



# Arizona Reconsultation Committee Meeting #7

April 17, 2023



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# Meeting Logistics Summary

- Roll Call
  - Members will unmute and acknowledge their attendance when their name is called.
- ARC Delegates
  - If in the room, please raise your hand.
  - If online, use the Teams “raise hand” feature to request to speak or ask questions.
  - Wait to be recognized before speaking to ensure clear communication and remain muted when not speaking.
- Livestream Attendees
  - Electronic public comment forms are available at [cap-az.com/ARC](https://cap-az.com/ARC) for anyone wishing to submit a comment or question during the meeting.
  - Submissions will be addressed during the Call to the Public at the end of the meeting, unless relevant to a specific topic in the presentation.



# 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



# November 2022 ARC Meeting Summary

- Discussed potential for reduced releases from Lake Powell in WY 2023 in anticipation of another low run-off year
- Reviewed the September announcements from Reclamation that led to publication of the Notice of Intent to complete an SEIS
- Reviewed the funding available from Reclamation through the Inflation Reduction Act
- Announced ADWR and CAP's efforts to preserve ICS in Lake Mead through voluntary compensation agreements

# DOI Actions since November ARC

- Published Notice of Intent on November 17, 2022 to prepare an SEIS
  - Existing operating guidelines are insufficient given current hydrology and reservoir conditions and in light of plausible low runoff conditions
  - To ensure that Glen Canyon Dam continues to operate under its intended design, there may be a need to modify current operations and reduce downstream releases
  - To protect Hoover Dam operations, system integrity, and public health and safety, may need to modify current operations and reduce downstream releases



# 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.



# 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)



# 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.*



# 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



# Powell Operations

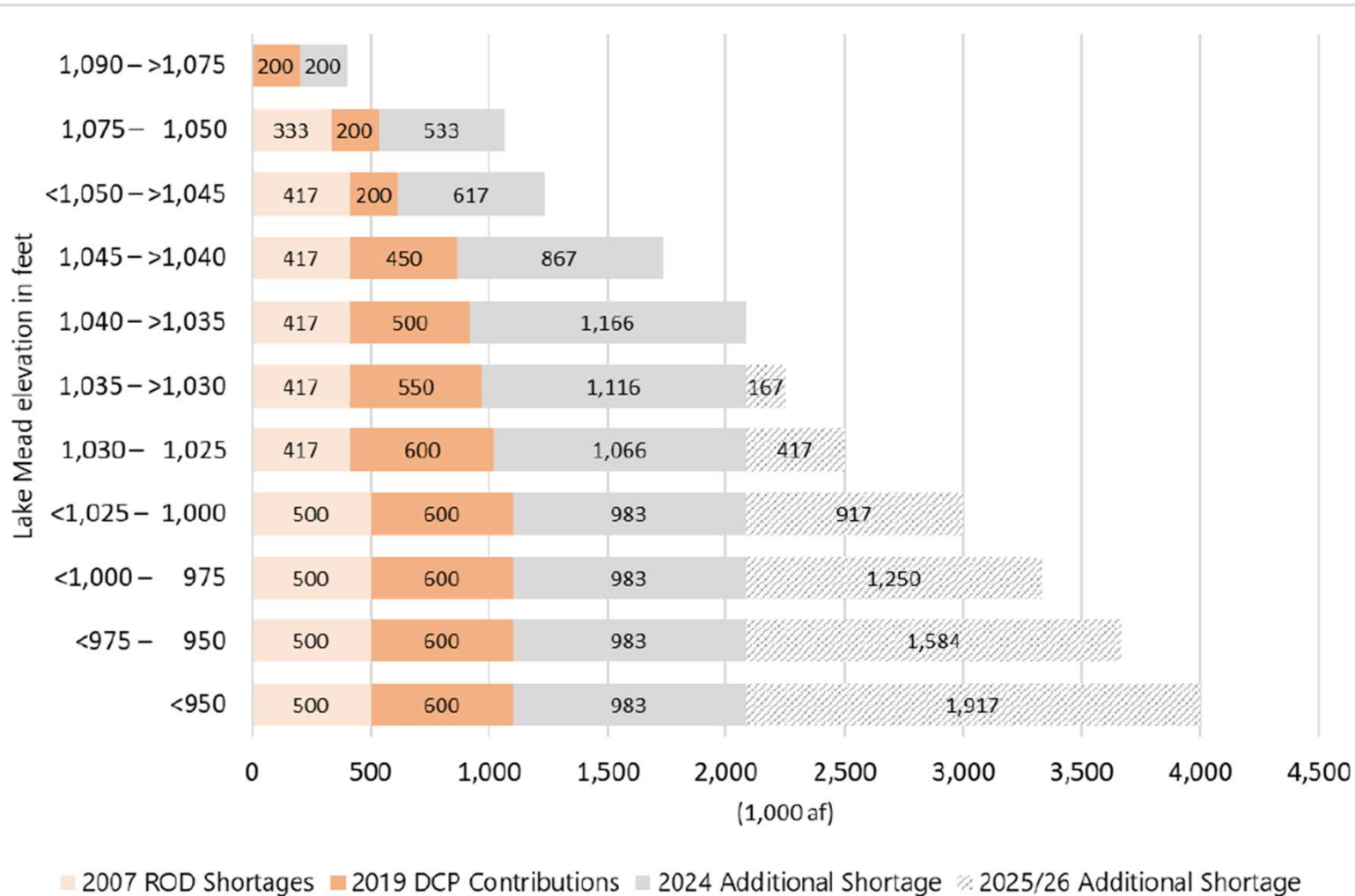
	Current	Alternatives 1 & 2
3,575	<hr/> <b>Mid-Elevation Release Tier</b> Release 7.48 maf; if Lake Mead <1,025 feet, release 8.23 maf	<hr/> <b>Lower Elevation Release Tier</b> Set initial release: 6.0 maf; adjust releases based on April Lake Powell end-of-water-year elevation projection:  ≥3,575 feet, 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	<hr/> <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		<hr/> <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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# 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)



# 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

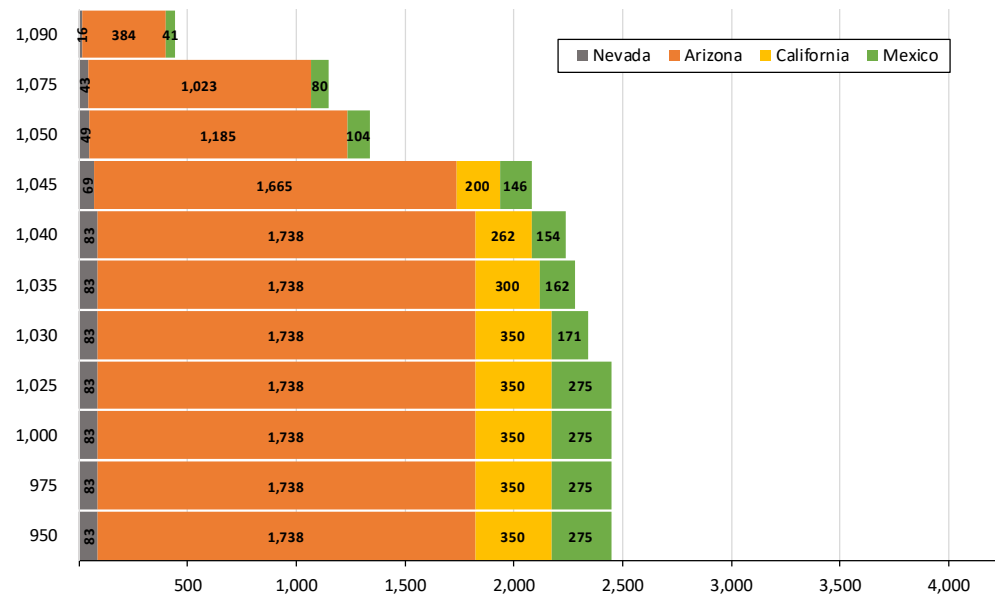




# Alternative 1 (2024)

## Reductions by Lower Basin State and Mexico

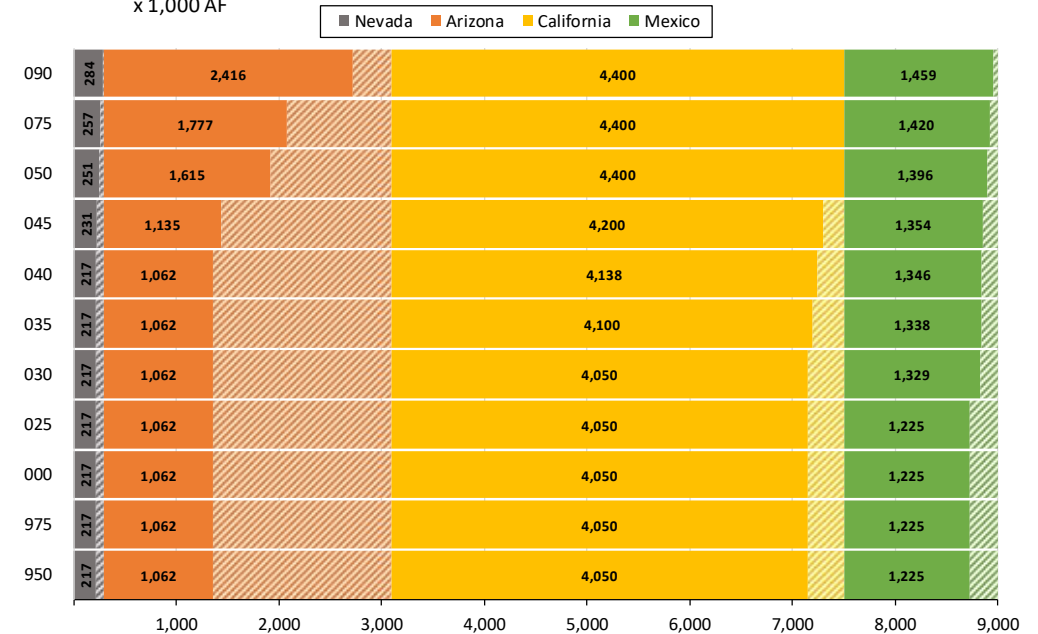
x 1,000 AF



2023SEISScenarioModel\_2023\_04\_12.gsm

## Available as Compared to Apportionments

x 1,000 AF



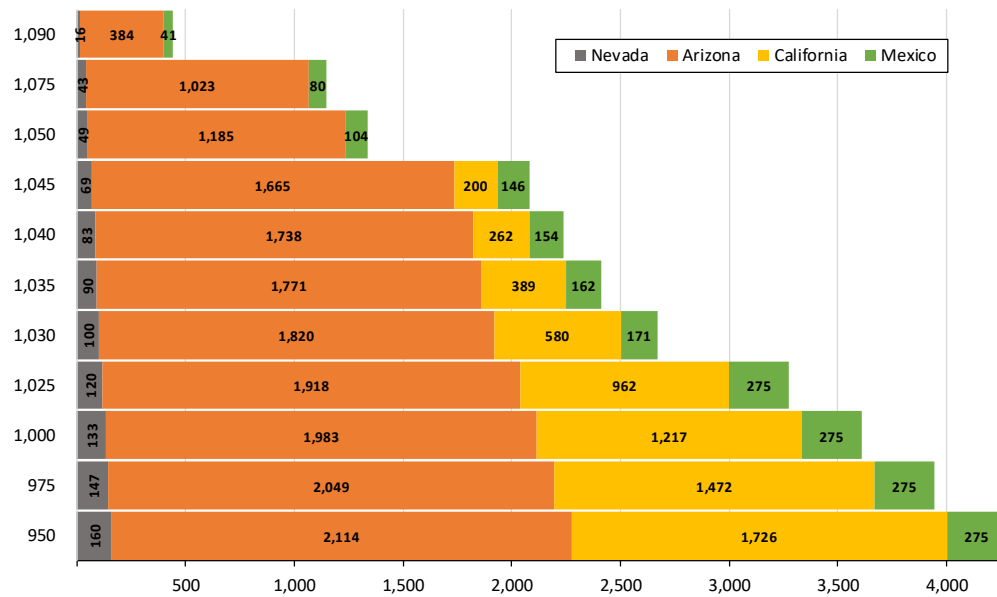
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# Alternative 1 (2025/26)

## Reductions by Lower Basin State and Mexico

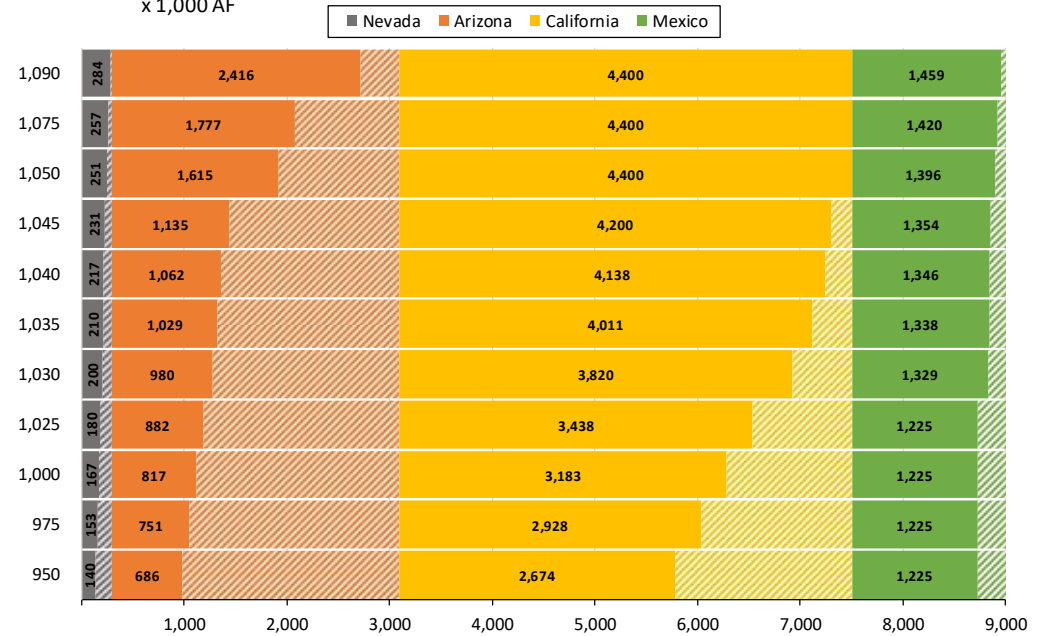
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## Available as Compared to Apportionments

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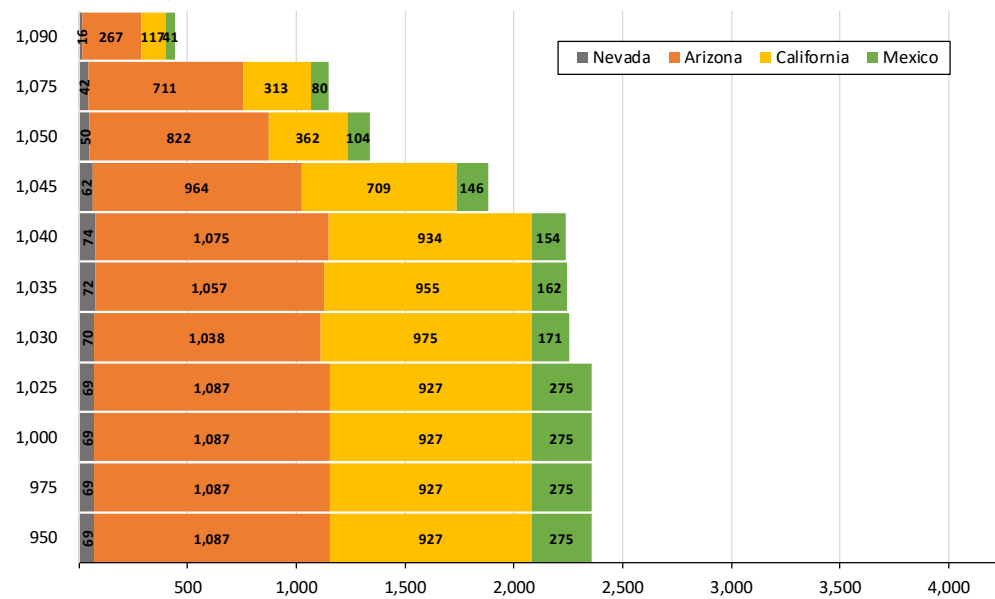
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# Alternative 2 (2024)

## Reductions by Lower Basin State and Mexico

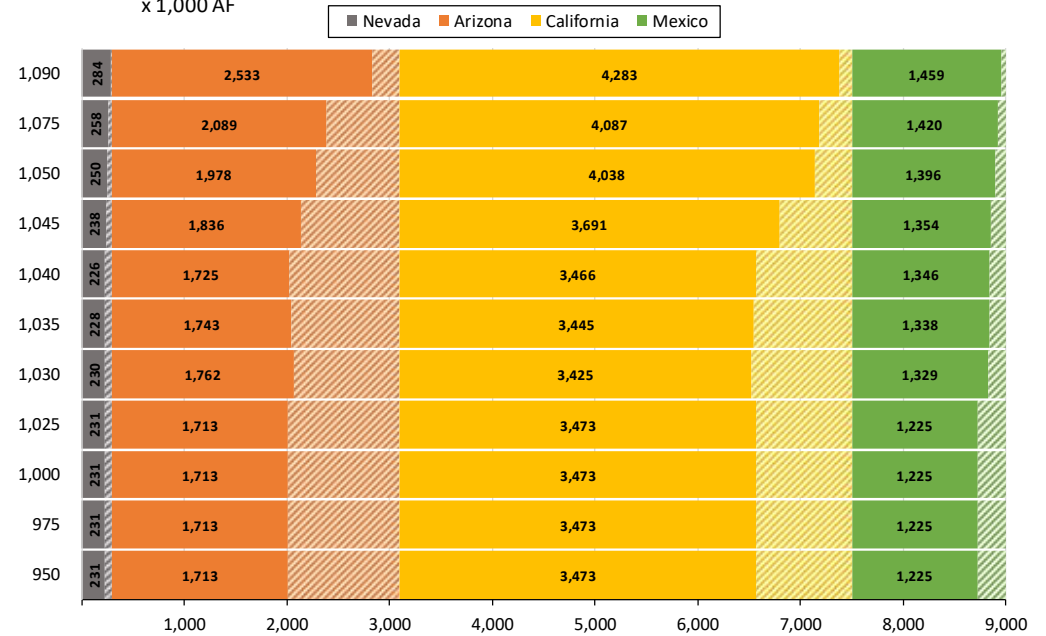
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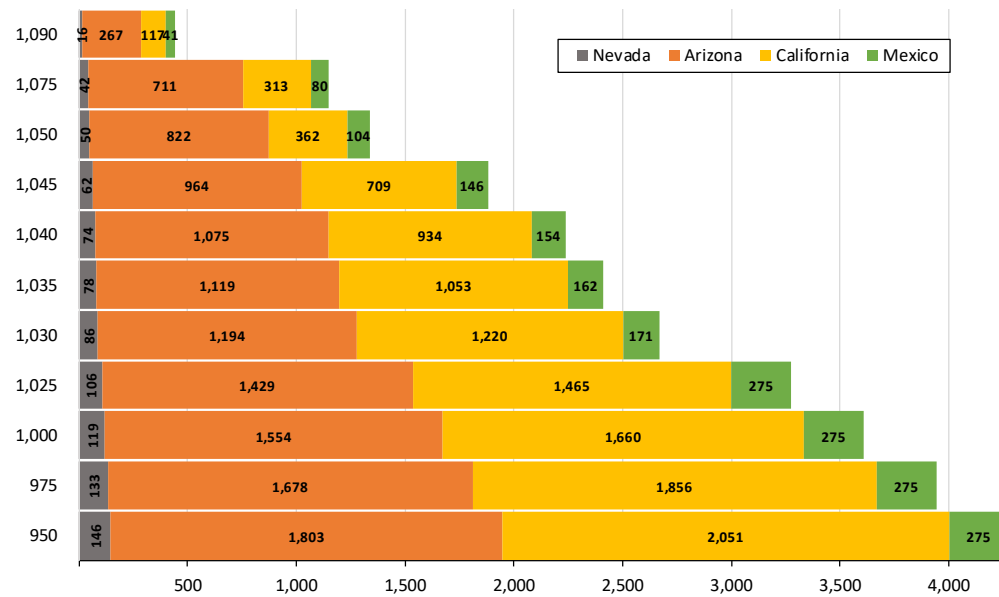
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# Alternative 2 (2025/26)

## Reductions by Lower Basin State and Mexico

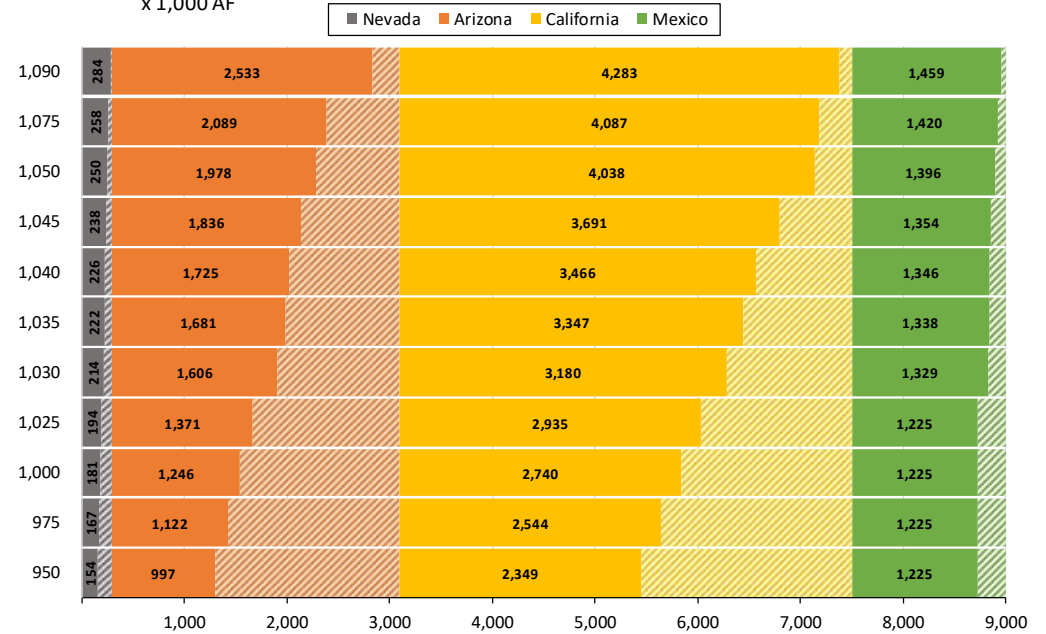
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## Available as Compared to Apportionments

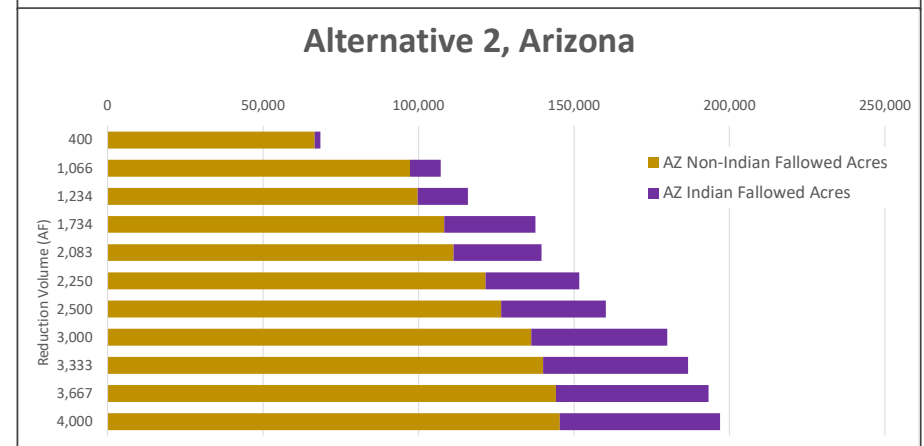
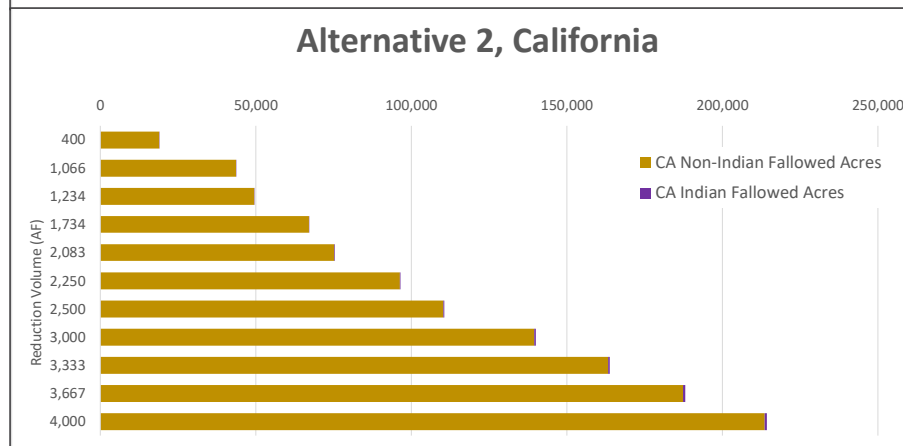
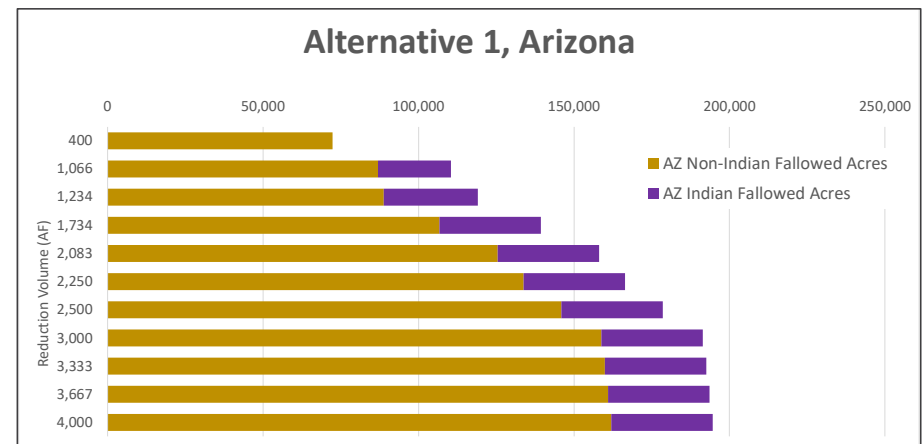
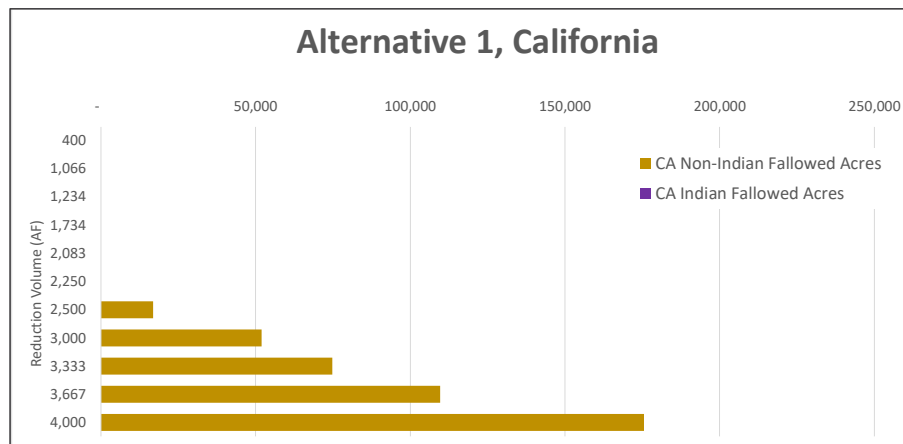
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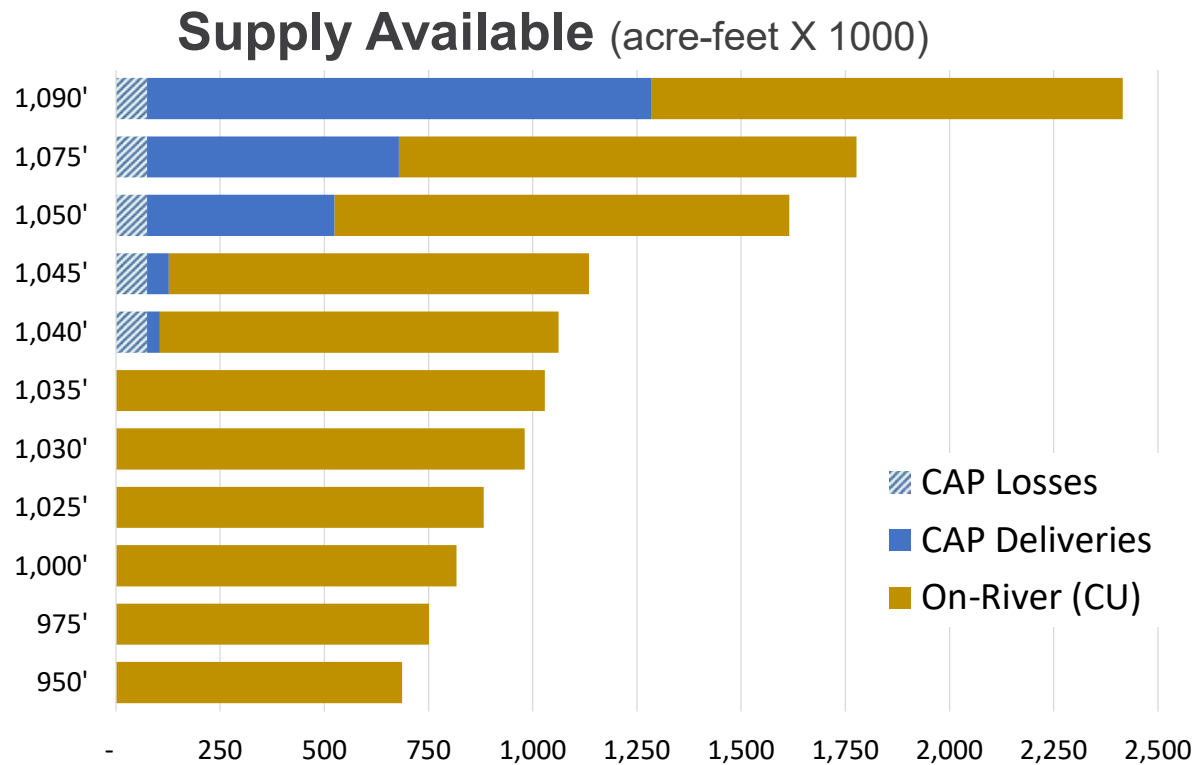


# Agricultural Impacts: Fallowed Acres, 2025/26



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

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

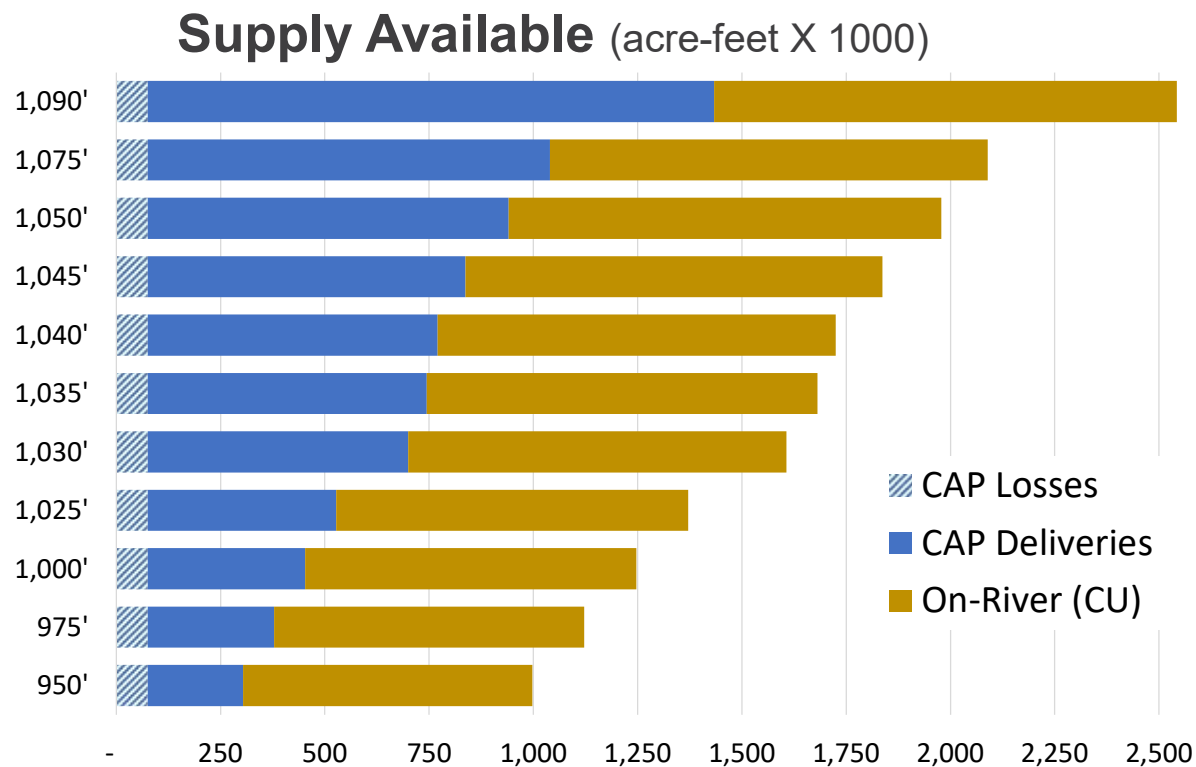


Compiled from: *Draft SEIS for Near-term Colorado River Operations, Appendix D*



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



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



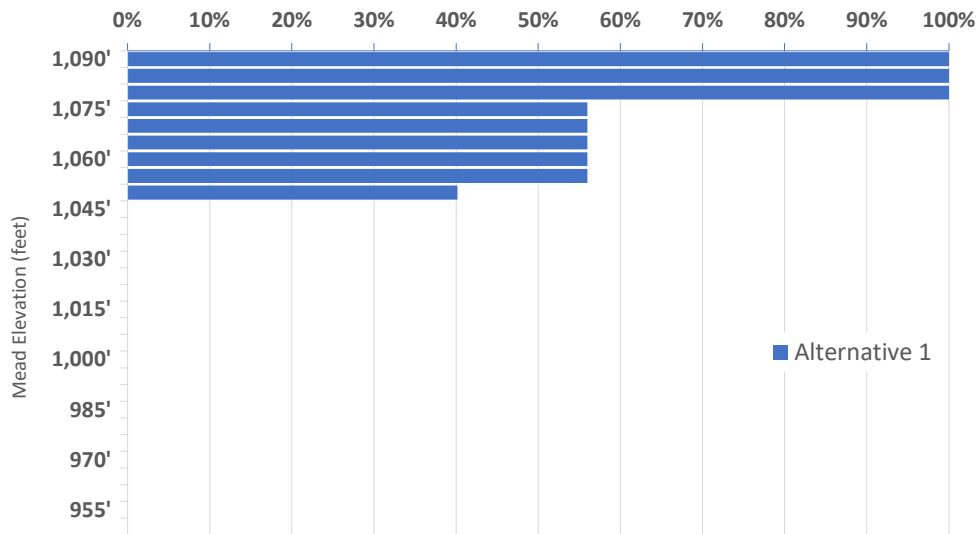
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# CAP Indian and M&I Priority Pools (2025/26)

## Alternative 1

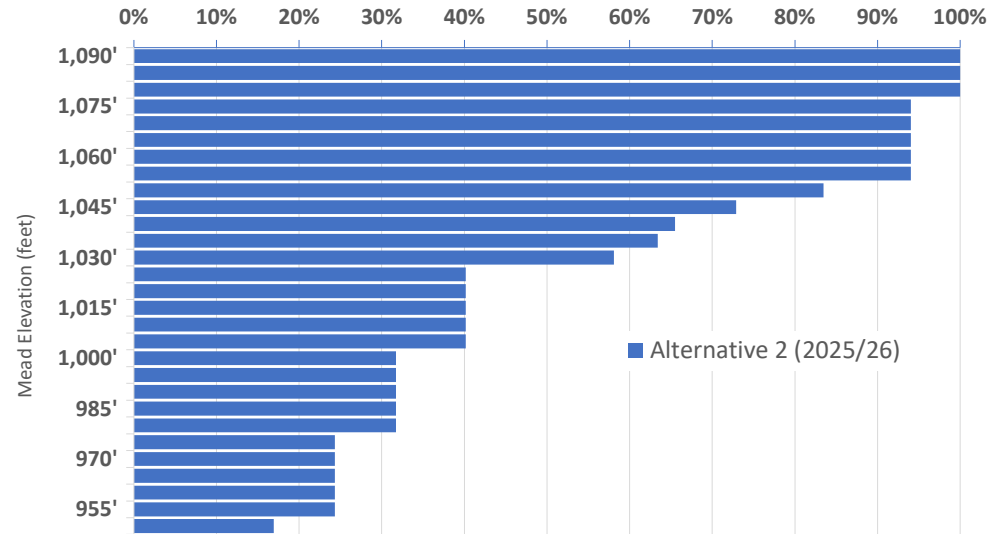
Availability of CAP Indian and M&I Priority Pools,  
by SEIS Alternative and Mead Elevation



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

## Alternative 2

Availability of CAP Indian and M&I Priority Pools,  
by SEIS Alternative and Mead Elevation



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



# 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



# SEIS Comment Period

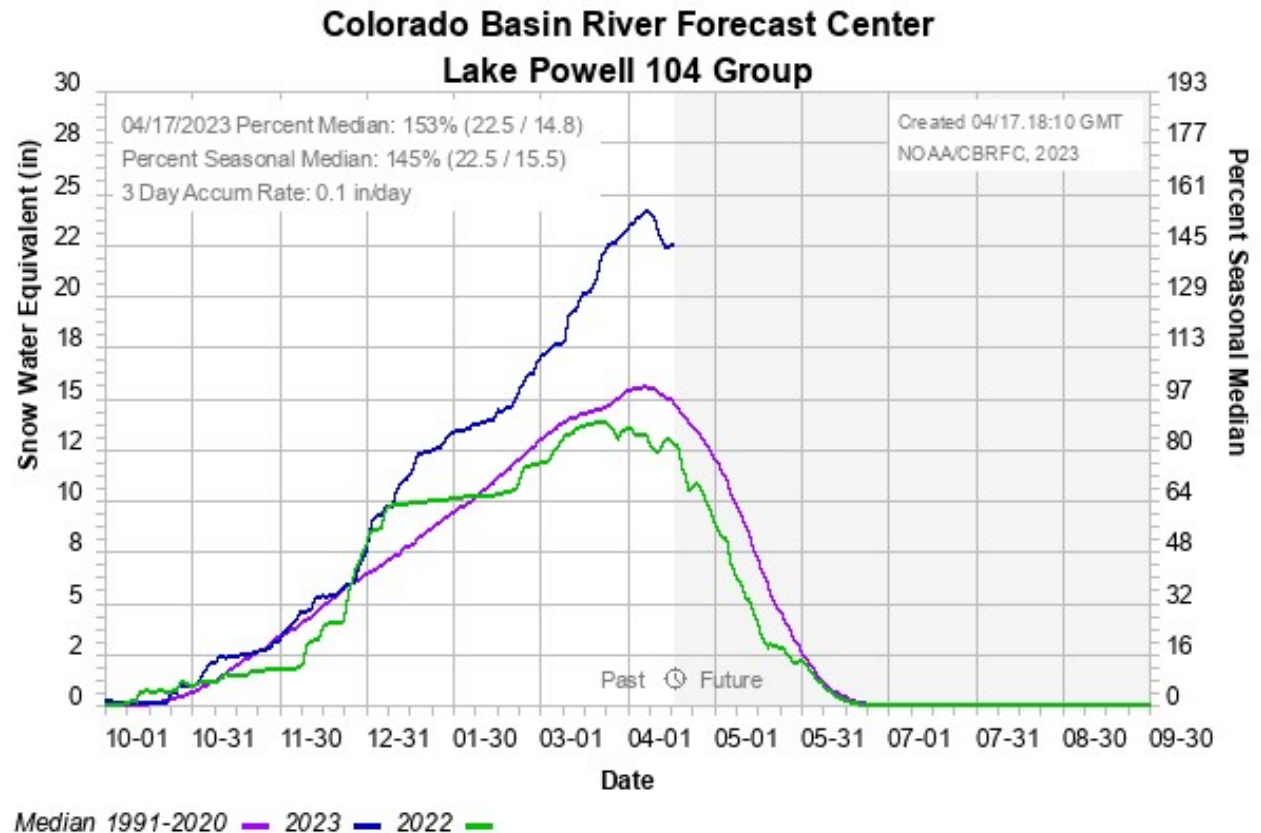
- SEIS published in the Federal Register on April 14, 2023, starting the 45-day comment period
- Reclamation will hold four virtual Public Meetings to provide information
  - May 4, 2023 (5:30 – 8 PM MDT)
  - May 8, 2023 (9:30 AM – Noon MDT)
  - May 10, 2023 (5:30 – 8 PM MDT)
  - May 16, 2023 (Noon – 2:30 PM MDT)
- Comments on the SEIS are due May 30, 2023



# Basin Snow-pack and inflow projections

Snowpack vs. Runoff (% of average)		
	Snowpack	Runoff
2020	105%	61%
2021	86%	37%
2022	90%	63%
April 2023*	161%	151%

\* Projected conditions as of April



# Glen Canyon Dam High Flow Release

- Reclamation will initiate a Spring 2023 Experiment from Glen Canyon Dam April 24-27
  - The release will last for 72 hours and will move 279 KAF through the eight penstocks and the bypass tubes
  - This release will not impact operations in 2024



# April 24-Month Study

- The April 24-Month Study is targeted for release April 18
- The April 24-Month Study and its implications will be discussed by ADWR and CAWCD during a public briefing on May 5, 2023
- We anticipate it will show a large projected balancing release from Lake Powell in the remainder of Water Year 2023
- Improved hydrology will have impacts on EOCY 2023 Mead elevations and the range of actual reductions may be less than was contemplated in the SEIS



# Additional Activities that could Impact Lake Mead Elevations

- Potential for Lake Powell to balance contents and release more than 7 MAF in WY 2023 (up to 9.5 MAF)
- March 2023 Intervening Flows were 226 KAF, 234% of the 5-year average
- CBRFC forecasts the April – July intervening flows to be well above the 5-year average
- Alamo releases are anticipated to go up to 140 kaf – reducing the need for releases from Lake Mead
- Painted Rock Dam releases – anticipated to go to 10,000 AF/day, could potentially reduce the need for releases from Lake Mead
- Execution of conservation agreements among Lower Basin water users
- Changes in California ICS behavior





# 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 30<sup>th</sup>
- 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"



# Call to the Public

- Submit questions or comments using the electronic public comment form at [cap-az.com/ARC](https://cap-az.com/ARC)





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For continued information  
and updates, visit  
[new.azwater.gov/ARC](http://new.azwater.gov/ARC) or  
[cap-az.com/ARC](http://cap-az.com/ARC)