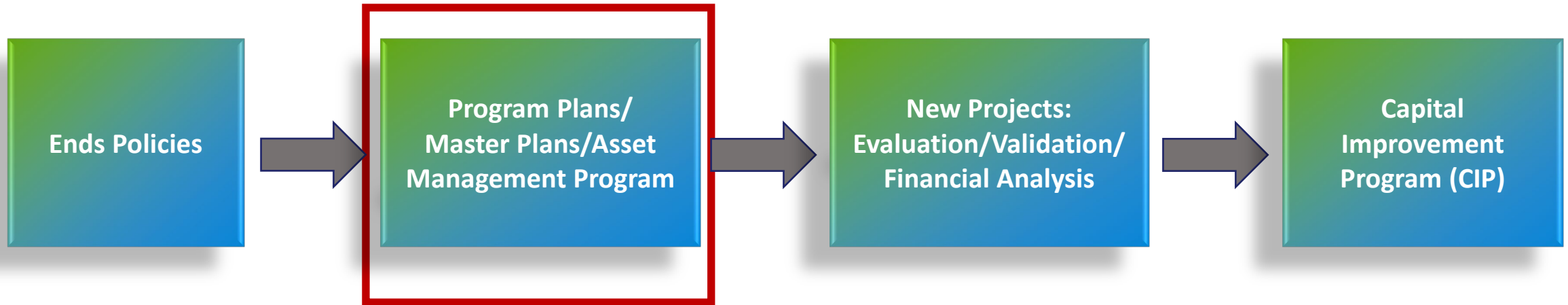




Water Supply Master Plan 2050

Special Board Meeting: September 19, 2023

Drivers for New Capital Projects



Long-Range Water Supply Planning

3

- Uncertain future
- Aging infrastructure
- Incomplete information
- Imminent decisions on generational opportunities for investment



WSMP 2050 Updates

Goals

Planning horizon

Wider range of values

Portfolio approach

Recognition of uncertainty

Planning Goals to Achieve Level of Service ⁵

System reliability

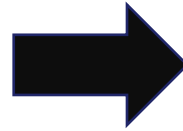
Supply diversification

Reduced shortage risk

Affordable rates

Proposed Water Supply Strategy

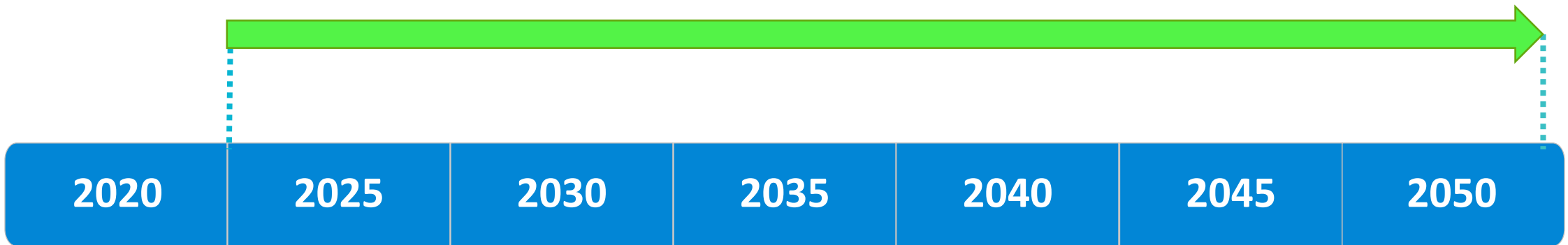
1. Secure existing supplies and infrastructure
2. Increase water conservation and reuse
3. Optimize the use of existing supplies and infrastructure



1. Secure existing supplies and infrastructure
2. Expand water conservation and Reuse
3. Increase system reliability and flexibility

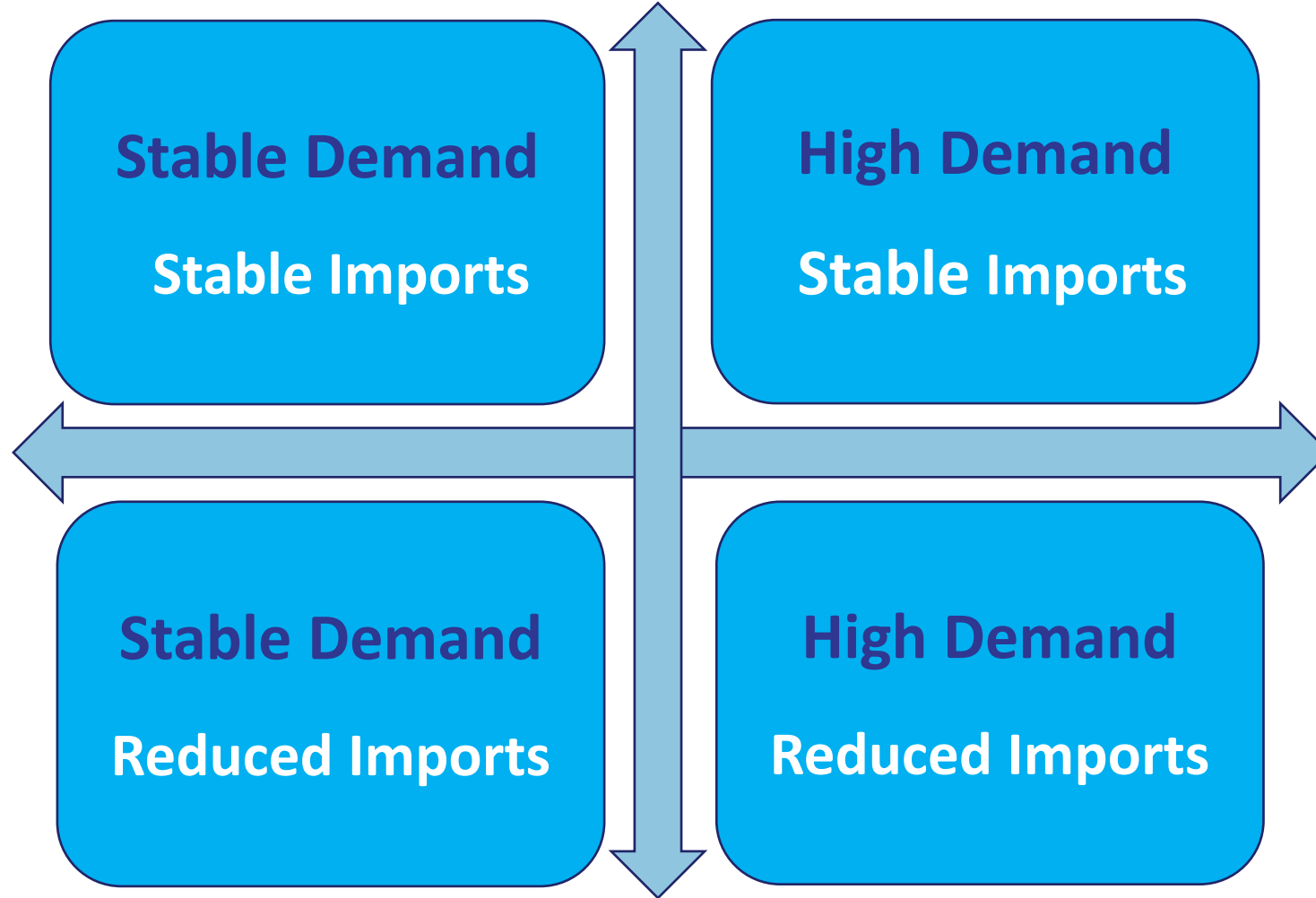
Planning Horizon

20 years → **30 years**

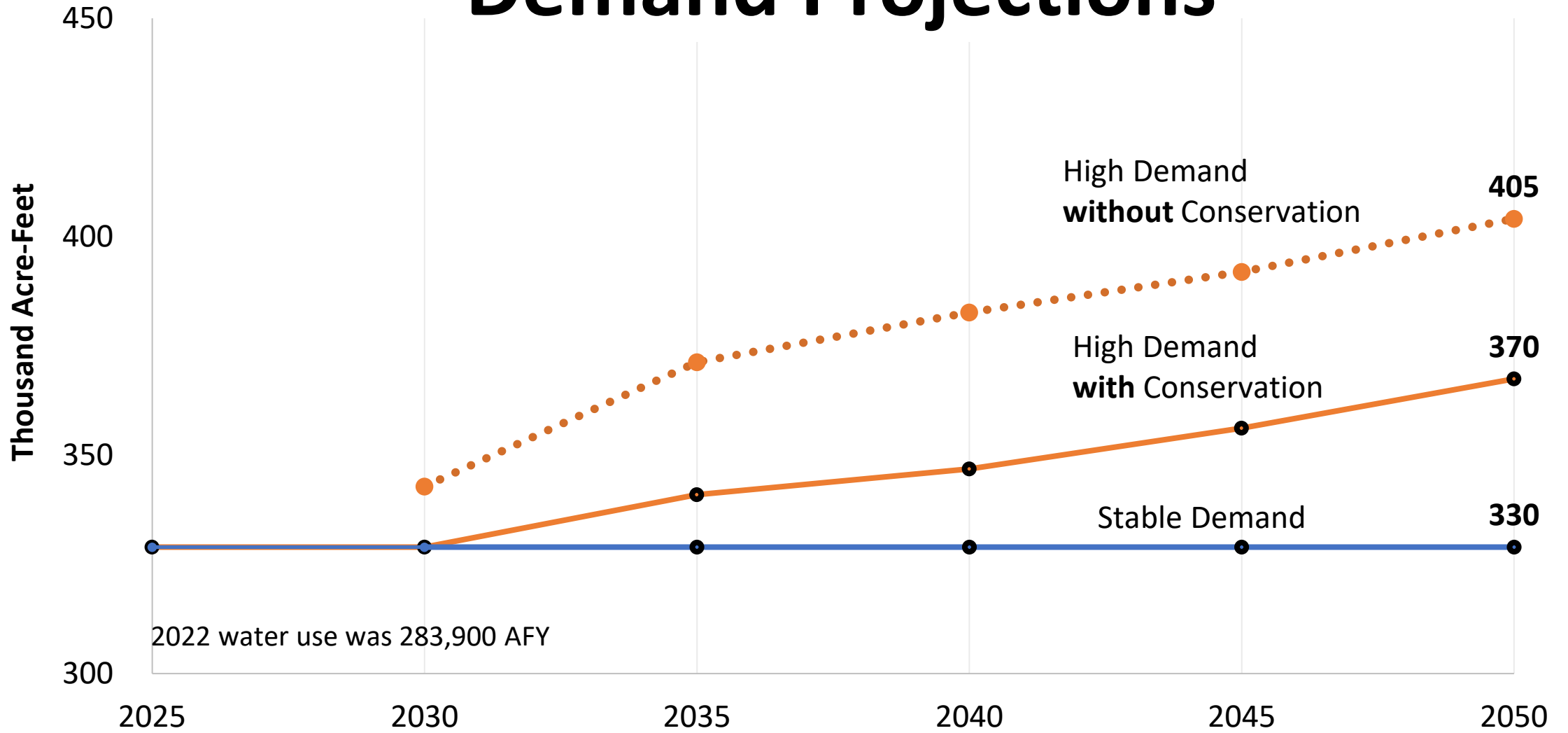


Questions and Feedback

Planning Approach – Scenario Planning



Demand Projections



Demand modeling integrates historic water use trends, housing and economic growth, climate change, and post-drought water use rebound.

Questions and Feedback

Imported Water Supply

Two imported water scenarios

- Stable imports
- Reduced imports

Climate change considered



Baseline Assumptions

Achieve 2040 conservation goal

Complete dam seismic retrofits by 2035

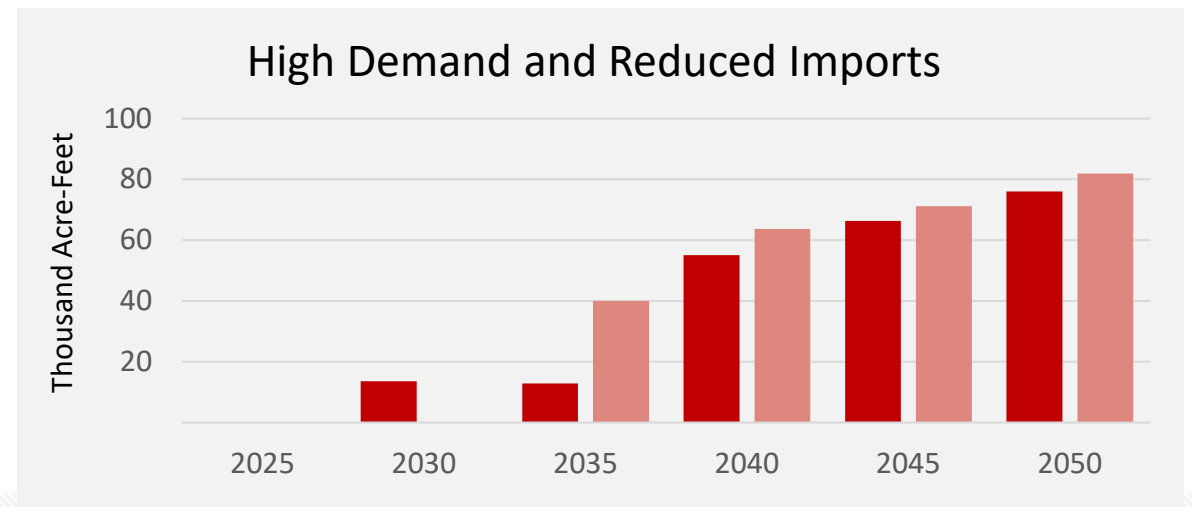
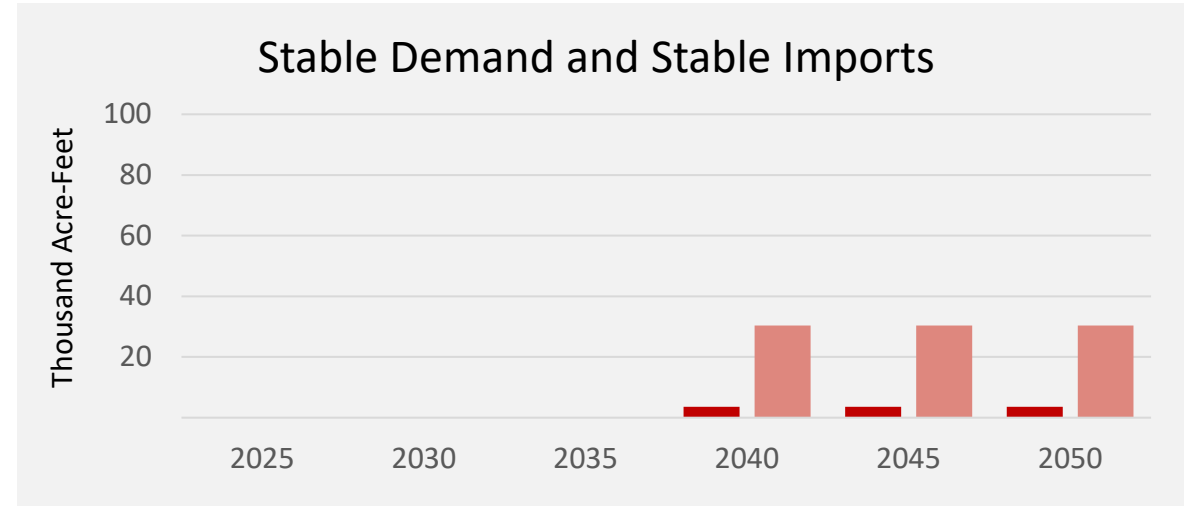
Maintain Valley Water assets

Baseline Assessment – Planning Horizon

14

■ With Semitropic
■ Without Semitropic

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

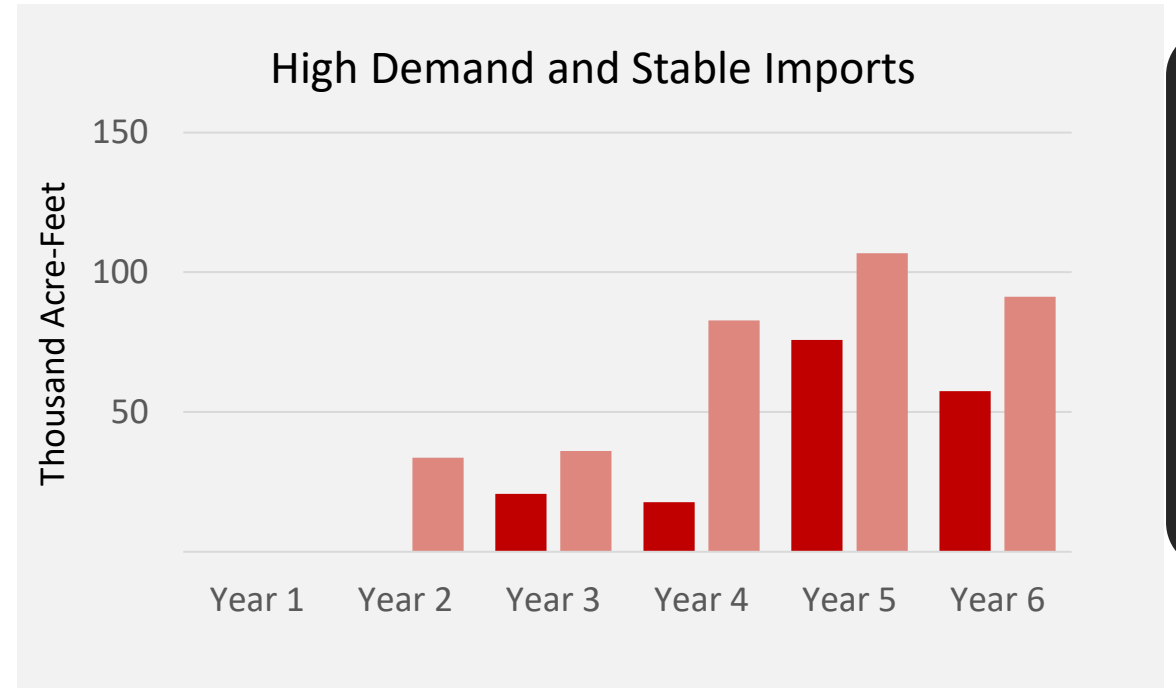


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Baseline Assessment – Drought in 2050

- 2-year drought manageable
- Need for investment

■ With Semitropic
■ Without Semitropic



Questions and Feedback

Future Investment Options

- Alternative supply - dependable during drought/year round
- Local and imported surface supply - increase reliability and resilience
- Storage - capture excess water supply in wet years to be used during drought years

Projects Under Consideration

- Conservation (20+)
- Alternative Supply (4)
- Surface Supply (4)
- Storage (4)
- Recharge & Pipelines (6)



Project Evaluation Criteria

- **Water Supply Benefit**
- **Cost/Rate Impact**
- Timing
- Technical Feasibility
- Operation
- Reliability
- Readiness/Likelihood of Success
- Flexibility
- Jurisdiction/Partnership
- Permitting/Legal issues
- Environmental Impacts/Justice
- Public Acceptance
- Inter-dependence
- Risk/Challenges

Questions and Feedback

Preliminary Unit Cost of Major Supply Projects

21

All costs are 2023 dollars

Project	Average Annual Supply (AF)	Capital Cost (M\$)	Annual O&M (M\$)	30 Year Lifecycle Cost Present Value* (M\$)	Lifecycle Cost PV/ Supply PV (\$/AF)
Potable Reuse - Palo Alto	8,000	782	14	1,169	7,842
Potable Reuse – San Jose	24,000	1,181	29	1,599	4,208
Refinery Recycled Project	8,000	265	9	445	2,834
Delta Conveyance Project	13,850	627	2.5	513	2,374
Sites Reservoir	380	10	0.05	10	1,270

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* Project lifecycles vary, 30-year selected for comparison purpose

Preliminary Storage Capacity Cost of Major Storage Projects

22

All costs are 2023 dollars

Project	Storage (AF)	Capital Cost (M\$)	Annual O&M (M\$)	30 Year Lifecycle Cost* (M\$)	Lifecycle Cost /Storage Capacity (\$/AF)
Pacheco Reservoir Expansion	134,000	2,210	2.5	2,700	20,149
B.F. Sisk Dam Raise	60,000	435	1.8	717	11,950
Los Vaqueros Expansion	30,000	100	3.8	258	8,600
Groundwater Banking	200,000	160	0.7	283	1,415

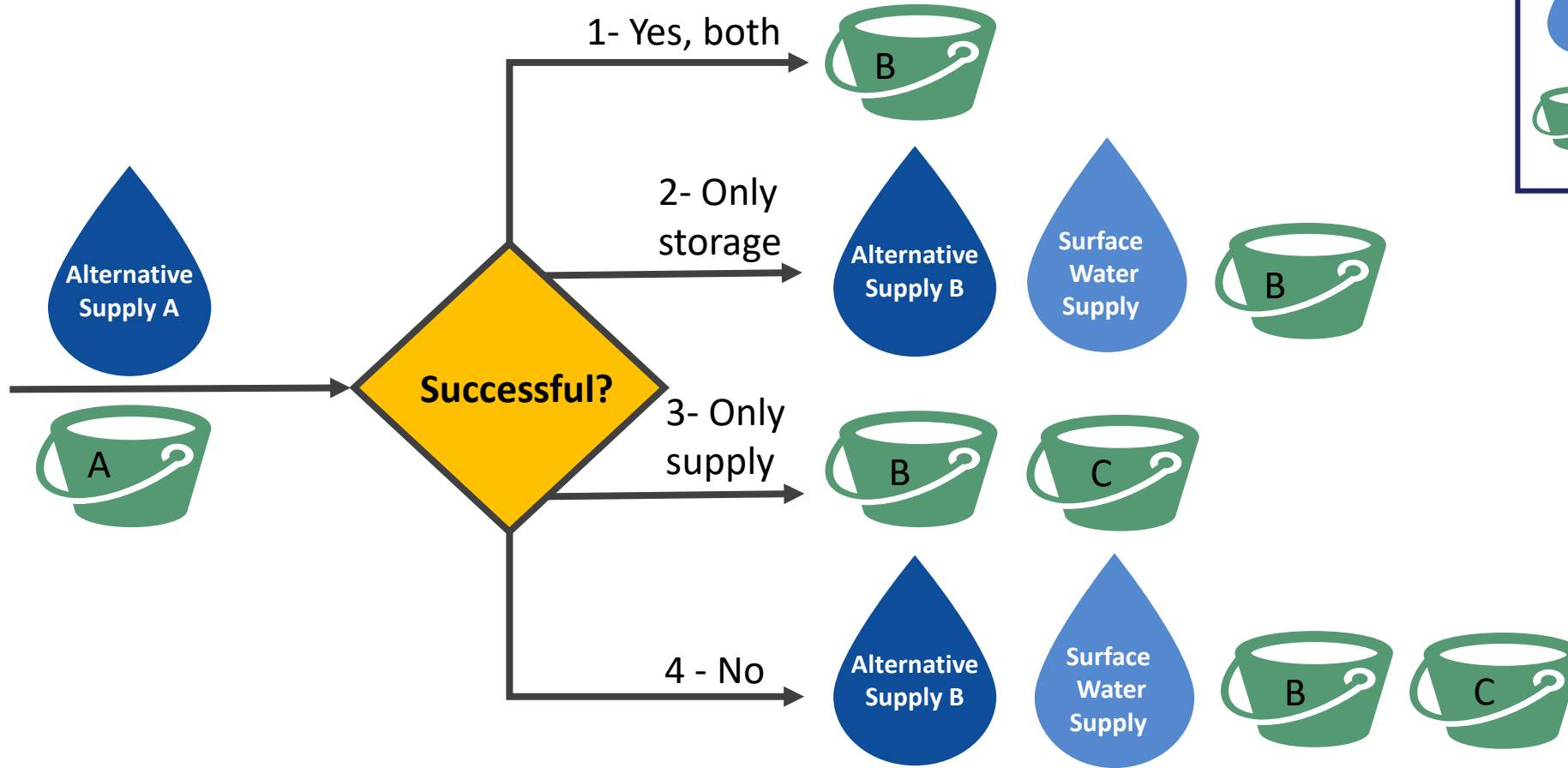
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* Project lifecycles vary, 30-year selected for comparison purpose

Questions and Feedback

Decision Tree



Legend

-  Alternative Supply Project
-  Surface Supply Project
-  Storage Project

Board/Committee Engagement Plan

25

- Board meeting and workshop
- Board Committees
 - Water Conservation and Demand Management Committee
 - Water Storage Exploratory Committee
 - Recycled Water Committee
- Advisory Committees/Stakeholder meetings
 - Agricultural Water Advisory Committee
 - Water Retailer Meeting
 - Environmental and Water Resources Committee
 - Water Commission Meeting
 - Youth Commission

Stakeholder Engagement Plan

- Retailer meetings
- WSMP webpage for update and contact
- Stakeholder email list, communication newsletter or other channels as ongoing opportunities for updates

Expert Panel

Provide independent review:

- Planning approach and framework
- Demand projection
- Project cost analysis
- Project evaluation
- Climate change analysis

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

- Planning goals
- Proposed strategies
- Planning approach
- Projects
- Evaluation criteria

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