 **CAP**  
CENTRAL ARIZONA PROJECT

**Patrick Dent**

Item 16 - CR River Discussions

Report on Draft Supplemental Environmental Impact Statement

May 4, 2023

YOUR WATER. YOUR FUTURE.

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**ARC #7 Meeting Agenda**

Welcome and Introductions

November ARC meeting summary

**Draft** Supplemental Environmental Impact Statement (SEIS)


Hydrology Updates

Basin States Discussion update

Next Steps

Call to the Public

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## Published SEIS Purpose and Need

**Purpose** – To supplement the 2007 Interim Guidelines to modify guidelines for operation of the Glen Canyon and Hoover Dams

**Need** - Potential for continued low-runoff conditions in the Basin could lead Lake Powell and Lake Mead to decline to critically low elevations, impacting operations through the remainder of the interim period (prior to January 1, 2027).

## Published SEIS Scope

The SEIS focuses on:

- New information
- Changes in conditions since 2007
- Impacts associated with the considered alternatives

The SEIS only analyzes the operations of Lakes Powell and Mead and does not consider operations of the Upper Basin reservoirs above Lake Powell.

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## SEIS - Key Actions Evaluated

**Shortage Conditions** - Decrease quantity of water apportioned for consumptive uses in the Lower Division States

**Coordinated Operation of Lake Powell and Lake Mead** – Revise Mid-Elevation Release Tier, and Lower Elevation Balancing Tier, to reduce releases from Glen Canyon Dam

**Mid-Year Review** - Expand the mid-year review to include reduction of deliveries from Lake Mead

*The content of this presentation represent our current, best understanding of the draft SEIS and may change with continued review and further analysis.*

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## Reclamation “Disclaimer”

“The action alternatives under this Draft SEIS and their associated Shortage Allocation Models, which are described in detail in the following sections, require certain modeling assumptions with regard to how shortages may be allocated. Reclamation acknowledges there may be other interpretations of how shortages could be distributed. **These modeling assumptions are not intended to represent current or future policy with respect to shortage sharing or to limit Secretarial discretion to distribute shortages. The Shortage Allocation Models are not a substitute for the annual process of reviewing water orders and determining annual water availability for each water entitlement holder on the lower Colorado River and, as such, cannot replicate the precision required for that process.**” (emphasis added)

## Alternatives

### No Action Alternative

- Required under NEPA to analyze impacts if the action agency does not take action.
- Analyzes impacts under the current operating agreements including the 2007 Interim Guidelines and the Drought Contingency Plan

### Alternative 1 – the “priority” alternative

- Reductions pursuant to '07 Guidelines and DCP, plus additional cuts by an interpretation of priority under the Law of the River

### Alternative 2 – the “pro rata” alternative

- Uniform percent reductions applied to all users based on 2021 consumptive use, plus reductions pursuant to '07 Guidelines and DCP
- Includes a potential 500 kaf of DROA release from the Upper Basin

Reclamation did not fully analyze the Six-State or the California alternatives

## Modeling Assumptions (Hydrology)

Colorado River Mid-term Modeling System (CRMMS) September 2022 model

Initial reservoir conditions as of August 31, 2022

Run period: September 2022 through December 2026

Input hydrology consists of:

- 1991 – 2020 Hydrology
- 100, 90, and 80 percent of streamflow forecasts combined into a single ensemble
- A total of 90 traces were analyzed

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## Powell Operations

	Current	Alternatives 1 & 2
3,575	<b>Mid-Elevation Release Tier</b> Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	<b>Lower Elevation Release Tier</b> Set initial release: 6.0 maf; adjust releases based on April Lake Powell end-of-water-year elevation projection:  ≥ 3,575 feet, release 8.23 maf < 3,575 feet AND ≥ 3,550 feet, release 7.48 maf < 3,550 feet AND ≥ 3,525 feet, release 7.0 maf
3,525	<b>Lower Elevation Balancing Tier</b> Balance contents with a minimum/maximum release of 7.0/9.5 maf	< 3,525 feet AND ≥ 3,500 feet, maintain release of 6.0 maf  < 3,500 feet, then reduce releases (gains equals losses) such that Lake Powell ends the operating year at 3,500 feet
3,500		<b>Protection Level</b> < 3,500 feet in any month, reduce releases (gains equals losses) such that Lake Powell ends the operating year at 3,500 feet
3,370		

Action Alternatives 1 and 2 are identical for Powell Ops

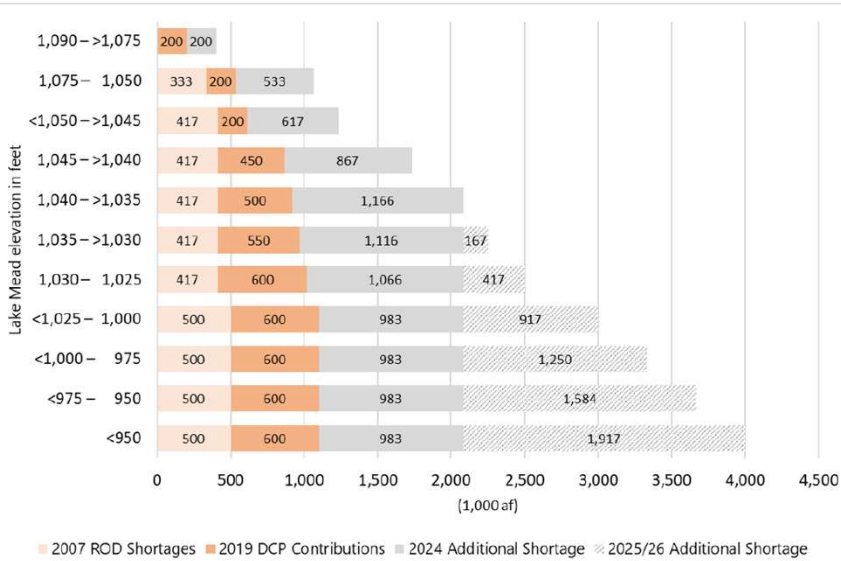
### New Lower Elevation Release Tier

- Absolute Protect 3,500'
- Alternative 2 considers up to 500 KAF of DROA if Powell Elevation < 3,525'
- Releases of 6 MAF or less are contemplated



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## Mead Operations: Action Alternatives 1 & 2



Identical incremental reductions based on elevation

Reductions

- 2.083 MAF in 2024

- up to 4 MAF in 25 & 26

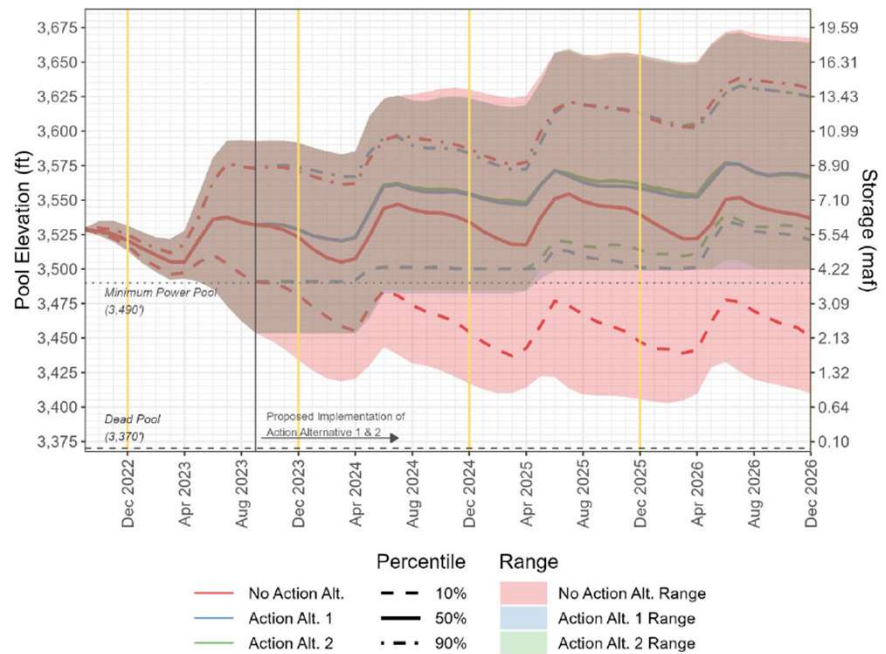
**Alternative 1 distributes additional reductions based on a concept of priority**

**Alternative 2 distributes additional reductions pro-rata across all Lower Basin water users**



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## Impacts to Lake Powell

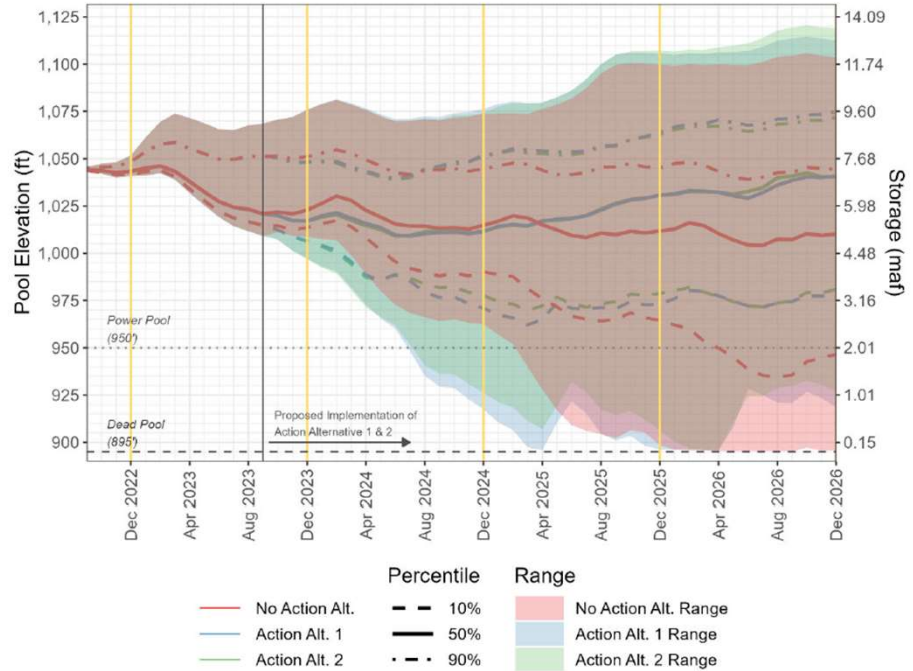


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## Impacts to Lake Mead



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## Powell and Mead Critical Elevations 3490' at Powell, 950' at Mead

### No Action Alternative

- Lake Powell
  - 38% (2024) of the traces fell below critical elevations
  - 31% and 34% (2025, 2026) of the traces fell below critical elevations
- Lake Mead
  - 0% (2024) fell below critical elevations
  - 9% and 14% (2025, 2026) of the traces fell below critical elevations
  - In 2026, 8% of the traces approach dead pool
  - Lake Mead projected elevations are dependent on release of water through the bypass tubes (which may not be technically feasible)

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## Powell and Mead Critical Elevations 3490' at Powell, 950' at Mead

### Action Alternative 1

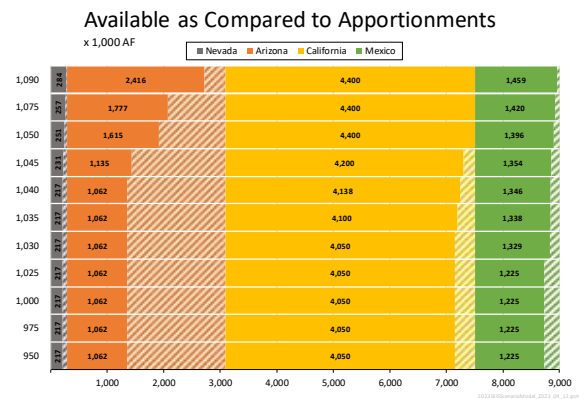
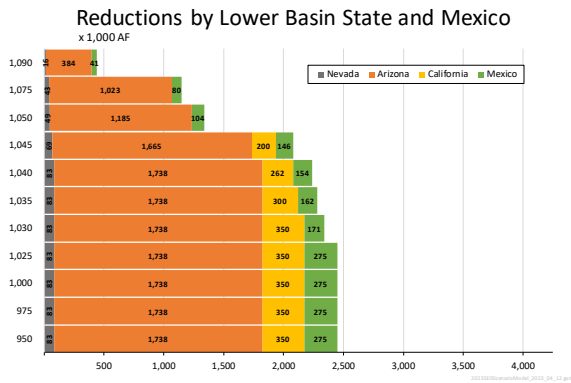
- Lake Powell
  - 9% (2024) of the traces fell below critical elevations
  - 2% and 0% (2025, 2026) of the traces fell below critical elevations
  - Eliminates the outcome of Powell falling below 3500' by 2026
- Lake Mead
  - 6% (2024) of the traces fell below critical elevations
  - 9% and 7% (2025, 2026) of the traces fell below critical elevations
  - Elevations in Lake Mead stabilizing or increasing in 2025

## Powell and Mead Critical Elevations 3490' at Powell, 950' at Mead

### Action Alternative 2

- Lake Powell
  - Action Alternative 2 performs identical to Action Alternative 1
  - Eliminates the outcome of Powell falling below 3500' by 2026
  - Up to 500 KAF of DROA is included
- Lake Mead
  - 3% (2024) of the traces fell below critical elevations
  - 8% and 4% (2025, 2026) of the traces fell below critical elevations
  - Elevations in Lake Mead stabilizing or increasing in 2025

## Alternative 1 (2024)

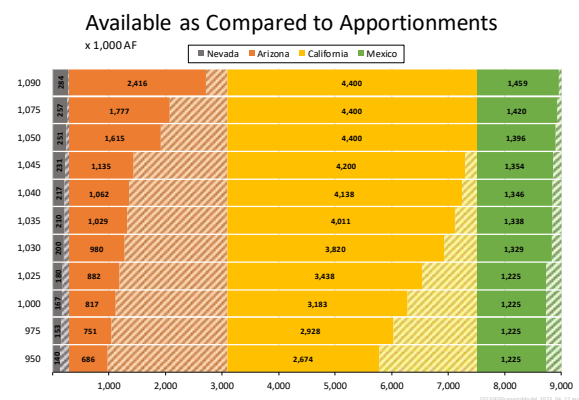
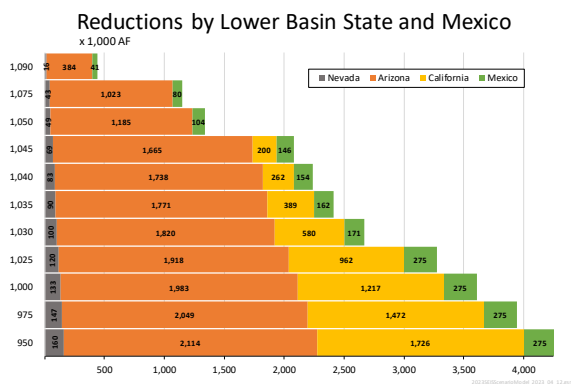


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## Alternative 1 (2025/26)



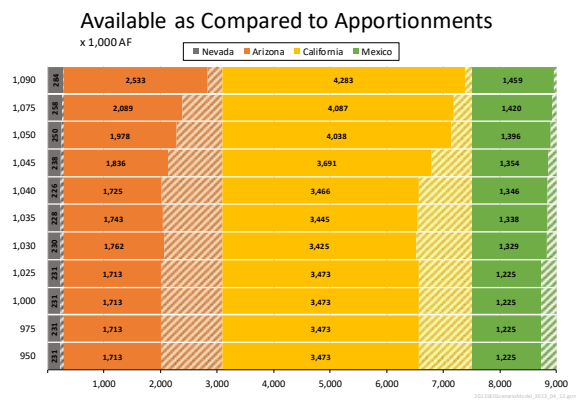
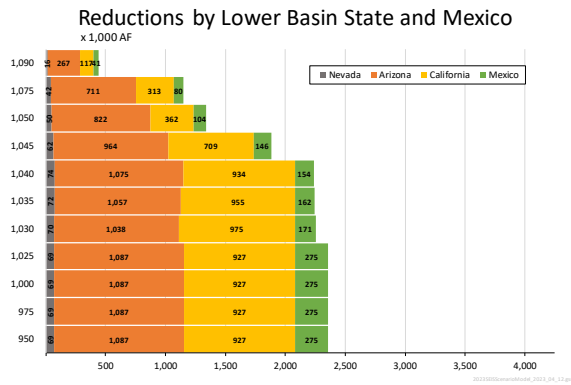
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## Alternative 2 (2024)

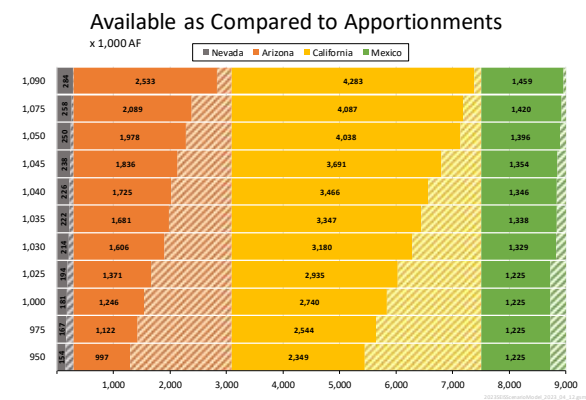
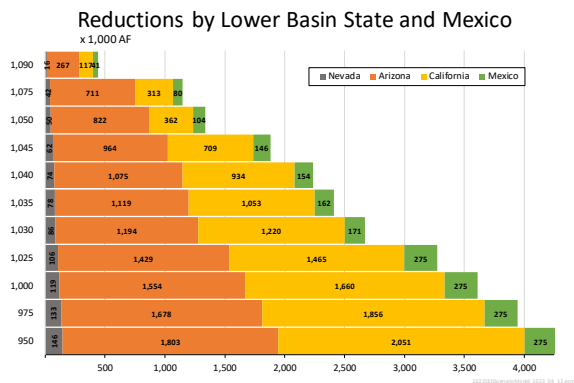


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## Alternative 2 (2025/26)

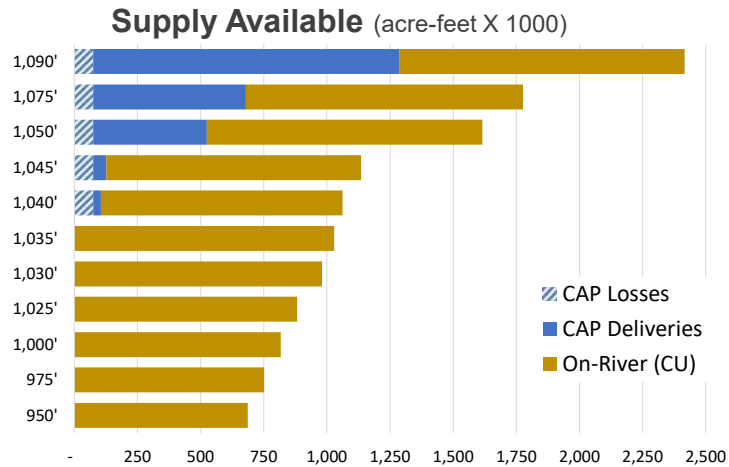


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## Supply to Arizona: Alternative 1 (2025/26)



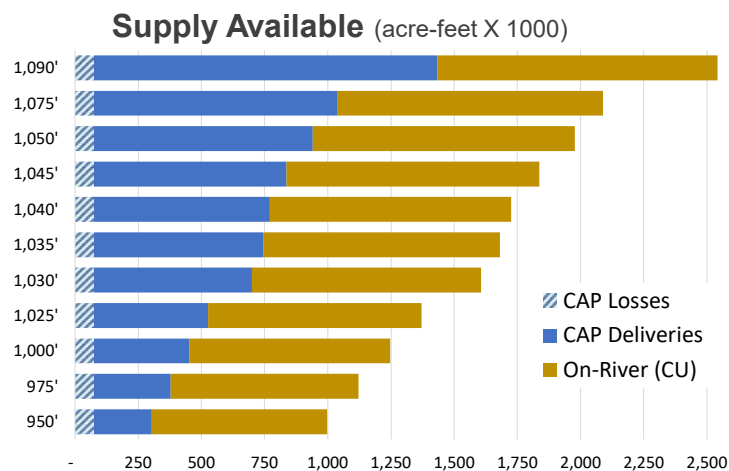
Compiled from: Draft SEIS for Near-term Colorado River Operations, Appendix D

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## Supply to Arizona: Alternative 2 (2025/26)



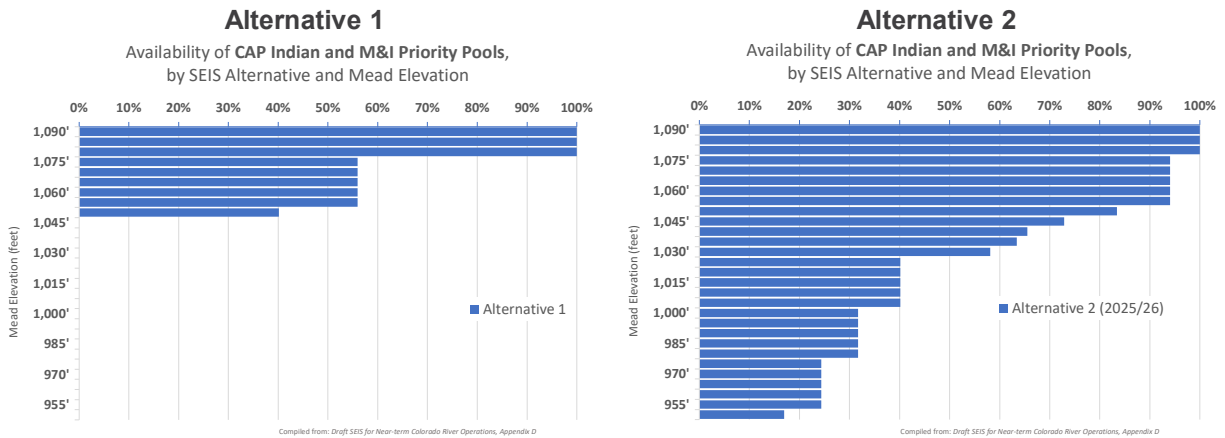
Compiled from: Draft SEIS for Near-term Colorado River Operations, Appendix D

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## CAP Indian and M&I Priority Pools (2025/26)



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## Other Resources Analyzed

Water Quality

Air Quality

Visual Resources

Cultural Resources

Biological Resources

Recreation

Electrical Power Resources

Socioeconomics

Environmental Justice (Housing & Population)

Indian Trust Assets

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## SEIS Comment Period

SEIS published in the Federal Register on April 14, 2023, starting the 45-day comment period

Reclamation will hold four virtual Public Meetings to provide information

May 4, 2023 (5:30 – 8 PM MDT)      May 10, 2023 (5:30 – 8 PM MDT)

May 8, 2023 (9:30 AM – Noon MDT)      May 16, 2023 (Noon – 2:30 PM MDT)

Comments on the SEIS are due May 30, 2023

## Basin States Discussion Update

Negotiations are continuing among Basin States

Looking for a more desirable outcome for all three Lower Basin States than either of the Action Alternatives

Arizona will continue to seek a collaborative operational scenario to protect the interests of Arizonans and the system

- Recognizing the improved hydrology in Water Year 2023
- Minimizes deep cuts

## Next Steps

Comment period closes on May 30, 2023 (45-day comment period)

Potential ARC meeting before May 30th

May 5: ADWR/CAP Joint Shortage Briefing

- Reclamation will report on the April 24-Month Study
- Updates on other activities affecting Lake Mead's elevation
- Updates on Reclamation's IRA funding and executed conservation agreements under "bucket 1" and "bucket 2"

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## Questions

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