



Report on Storage Management Strategy and Implementation

Water Planning and Stewardship Committee

Item 6b

June 7, 2021

Outline

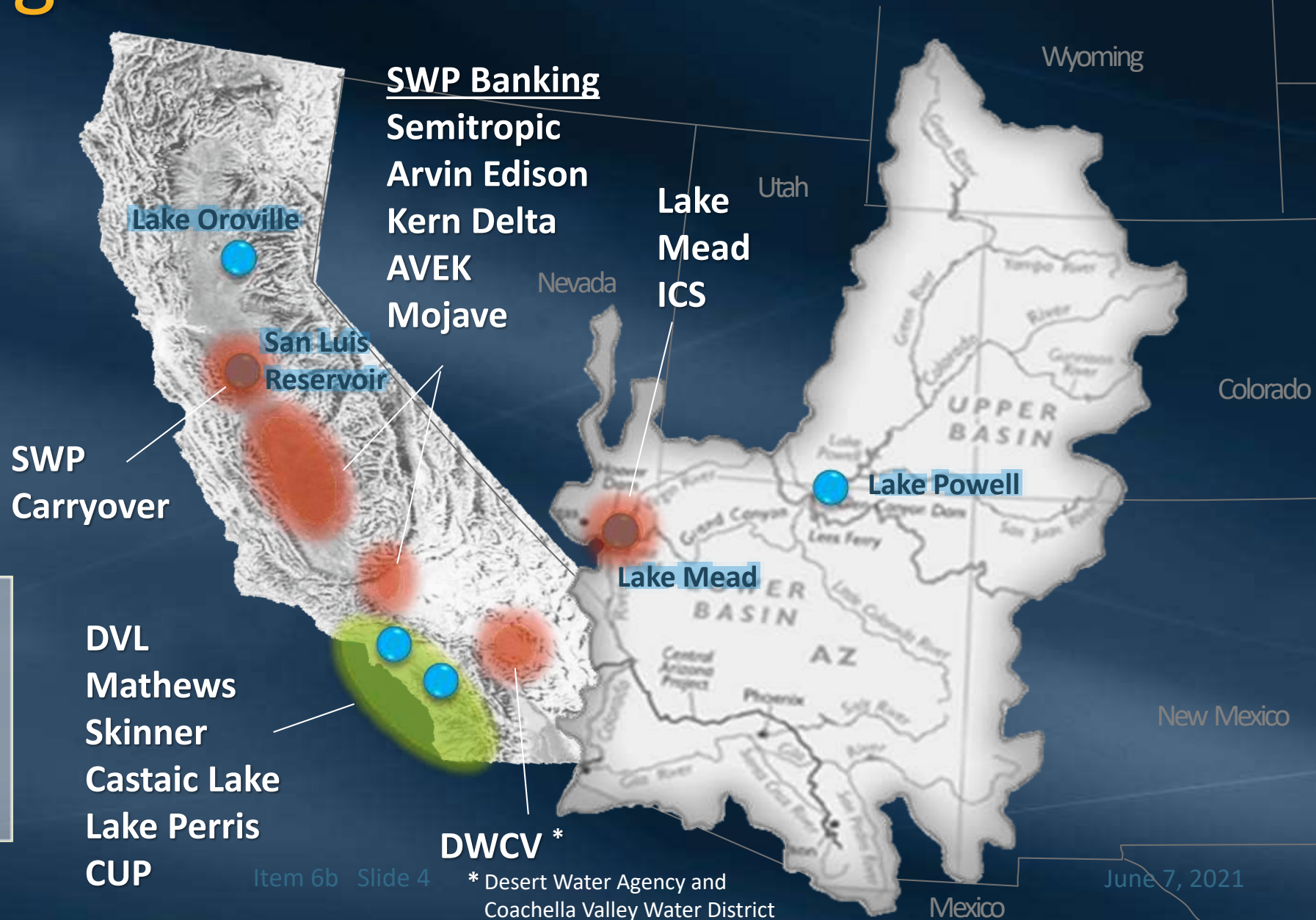
- Storage Portfolio Overview
- Water Surplus Drought Management Plan
- Operational and Other Considerations

Storage Portfolio Overview

Diverse Storage Portfolio

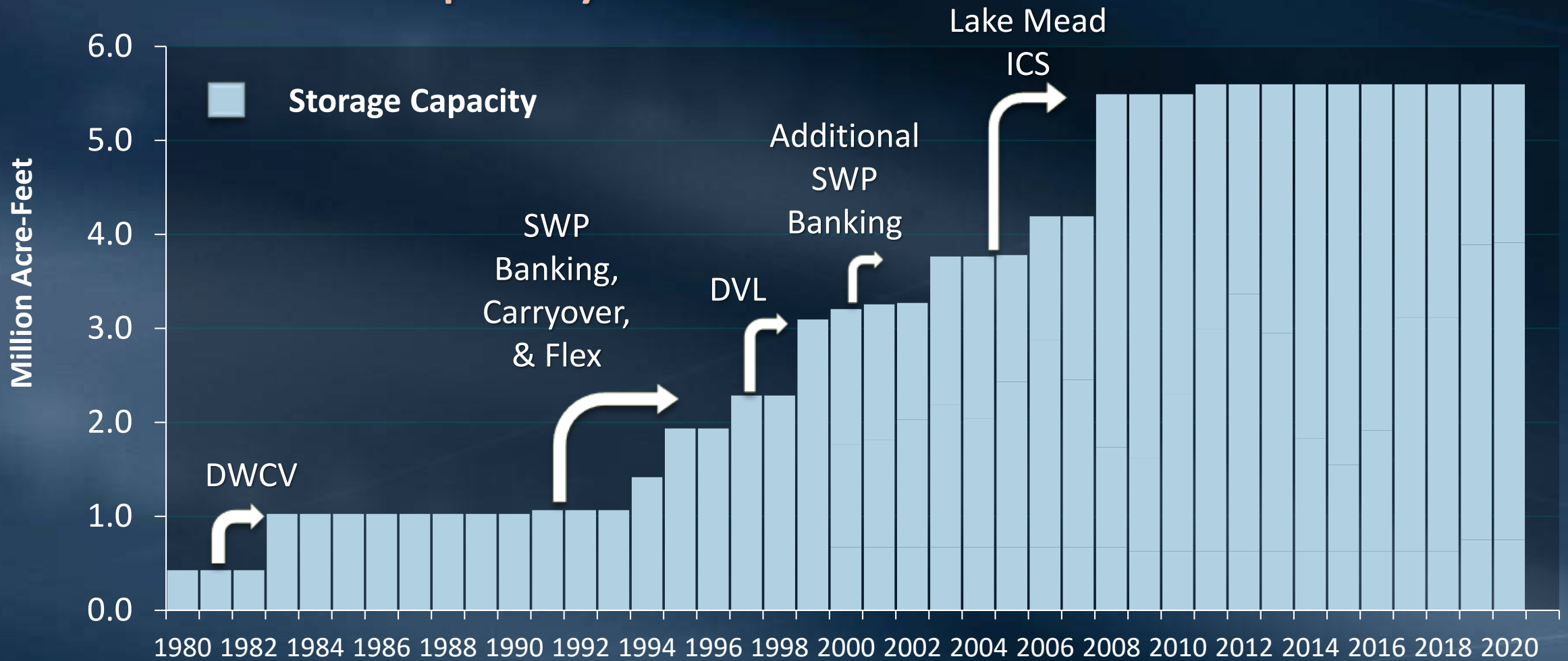
- In and Out-of-Region
- Groundwater and surface water

● Key imported water supply reservoirs operated by others
● MWD In Region Storage
● MWD Out of Region Storage



Diversification thru Investment and Partnerships

13x Increased Capacity Since 1980



For illustrative purposes only - capacity levels shown are approximate

Not All Storage is Created Equal

- Out-of-Region or In-Region
- Surface water vs. Groundwater
- Direct/indirect control over management and operation
- Water quality considerations
- Contractual arrangements
- Distribution system considerations
- Cost

Lake Mead - Intentionally Created Surplus

Surface Water: Out-of-Region



● Benefits

- Regulate Colorado River diversions and agricultural adjustments
- Helps fill the CRA
- Helps satisfy obligations

● Considerations

- Access (DCP agreement)
- Supply cannot reach entire service area

State Water Project Carryover

Surface Water: Out-of-Region



San Luis Reservoir

● Benefits

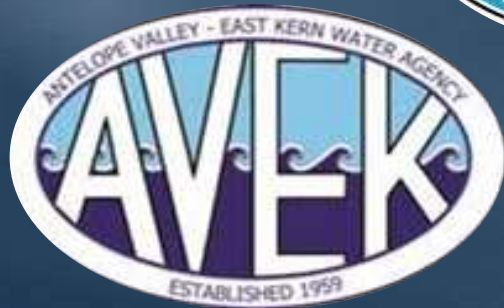
- Flexible in-region delivery points
- Contractual flexibility
- Helps manage variable hydrologic conditions
- No losses

● Considerations

- MWD does not own/operate
- Risk of spill

State Water Project Banking Programs

Groundwater: Out-of-Region



- Benefits
 - Flexible in-region delivery points
 - Exchange capabilities
 - Helps manage variable hydrologic conditions
- Considerations
 - Water quality
 - Put/take capacities
 - Costs and losses

Exchange and Advanced Delivery (DWCV*)

Groundwater: Out-of-Region



- Benefits
 - Increases SWP supply (Exchange with CRA supply)
 - Operating/contractual flexibility
 - No losses
- Considerations
 - CRA capacity
 - Put/take capacities

*Desert Water Agency and Coachella Valley Water District

Flexible Storage

Surface Water: In-Region



- Benefits
 - Flexible in-region delivery points
 - No losses
- Considerations
 - Contractual requirements
 - Water quality
 - Supplies cannot reach entire service area

Diamond Valley Lake

Surface Water: In-Region



- Benefits
 - MWD owns/operates
 - Operational flexibility
 - Maximizes Inland Feeder capabilities
- Considerations
 - No CRA water (quagga mussels)
 - Supply cannot reach entire service area
 - Water quality

Conjunctive Use Programs

Groundwater: In-Region



- Benefits
 - Demand management
- Considerations
 - Partnerships/coordination
 - Local basin management

Water Surplus and Drought Management Plan (WSDM Plan)

Guiding Principle for Managing Regional Storage

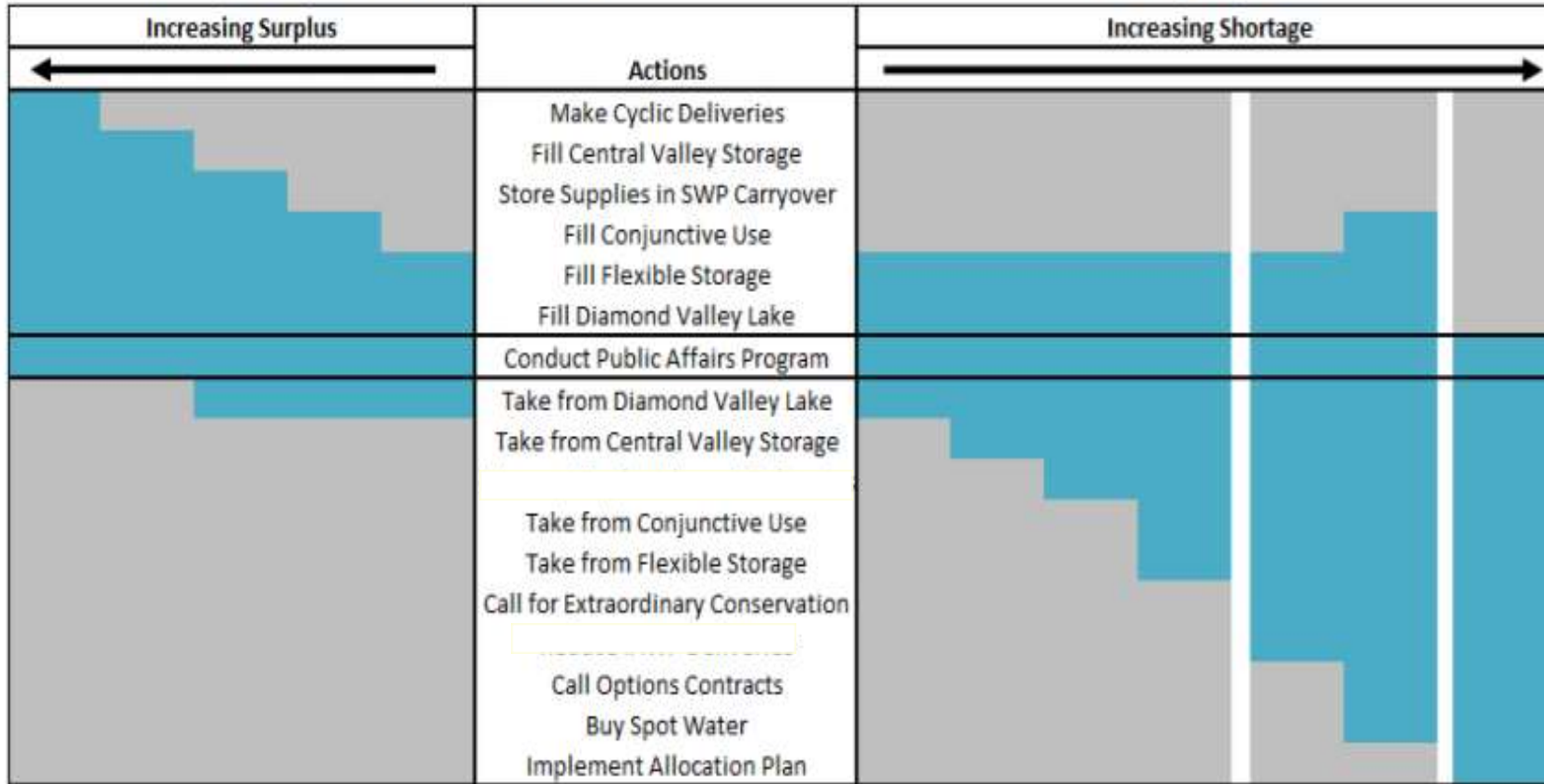


Encourage storage of water during periods of surplus and work jointly with its member agencies to minimize the impacts of water shortages on the region's retail consumers and economy during periods of shortage

WSDM Plan Action Matrix

Framework for Generally Preferred Actions

Figure 1: WSDM Plan Resource Stages and Actions Matrix (updated)



 Potential Simultaneous Actions

The WSDM Plan presents a resource management framework to guide Metropolitan's integrated approach to supply management

Underlying Objective for Storage Management

- The WSDM framework values accessibility and security



- *“The resource management framework does not dictate a scripted response to shortage or surplus. The framework recognizes the complexity and variety of conditions that require action.”*

WSDM Plan – Surplus Actions

Surplus Action (Put)			
Order May Vary	DVL	In-Region	Surface
	Flex Storage		Groundwater
	Conjunctive Use	Out-of-Region	Surface
	SWP Carryover		Groundwater
	Lake Mead ICS		
	Banking Programs		

- Not meant to be a strict order
- Meant to adapt to current conditions
- Store water for most effective use in future droughts

WSDM Plan – Drought Actions



- Not meant to be a strict order
- Take water strategically to be better prepared for future droughts

Operational and Other Considerations

Six Operating Principles Guide Storage Strategy

OPERATIONAL FLEXIBILITY

Maintain flexibility to manage storage within the total storage portfolio, not individual accounts

INVASIVE SPECIES

Regional storage managed to minimize risk of infestation

EMERGENCY STORAGE

Reserve emergency storage in Southern California reservoirs to meet demands during catastrophic events

SYSTEM RELIABILITY

Manage storage to meet demands in the entire service area, including exclusive areas

WATER QUALITY

Consider salinity goals and other constituents when blending various supplies

SUPPLY ALLOCATIONS

Manage regional storage to avoid or reduce the frequency of severe water supply allocations and avoid large supply allocation increases from year-to-year, to the extent practicable

Flexibility Allows Adaptation to Changed Conditions and to Implement Lessons Learned

● System Needs

- Maintain storage for areas served by a specific resource
- Operational constraints and water quality considerations
- Preserve SWP supplies in low SWP allocation years

● Contractual Requirements

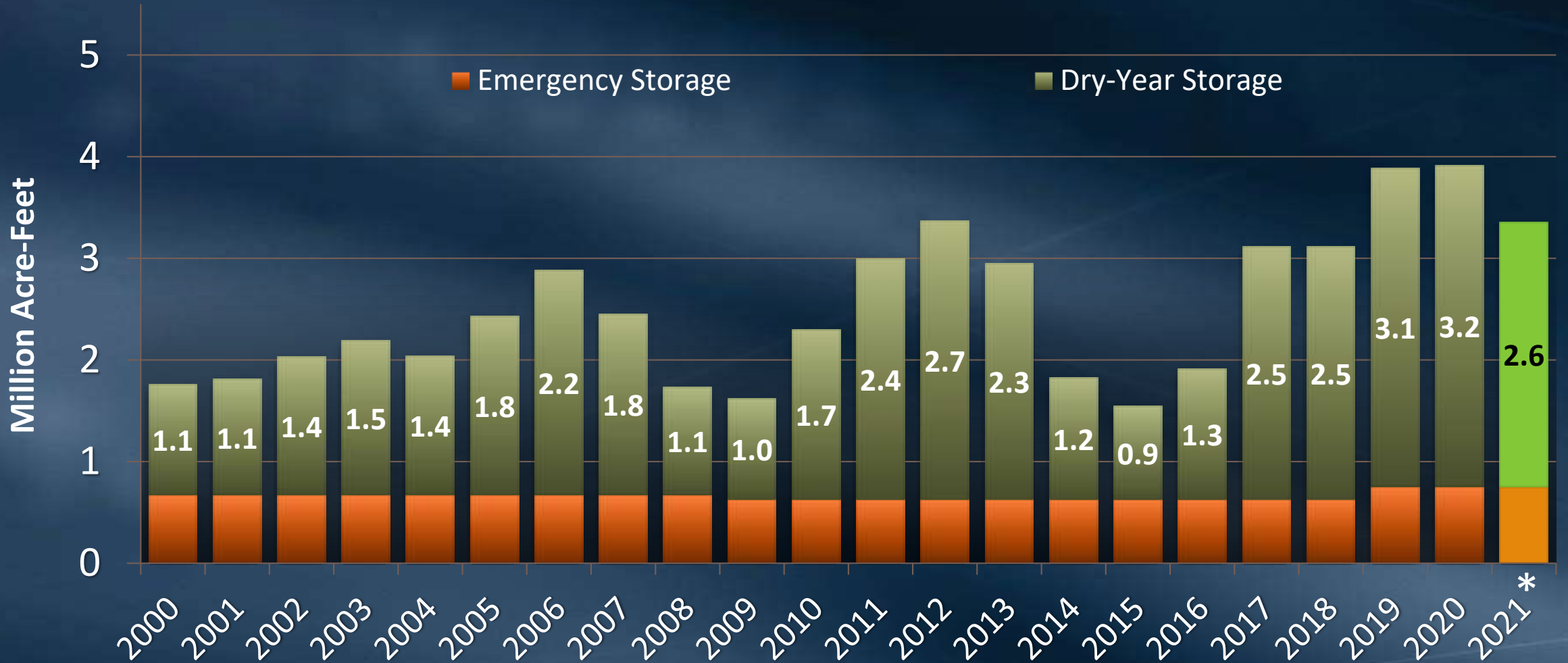
- SWP groundwater banking partnerships
- Repayment of previously stored water
- Potential DCP contributions

● Other Considerations

- Balancing storage to maximize takes in multi-year droughts
- Conditions reporting and WSAP implementation

WSDM Storage Management Success

End of Year Balances



* Projected balance

Summary

- Metropolitan has invested in a diverse storage portfolio
- The WSDM Plan provides guidance for managing storage during periods of surplus and shortage
- Storage programs are not created equally
- Storage levels are critical in water supply condition reporting and implementation of the Water Supply Allocation Plan
- The WSDM Plan provides a flexible framework that has enabled the region to maintain a high degree of water supply reliability

