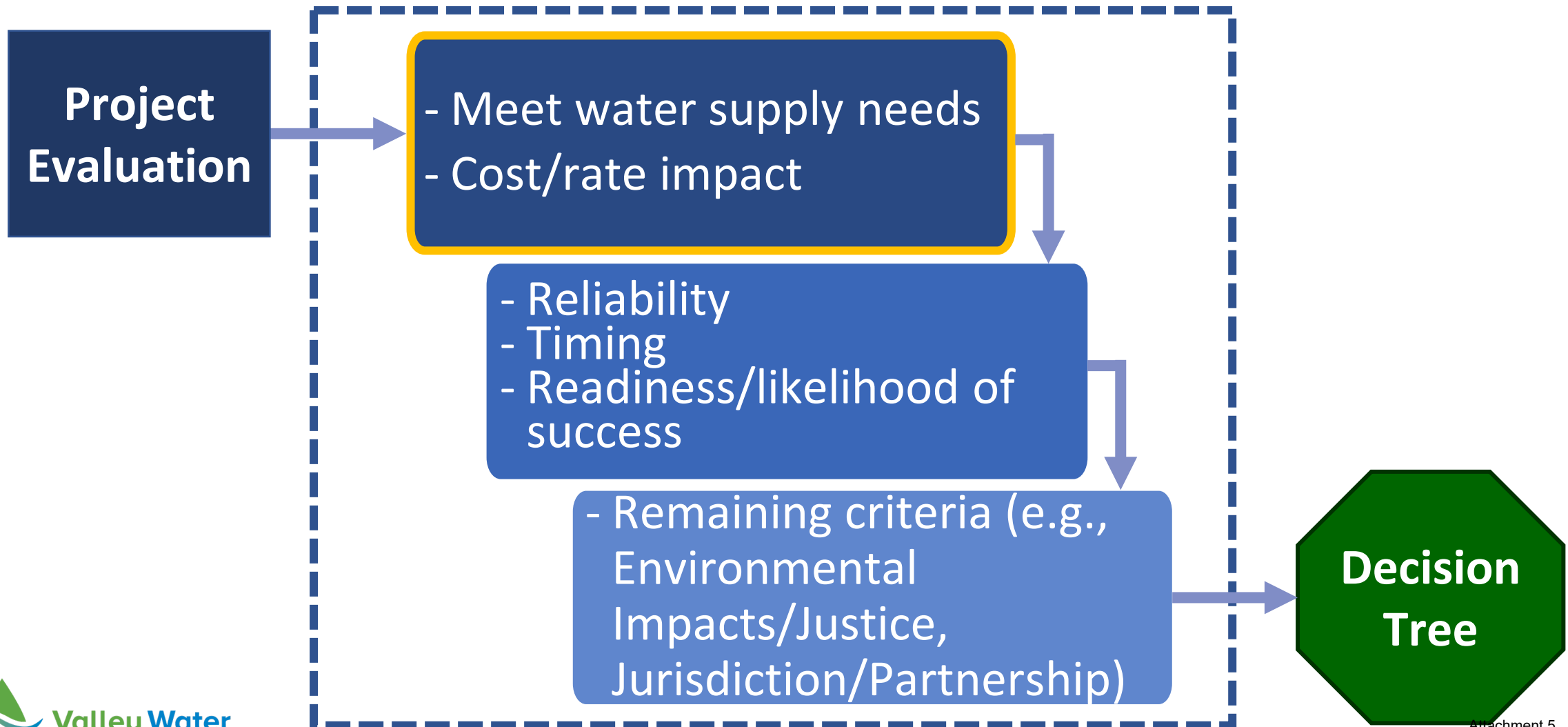
- Continued conservation
- Develop 2050 conservation targets
- Develop water reuse goal



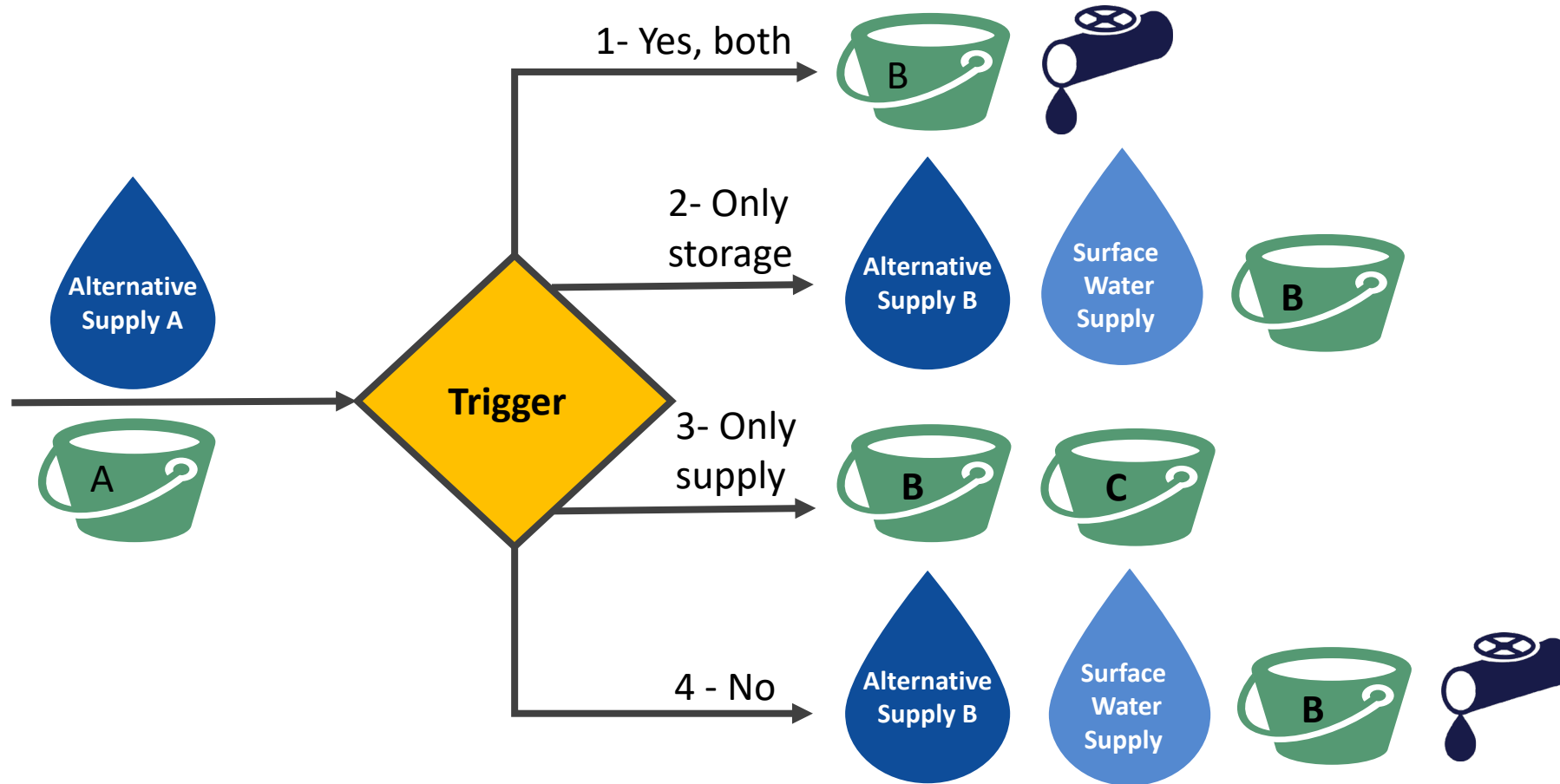
Partner Agency	Potential Future Wastewater Available (AFY)	Potential Purified Water Production (AFY)
Palo Alto	10,000	8,000
Sunnyvale	5,600	4,800
San Jose/ Santa Clara	40,000	24,000 – 32,000
SCRWA	Fully Utilized in Summer	--
Countywide Total:	55,600	36,800 – 44,800

Portfolio Evaluation and Comparison





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Decision Tree



Legend

-  Alternative Supply Project
-  Surface Supply Project
-  Storage Project
-  Recharge and Pipelines

Stakeholder Engagement

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- Water Retailer Meeting
- Environmental Water Resources Committee
- Agricultural Water Advisory Committee
- Joint Water Resources Committee (with South County)
- Environmentally focused stakeholder group
- Water Commission Meeting
- Newsletter/blog/social media

Expert Engagement

- Cost analysis approaches
- Economic benefits of water supply projects
- Conservation targets and programs
- Recycled and purified water projects
- Project evaluation and scenario planning framework

Next Steps

- Finalize conservation and reuse goals
- Evaluate additional portfolios
- Determine cost/rate impacts
- Provide update to support upcoming project decisions

WSMP Update Schedule

2023

- Establish overall framework and procedures
- Project/portfolio analysis and evaluation
- Stakeholder engagement

2024

- Portfolio analysis and recommendations
- Plan development
- Stakeholder outreach
- Plan adoption



Feedback Requested

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- Any specific portfolios
- Overall evaluation framework
- Information to help inform decisions