

# CITY COUNCIL REPORT



Meeting Date: June 25, 2024  
General Plan Element: ***Public Service & Facilities***  
General Plan Goal: **Ensure renewable, long-term water supply**

## ACTION

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**For informational purposes only**

## BACKGROUND

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Since 2022, the Colorado River system has been in shortage – meaning less water for the state of Arizona through the Central Arizona Project (CAP). Over the last several years, there has been a tremendous amount of news coverage about the drought and water cuts. Scottsdale Water has also been updating council about the conditions and effects to the city including hydrologic predictions and updates to governance framework negotiations.

Currently the two largest reservoirs of the system, Lake Mead and Lake Powell, were reported in Spring of 2024 to be 35% full. At this point, the city is still able to meet demand for residents and businesses, while preparing for even further cuts in coming years. The governance structure of how and when we are in shortage is currently controlled through the 2007 Interim Guidelines with the 2019 Drought Contingency Plan reductions layered on top of the guidelines. This set of guidelines is set to expire at the end of 2026.

The U.S. Bureau of Reclamation (BOR) has set in motion the process for re-consultation for a new set of guidelines post-2026. This is a multi-year process that will identify a range of scenarios and alternatives to determine operations for Lake Powell and Lake Mead as well as other water management actions. The BOR's intent is "to develop a robust set of operating guidelines for Lake Powell and Lake Mead that provide for the sustainable management of the Colorado River system and its resources under a wide range of potential future system conditions due to a changing climate". When put in place, the post-2026 guidelines will redefine Colorado River water allocations for decades.

Action Taken \_\_\_\_\_

As a part of this process, direct stakeholders and other interested groups were able to send in their own proposals on operating alternatives to be evaluated and included as part of the Environmental Impact Statement (EIS). The Lower Basin – California, Arizona, and Nevada – sent in a consensus proposal that evaluated several hydrologic futures and guidelines to manage the system around a dry future. The Post-2026 Lower Basin Alternative goals were to:

- Improve Colorado River reliability over a broad but plausible range of future conditions.
- Address the structural deficit and more in the lower basin by reducing 1.5 MAF of use in the Lower Basin.
- Sharing the risks and benefits of the system within and between the basins.
- Improving predictability of reductions to stabilize Lake Mead.

This is a critical time in our state for future planning efforts. In the face of uncertainty on future runoff hydrologies on the Colorado River, coupled with the potential for higher levels of shortage triggers and reduction amounts, this becomes a time for serious planning and action. Scottsdale was the first city in Arizona to declare stage one of its Drought Management Plan and we have since grown many of our conservation initiatives (some by as much as 400%) and continue efforts on infrastructure planning. Scottsdale is responding in the following ways:

- Expanding our recycled water systems and entering into conversations for regional programs.
- Continuing engagement in the Bartlett Dam Modification Feasibility study and effort.
- Increasing aquifer storage and recovery abilities.
- Expanding the Automatic Meter Infrastructure network and WaterSmart customer portal to assist customers to better understand and more efficiently manage their water.
- Identifying steps and technology that could be used to improve the city's water conservation and efficiency efforts such installing additional cooling tower controllers that alert to unexpected high water use events.

## ANALYSIS & ASSESSMENT

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### Recent Staff Action

None

### Community Involvement

None

## RESOURCE IMPACTS

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### Available funding

N/A

### Staffing, Workload Impact

N/A

## OPTIONS & STAFF RECOMMENDATION

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Continue to keep council informed on the Colorado River system and potential allocation reductions.

## RESPONSIBLE DEPARTMENT(S)

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Water Resources Division

## STAFF CONTACT(S)

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**APPROVED BY**

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*Brian K. Biesemeyer*

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6/10/24 14:56 MST

Date

*Greg Caton*

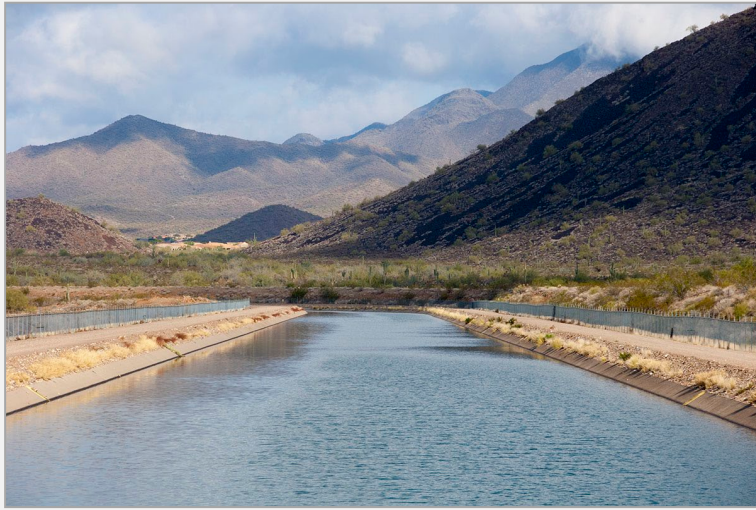
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Greg Caton, Assistant City Manager  
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6/10/24 16:05 MST

Date

# Scottsdale Water Colorado River Shortage Update



Scottsdale Council Work Study Session  
June 25<sup>th</sup>, 2024

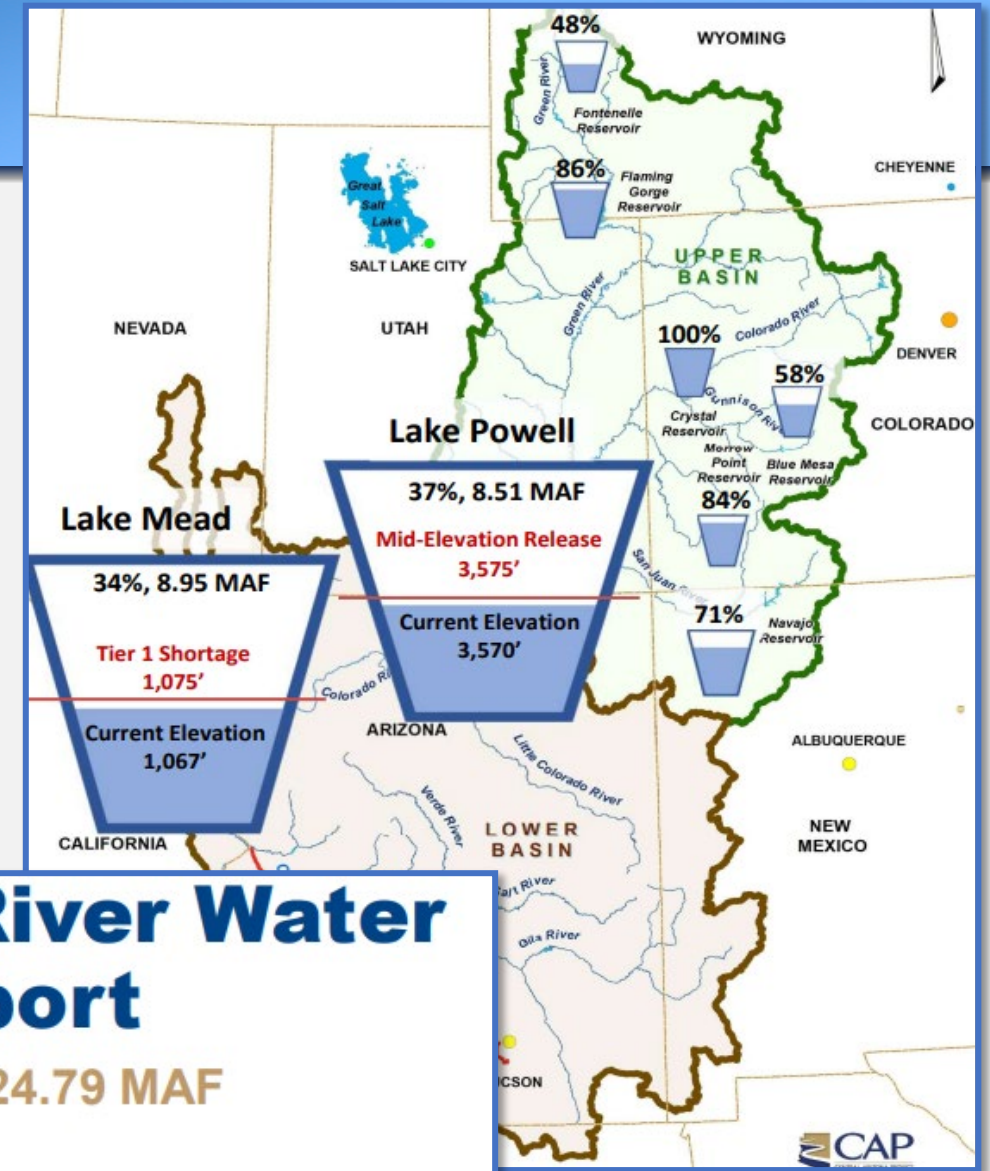
# Agenda

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- System and current conditions - Colorado River
- Post 2026 guideline development
- Lower Basin Proposal and implications

# Current Conditions

Total system content is approximately 43% of total system capacity



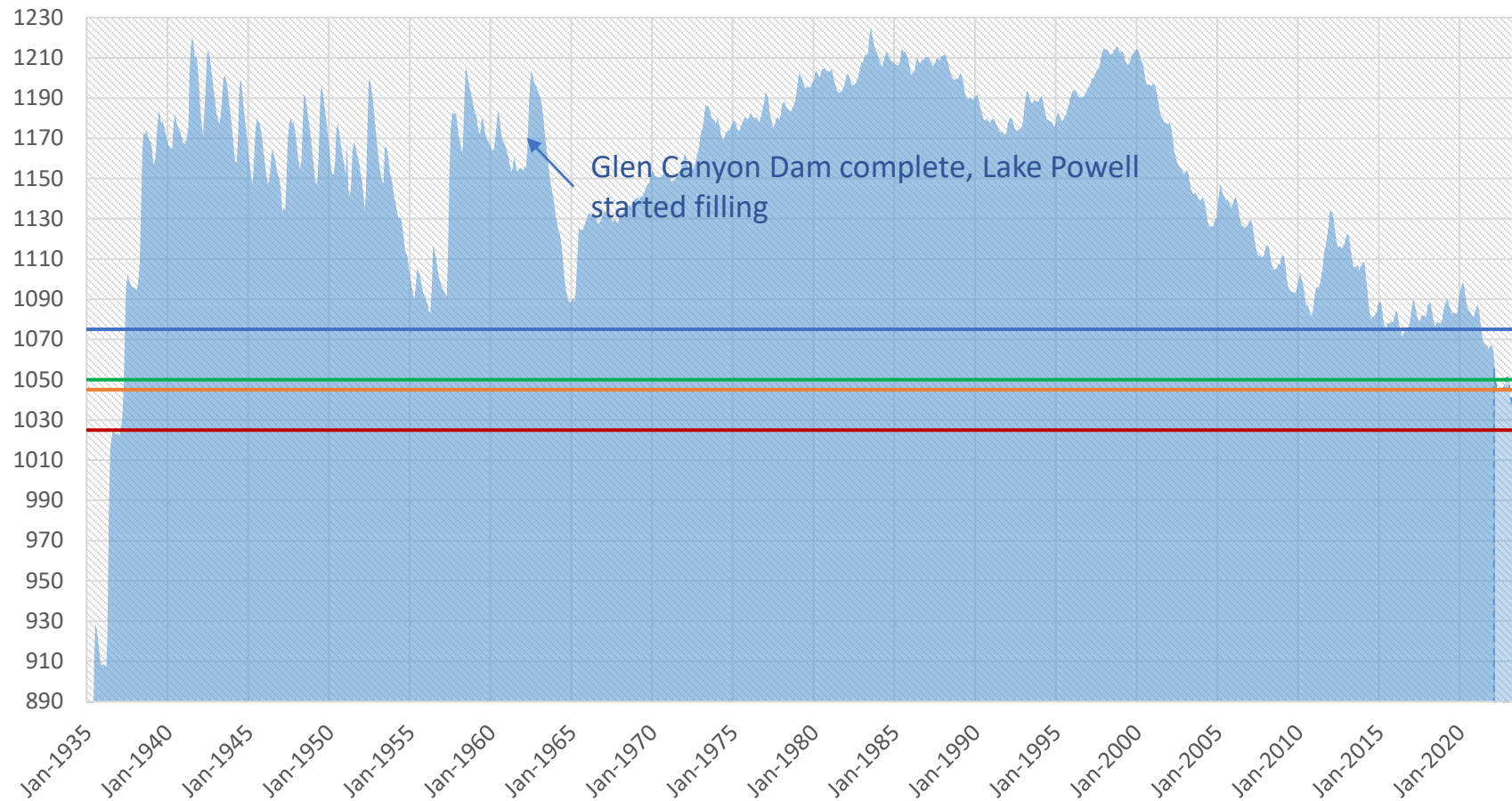
## Colorado River Water Supply Report

System Contents: 24.79 MAF

As of June 2, 2024

Last Year System Contents: 23.54 MAF

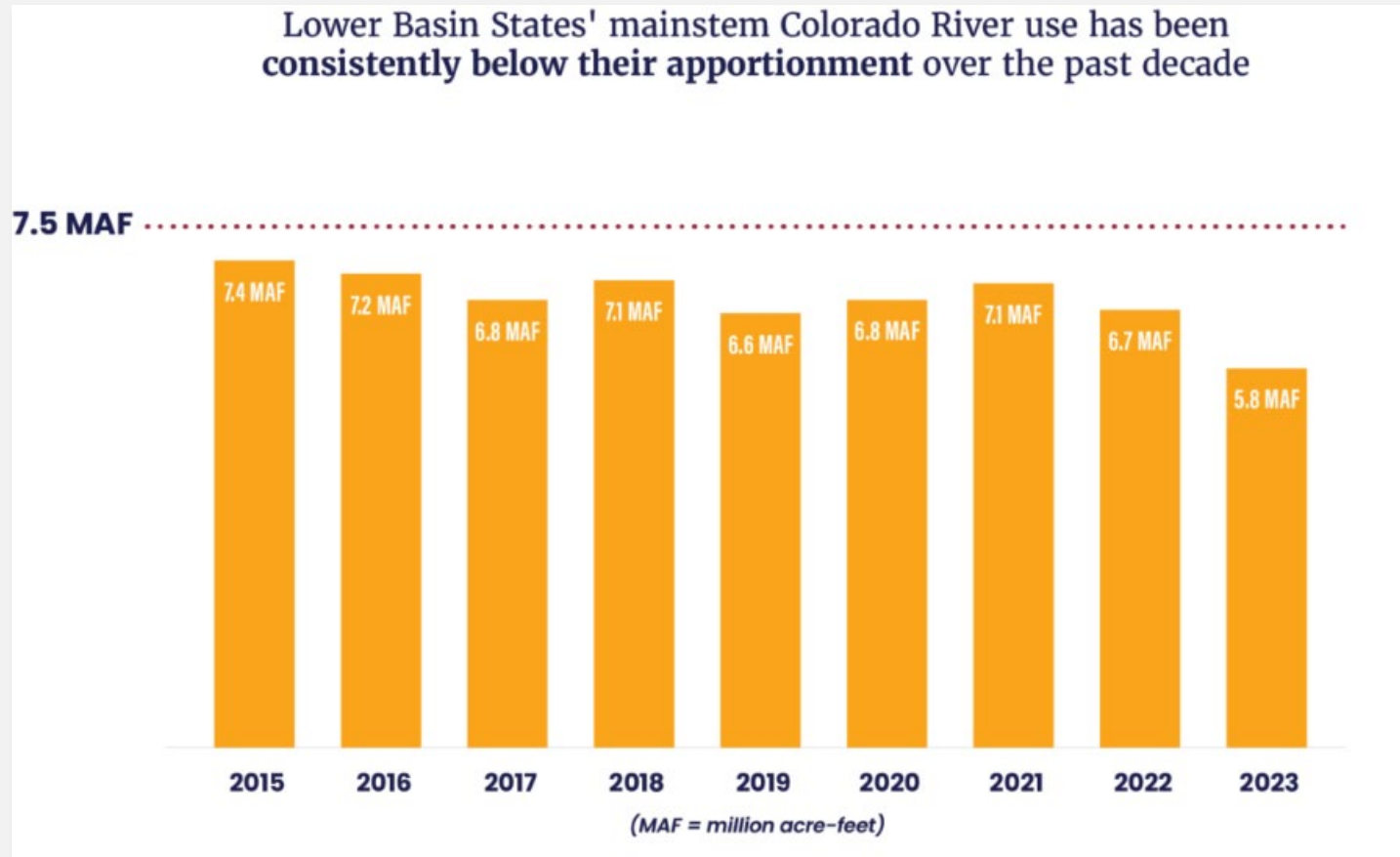
## Lake Mead Water Level Elevations



### Contributing Factors

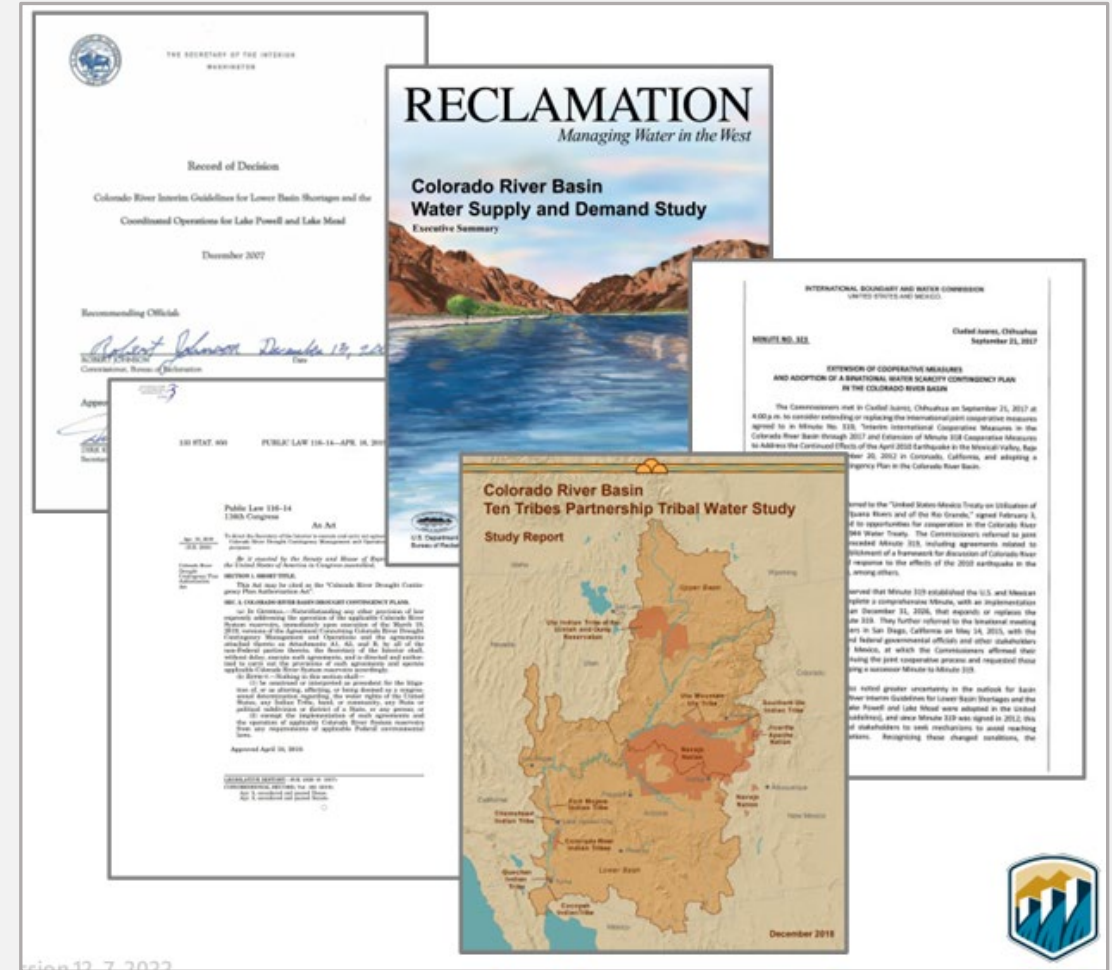
- 20+ years of dry conditions
- Warming climate and aridification
- Structural deficit and overallocation

# Currently operating below allocation



# Lower Basin Shortage Plans

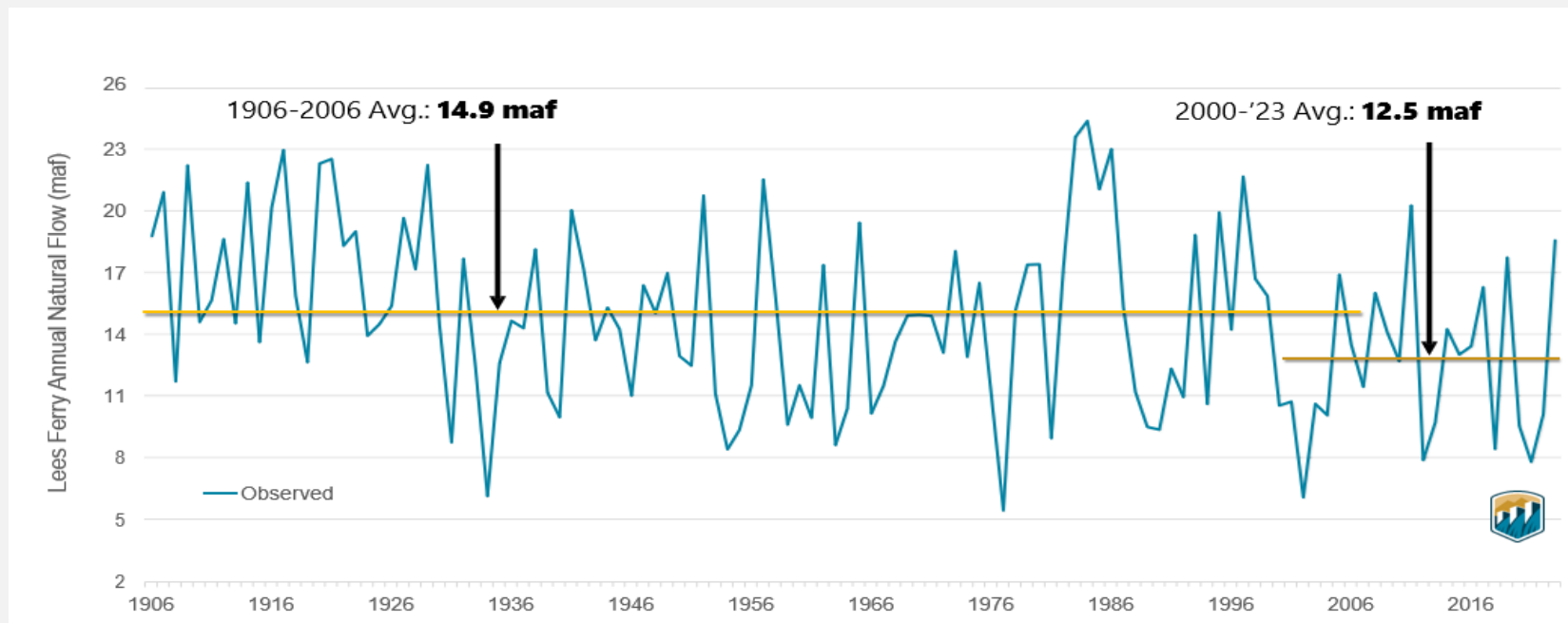
- 2007 Interim Guidelines
- Colorado River Basin Water Supply and Demand Study (2012)
- 2019 Lower Basin Drought Contingency Plan
- 2021 500 + Plan
- 2023-2026 Lower Basin additional system conservation of 3 million acre-feet



# Post 2026 Colorado River Reservoir Operations -

2007 Interim Guidelines have not sufficiently reduced risk

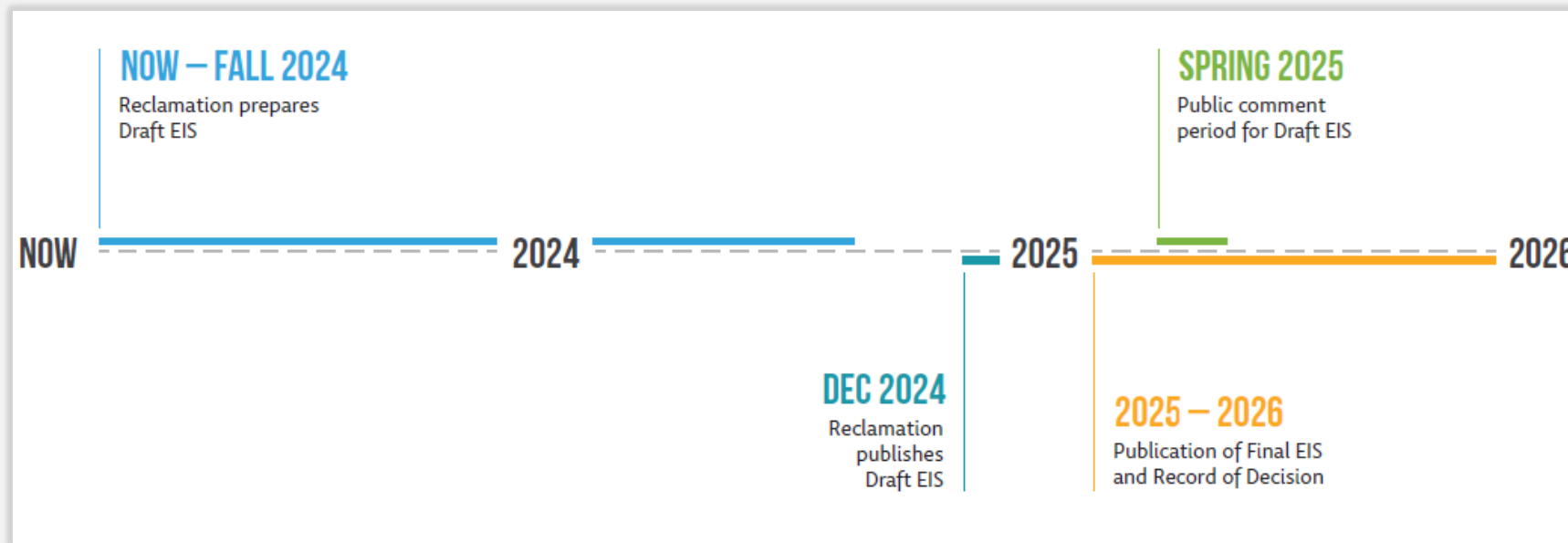
“Based on operational experience since 2007, the current guidelines are not robust enough.... More robust and adaptive guidelines are needed for the efficient and sustainable management of the major mainstream Colorado River reservoirs and system resources.”<sup>1</sup>



<sup>1</sup>Scoping report for Post-2026 Colorado River Reservoir Operations

# Guidelines that have been in place for operating the Colorado River since 2007 expire at the end of 2026

- Bureau of Reclamation began the process for establishing post-2026 guidelines in June 2023
- Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) process
- Analysis of a proposed federal action and alternatives submitted by the external stakeholders
- Culminates in a Final EIS with responses to comments and a Record of Decision



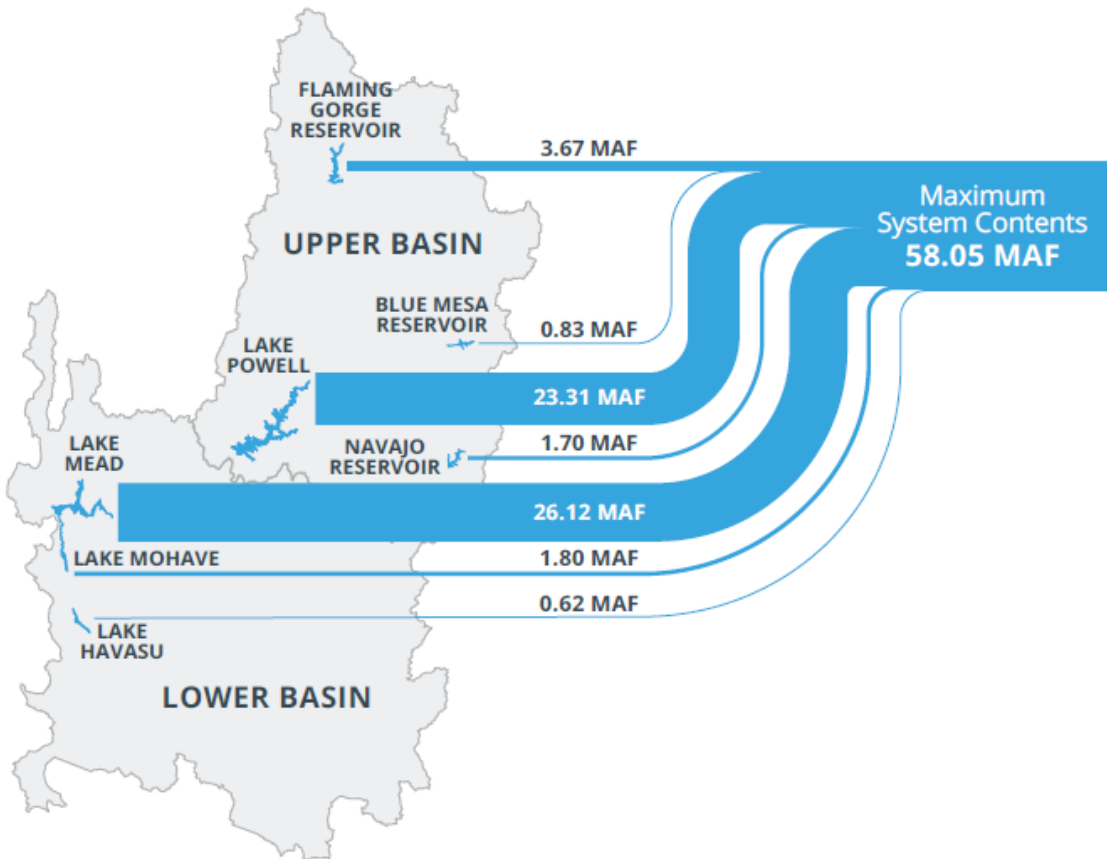
# THE LOWER BASIN STATES' ALTERNATIVE FOR POST-2026 COLORADO RIVER OPERATIONS

- Reclamation selected a wide range of future hydrologies to explore system alternatives.
- The hydrologies cover a wide range of minimum and maximum flow that extend beyond the historical records.
- The Lower basin Alternative was drafted collaboratively by Arizona, California and Nevada.
- Address the structural deficit.
- Sharing the risks and benefits of the system within and between the basins.

# LOWER BASIN ALTERNATIVE REDUCTION DETERMINATION

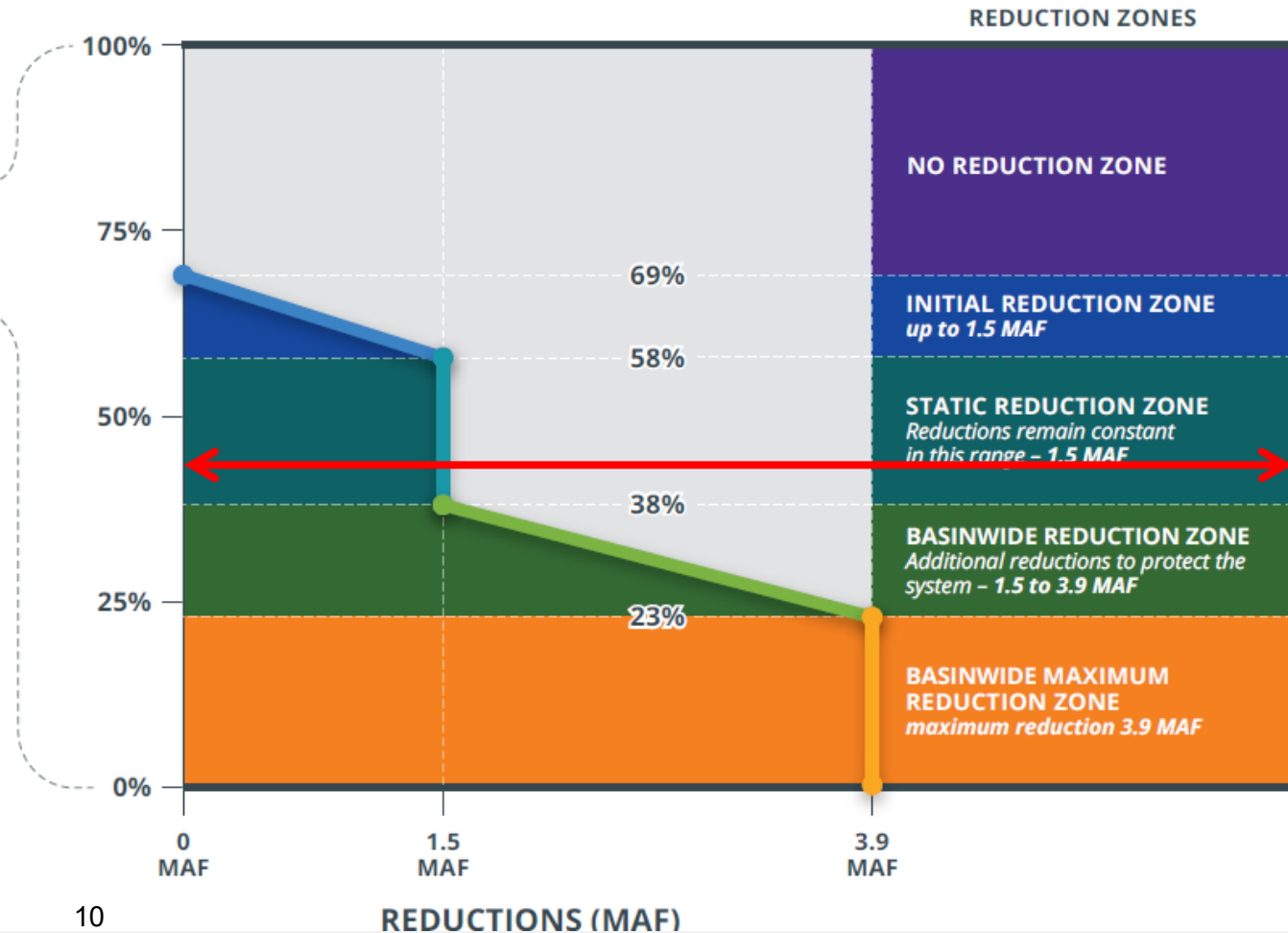
## MAXIMUM SYSTEM CONTENTS

System contents are based on the volume in each reservoir that is available for release, in millions of acre-feet (MAF)



## REDUCTION DETERMINATION

Reductions are based on the available system contents, based on the function below



# CAP Water Shortage Tiers and Scottsdale's Corresponding Shortage Stages

| CAP Water Shortage Tiers                                                | TIER ZERO                       | TIER 1                   | TIER 2A                  | TIER 2B                   | TIER 3                  | PROJECT LEVEL             |
|-------------------------------------------------------------------------|---------------------------------|--------------------------|--------------------------|---------------------------|-------------------------|---------------------------|
| Lake Mead Elevation (in feet)                                           | 1,090                           | 1,075                    | 1,050                    | 1,045                     | 1,025                   | <1,025                    |
| Corresponding City Water Shortage Stage                                 | Stage Zero Shortage Preparation | Stage 1 Minimum Shortage | Stage 1 Minimum Shortage | Stage 2 Moderate Shortage | Stage 3 Severe Shortage | Stage 4 Critical Shortage |
| Potential City Water Supply Reduction (MGD)                             | 0                               | 2.0                      | 3.0                      | 6.5                       | 13.5                    | 24                        |
| Potential City Water Supply Reduction (AF/year)                         | 0                               | 2,300                    | 3,400                    | 7,300                     | 15,200                  | 26,900                    |
| Approximate percent reduction to Scottsdale's CAP Supply <sup>(a)</sup> | 0                               | 3%                       | 4%                       | 9%                        | 18%                     | 33%                       |

## CMIP5 LOCA KNN

- No Reduction Zone
- Initial Reduction Zone
- Static Reduction Zone
- Basin-wide Reduction Zone
- Basin-wide Maximum Reduction Zone

20,000 AF  
18 mgd

42%

45,000 – 62,000 AF  
40 -56 mgd

18%

2%

- 20% of the time = no reduction
- 18% of the time up to 25% reduction
- 42% of the time 25%
- 18% of the time 50 – 75% reduction (estimated)
- 2% of the time 100% reduction

# Scottsdale's ongoing and Continual Response

- Operate under our Drought Management Plan
- Expanded conservation and messaging
- Expanding our AMI network
- WaterSmart portal
- HOA Program
- Commercial Audits
- Sustainable Water Management Principles – CH4

# **Scottsdale Water Strategic Plan Update**

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## **2025-2030**

# THANK YOU

