



# Water Supply Update

Board of Directors

March 15, 2022

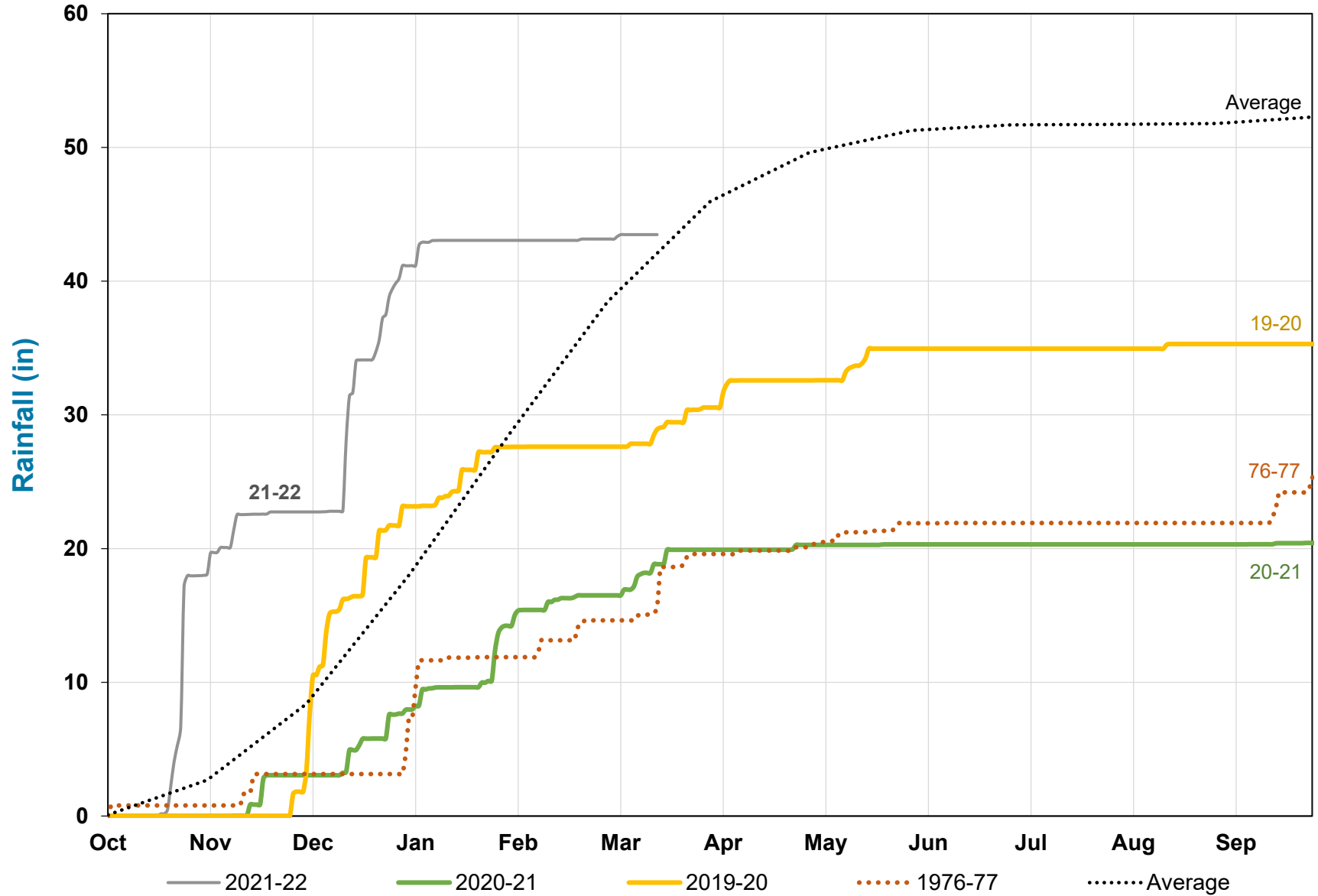


# Overview

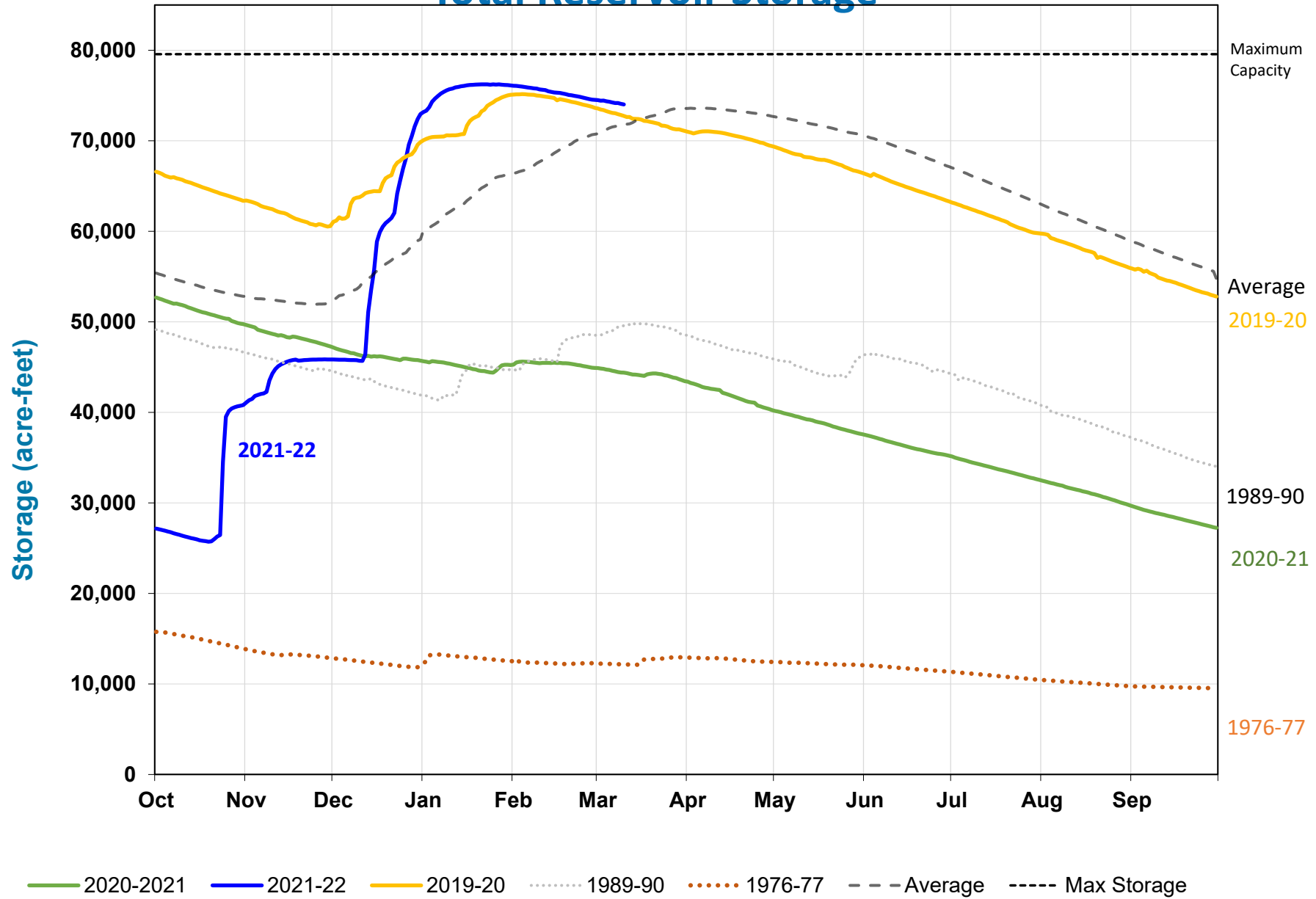
- Current Water Supply
- Bay Area Agencies Current Storage Comparison
- Water Supply Projection
- Water Supply Assessment Update
  - Overall Process
  - Strategy and Goals
- Summary

# Cumulative Precipitation

Lake Lagunitas Rain Gauge



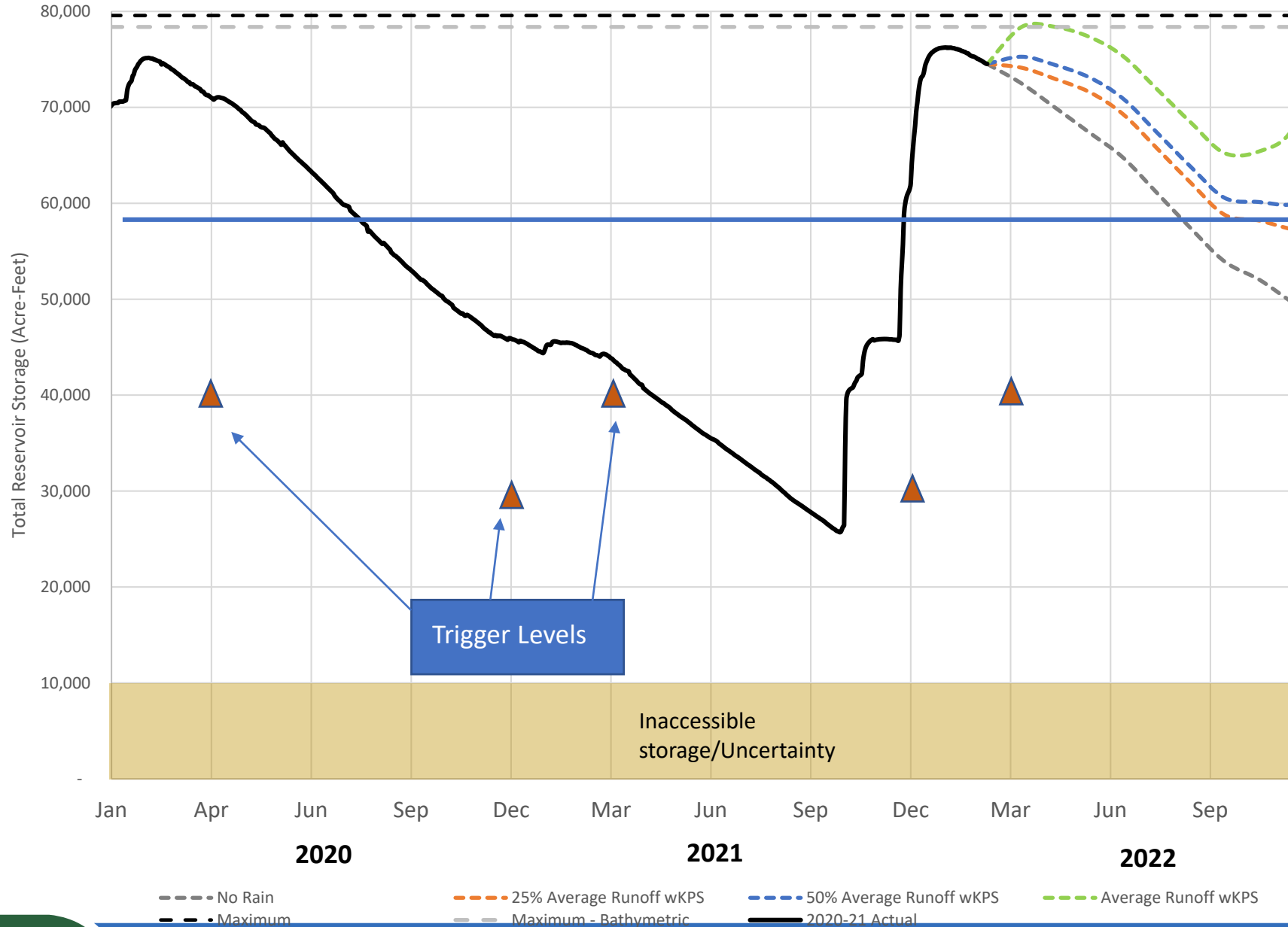
# Total Reservoir Storage



# Bay Area Water Supply Levels

- Sonoma Water – Lake Sonoma ~60% / Lake Mendocino ~59%
- East Bay Municipal Utilities District ~69%
- Valley Water ~26%
- San Francisco PUC ~73%
- Marin Water ~93%

# Projected Reservoir Storage



# Water Supply Assessment: Project Overview

The Assessment will address the following questions:

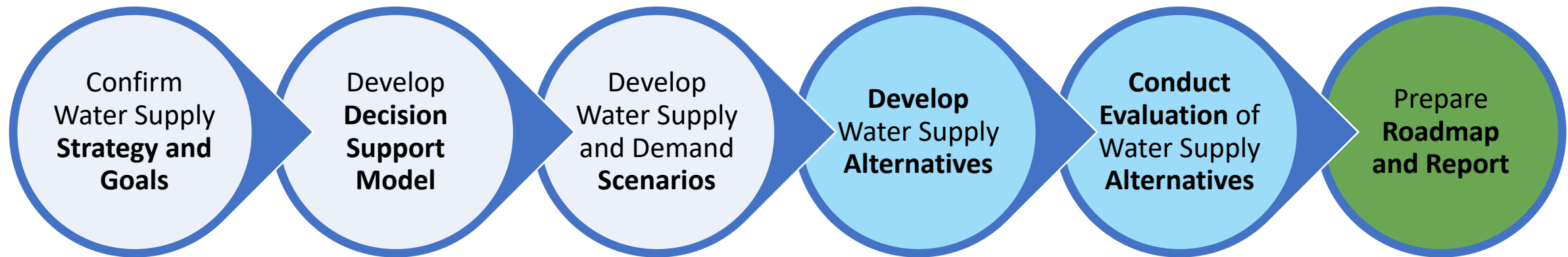
1. What is the current risk to MMWD's water delivery reliability under recent and projected future droughts?
2. How much additional water supply is needed under different future hydrologic drought and demand scenarios?
3. What are the range of water supply alternatives that could increase resiliency of MMWD's system? And what are their strengths and weaknesses?
4. What recommendations can be developed to support MMWD's near-term investment in drought resiliency?

# Water Supply Assessment: Key Project Scope Elements

Understanding Current Risks & Establishing Goals

Identifying & Evaluating Alternatives

Recommendations  
& Path Forward

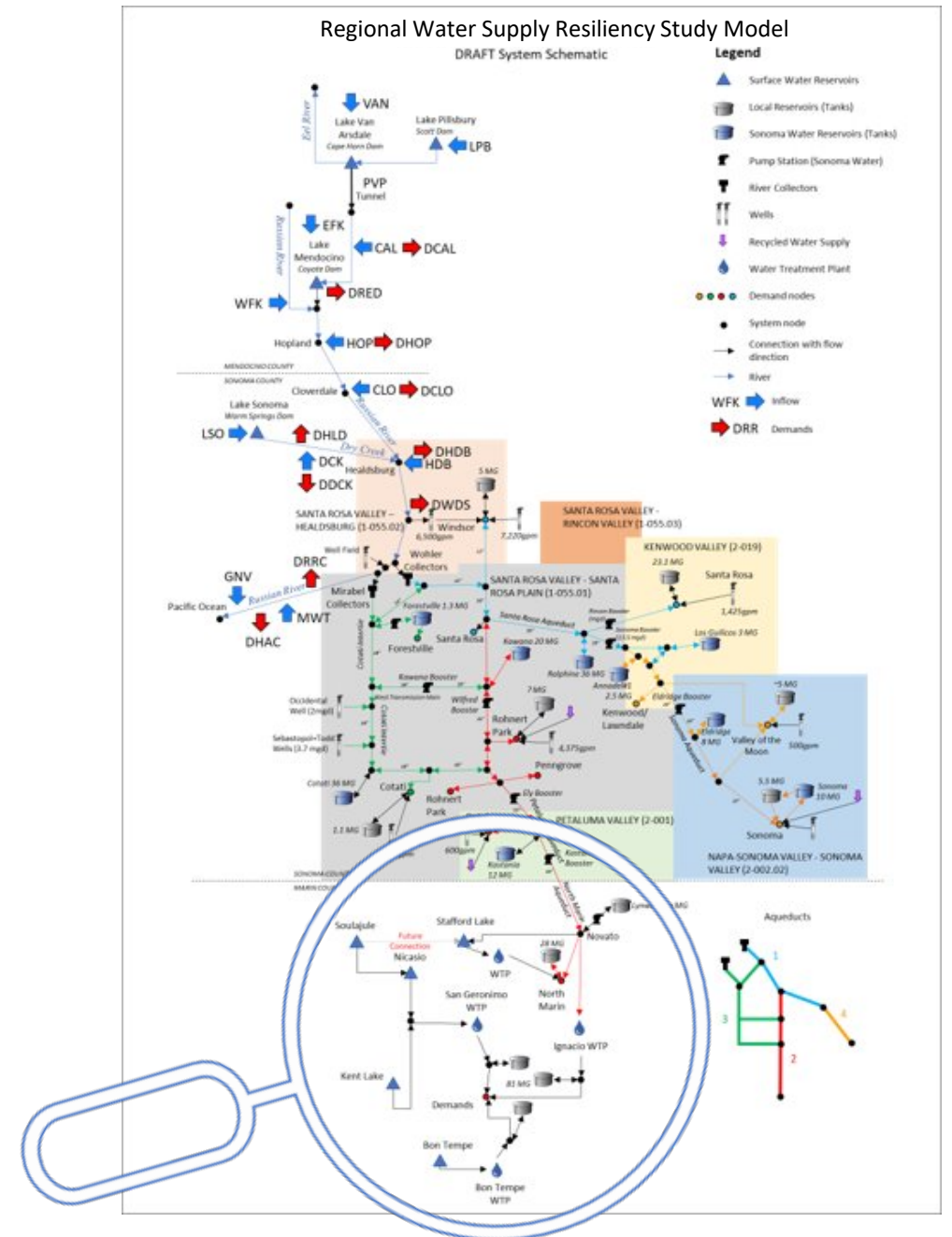


- Establish a Level of service
- How our system works
- Duration & severity of drought
- Quantify supply & demand



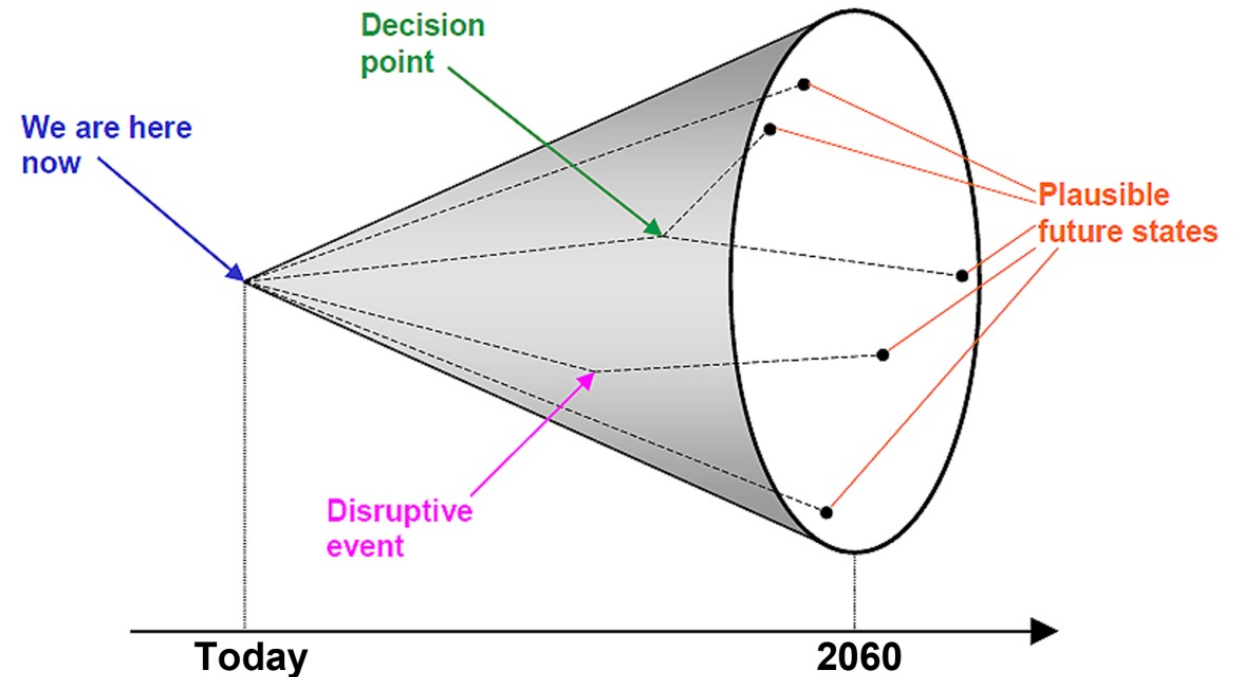
# Decision Support Model

- Regional and local system model for evaluating water supply resiliency
  - System infrastructure, hydrology, demands, operations
- Updating decision support models
  - Sonoma Water and Marin Water models
- Adding detail necessary to support option evaluations
- Test system performance under various scenarios and water management alternatives
- Suggest system improvements to improve resiliency



# Water Supply and Demand Scenarios

- Recognizing that future is uncertain
  - Climate change
  - Drought variability
  - Demands
  - Policies and regulations
- Seeking robust solutions
- Scenarios allow us to explore plausible future conditions and identify promising solutions
  - Historical droughts
  - Climate projections
  - Paleo reconstructions
  - Stress tests



# Water Supply Assessment Process

- Consider a broad range of water management alternatives
- Identify most promising alternatives
- Evaluate alternatives for performance and other economic, environmental, and social criteria
- Explore strategic combinations of alternatives
- Develop roadmap with specific project, pathways, and triggers to achieve resilient and sustainable solutions

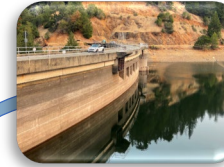
**Increase Supply**



**Manage Demand**



**Modify Operations**



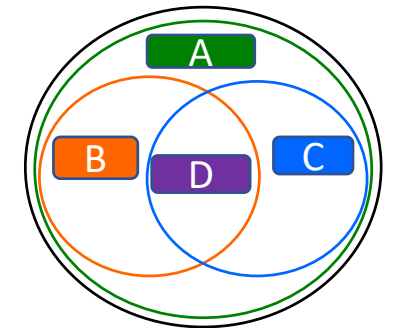
**Policy & Governance**



**Performance and Economic, Environmental, Social Attributes of Options**

Action Name	Cost	Quantity of Yield	Timing	Technical Feasibility	Permitting	Legal	Policy	Implementation Risk	Long-term Viability	Operational Feasibility	Energy Needs
Agricultural Water Use Efficiency	A	A	B	B	B	B	A	B	C	B	A
M&I Water Use Efficiency	A	A	C	A	A	A	B	B	C	B	A
M&I Water Reuse	B	A	C	B	C	C	B	B	C	C	D
Ocean Desalination	D	B	C	C	C	C	C	B	C	D	D
Precipitation Enhancement	A	C	A	C	B	C	C	B	D	D	C
Rainwater Harvesting	E	D	A	A	A	A	B	A	B	B	A
Conjunctive Management	C	B	C	C	C	C	A	B	C	C	B
Enhance Groundwater Recharge	C	B	C	B	B	B	A	B	B	B	A
Improve Tributary and Delta Environmental Flows	A	E	B	A	C	B	D	B	D	E	C
Improve System Conveyance	E	C	C	C	D	C	C	C	C	C	C
Improve CUP&SW Operations	B	D	B	B	D	C	C	B	B	B	C
Improve Regional/Local Conveyance	A	D	B	A	B	B	B	A	A	C	C
Increase Sacramento Valley Surface Storage	A	C	C	C	B	D	C	B	C	B	C
Increase San Joaquin Valley Surface Storage	C	D	C	C	B	D	C	B	C	B	C
Increase Export Area Surface Storage	B	D	C	B	D	C	C	B	C	B	C
Increase Upper Watershed Surface Storage	B	D	C	B	D	C	C	B	C	B	C
Improve Forest Health	A	B	C	C	C	C	E	D	D	C	C
Improve Regulatory Flexibility and Adaptability	A	D	B	A	A	D	B	C	B	A	A
Improve River Temperature Management	E	E	B	A	B	B	C	B	C	D	B
Improve Salinity and Nutrient Management	E	E	D	B	C	C	B	D	C	D	B

**Portfolio Development and Analysis**



**Resilient and Sustainable Water Management Solutions**



# Initial Water Management Strategies to Be Considered

- Baseline – Existing water supply system with planned improvements
- Long Term Conservation Scenario
- Water Purchases with Conveyance through East Bay Intertie
- Desalination
- Sonoma Water Options
- Increase Local Surface Storage
- Expand Recycled Water

# Schedule and Outreach Overview

- ✓ March - Public Workshop #1
- April Board & Committee Meetings - Goals/Targets
- May - Public Workshop #2
- May Board & Committee Meetings - Alternatives development
- June – Public Workshop #3
- June Board & Committee Meetings - Alternatives evaluation
- July Board & Committee Meetings - Roadmap and report preparation

# Summary

- Continue Water Supply Assessment:
  - Goals/Targets (April)
  - Alternatives (May & June)
  - Roadmap (July)
- Storage projection indicates near average reservoir levels for end of water year - even with no additional rain
- State is still in drought conditions
- Messaging to customers is to continue to use water wisely