

**Meeting Logistics Summary** 

- Roll Call
  - Members will acknowledge their attendance when their name is called.
- ARC Delegates
  - Please raise your hand to request to speak or ask questions.
  - Wait to be recognized before speaking to ensure clear communication.

ARIZONA RECONSULTATION COMMITTEE

ARC Meeting #9 March 6, 2024

#### **ARC Meeting #9 Agenda**

- Welcome and Introductions
- ARC Meeting #8 (November 2023) Summary
- Supplemental EIS Update
- Post-2026 Process
- Lower Basin Alternative
- Intra-Arizona Process

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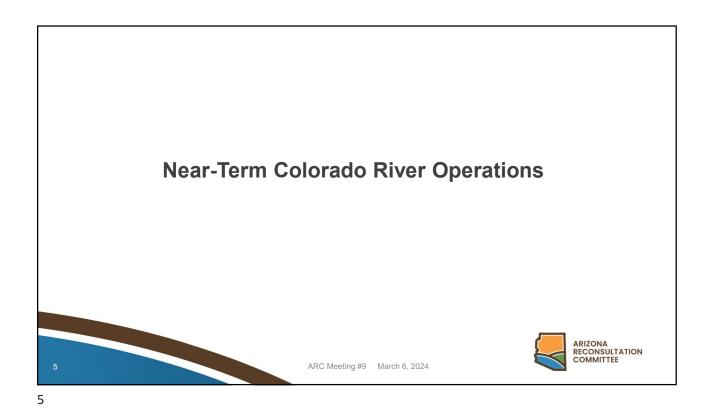


### ARC Meeting #8 (November 2023) Summary

- Draft Supplemental EIS re-released with Lower Basin States Proposal as the proposed action
- Post-2026 Scoping Report released with emphasis on the development of robust operating guidelines for Lake Powell and Lake Mead without precluding upstream or downstream actions needed to protect critical reservoir elevations at Lake Powell and Lake Mead
- Lower Basin States Activity
  - · Goals and Objectives
  - Reduction using system contents approach

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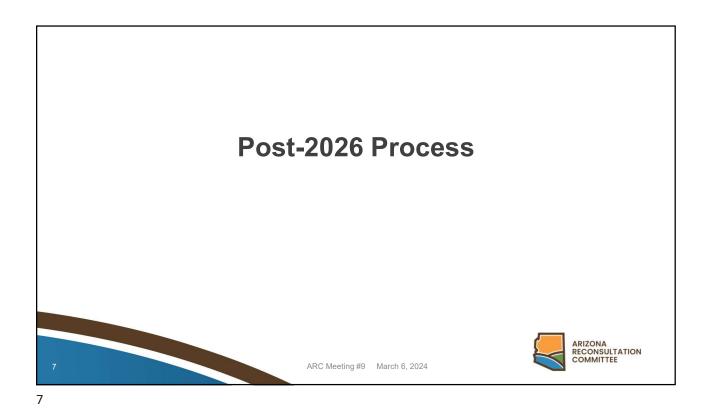


## **Supplemental EIS Update:**

- Final SEIS released March 5, 2024
- Three Basin States have committed to conserving 3 MAF through the interim period
  - 3 MAF plan is on track to protect the system through 2026
- Most Lower Basin parties have executed final conservation agreements

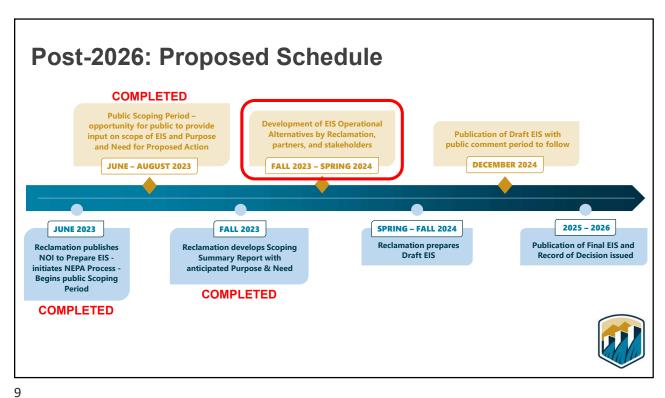


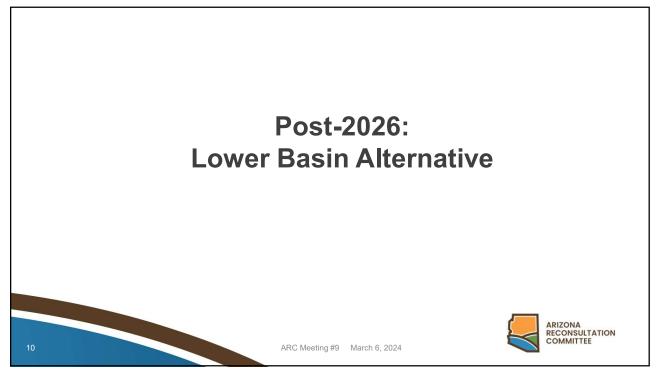
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#### **Post-2026 Colorado River Operations** • BOR initiated the NEPA process in BUREAU OF -RECLAMATION June 2023 • The Lower Basin states have **Scoping Report for Post-2026** developed a draft alternative for Colorado River Reservoir consideration in the Environmental **Operations** Impact Statement (EIS) Upper and Lower Colorado Basin Regions · Additional work with stakeholders, water users, and the Upper Basin is needed to reach consensus ARC Meeting #9 March 6, 2024 U.S. Department of the Interior

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#### Post-2026 Lower Basin Alternative Goals

- 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

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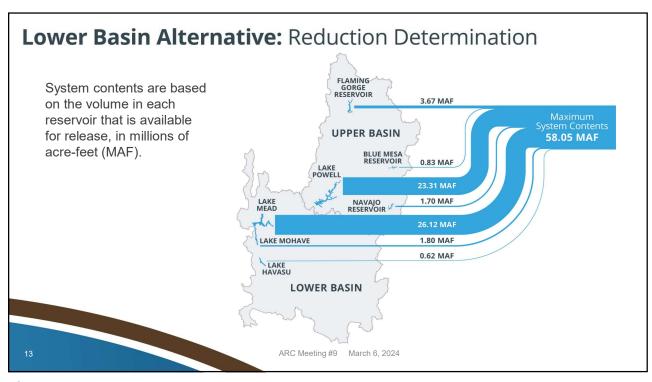
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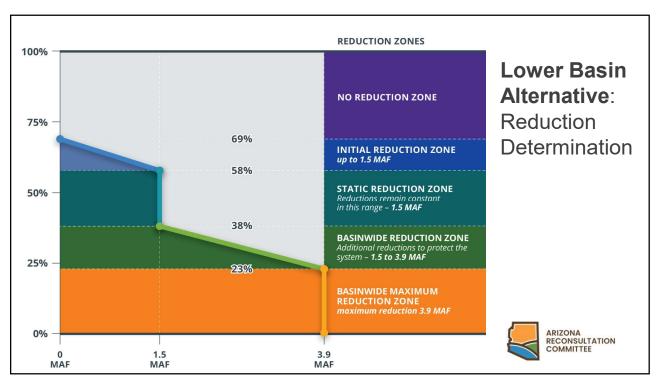
#### **Elements of the Lower Basin Alternative**

- Water use as a function of the system contents approach
  - · Surplus, Normal and Reduction conditions
- Lake Powell releases to Lake Mead
  - Equalization, "hydrologic shortage" based release, reduced and static releases
- Storage and delivery of conserved and augmentation water

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#### **Reclamation Provided Hydrologies**

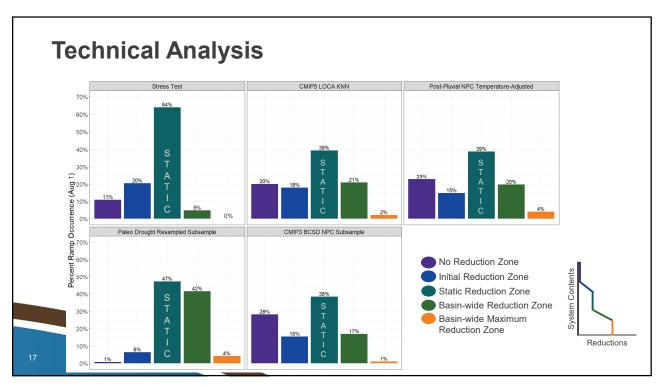
- Reclamation selected a wide range of future hydrologies to explore system robustness under different operational strategies.
- The hydrologies represent a historical natural flow record in addition to incorporating impacts of climate change, a warming future, and extended droughts.
- One of the 'wetter' hydrologies selected is the Stress Test, which is the natural flow record from 1988 to 2020, with an average flow of 13.2 MAF.
- Overall, the hydrologies cover a wide range of minimum and maximum flow sequences that extend beyond the historical records, especially for the minimum flows.

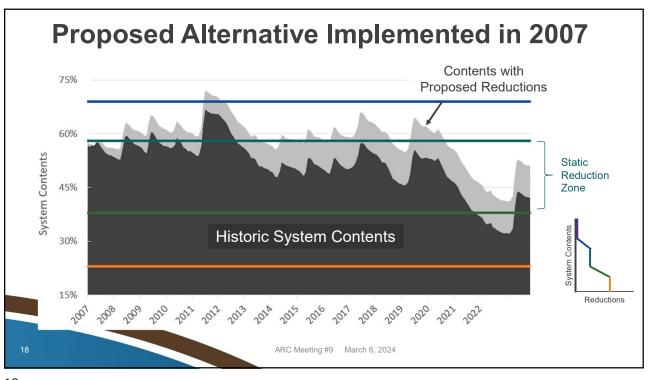
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**Reclamation Provided Hydrologies** Stress Test Average = 13.2 MAF 40 Annual Lees Ferry Natural Flow (MAF/yr) Average: 13.2 MAF Average: 13.2 MAF Average: 14.0 MAF Average: 11.8 MAF Average: 13.4 MAF Median: 12.7 MAF Median: 13.5 MAF Median: 12.4 MAF Median: 11.1 MAF Median: 12.1 MAF Post-Pluvial NPC Temperature-Adjusted CMIP5 LOCA KNN Paleo Drought CMIP3 BCSD NPC ARC Meeting #9 March 6, 2024





## Reduction Sharing among Basin States and Mexico

|                                   | Total Reduction Volumes | Upper<br>Basin   | Arizona | California | Nevada | Mexico* |
|-----------------------------------|-------------------------|--|---------|------------|--------|---------|
| Initial Reduction<br>Zone         | Up to 300 KAF           | 0  | 80%     | 0          | 3.33%  | 16.67%  |
|                                   | 300 KAF-1.5 MAF         | 0  | 43.33%  | 36.67%     | 3.33%  | 16.67%  |
| Static Reduction<br>Zone          | 1.5 MAF                 | 0  | 760,000 | 440,000    | 50,000 | 250,000 |
| Basin-wide<br>Reduction Zone      | 1.5 – 3.9 MAF           | Shared among Upper Division states, Lower Division States and Mexico |         |            |        |         |
| Basin-wide Maximum Reduction Zone | 3.9 MAF                 |  |         |            |        |         |

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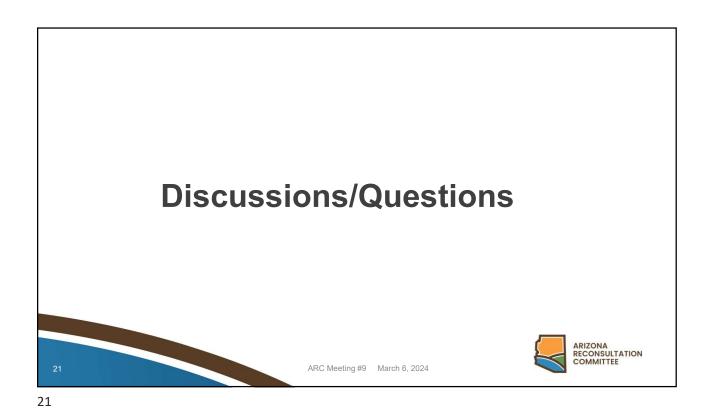
### **Surplus Conditions**

- Surplus conditions triggered under higher elevations than under the 2007 Interim Guidelines (TBD)
- Surplus will occur under a narrower range of conditions than under the 2007 Interim Guidelines (TBD)
- If System recovers and Surplus becomes available Arizona receives 240,000 AF of Surplus before California receives access to surplus

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<sup>\*</sup> Reductions to Mexico will be determined in a separate binational process



Lake Powell Releases to Lake Mead Lake Powell Release Curve • Considerate of Compact requirements **Equalization Release**  Lower Basin Alternative incorporates **UB** depletions 70-Release (MAF) <3.80 · Lake Powell release to Lake Mead 3.81-4.30 7.5 4.31-4.80 8.0 determined primarily by a combination >4.80 8.5 of Flaming Gorge, Blue Mesa, Navajo, and Powell (CRSP) live capacity and by UB depletions under certain release Static regimes Water Year Release (MAF) \*"Hydrologic shortage" is used to describe a broad range of factors that affect water supply availability in the Upper Division States without taking a position on which of these factors are "shortages." ARIZONA RECONSULTATION COMMITTEE ARC Meeting #9 March 6, 2024

## **Conservation, Augmentation and Storage**

- Existing Intentionally Created Surplus (ICS) program
  - Existing rules for post-2026 management of ICS created prior to 2027
  - Can be used to meet reductions (with limitations)
  - · Transition with new program TBD
- New Storage Program New program to incentivize conservation, augmentation and storage with new rules
  - Delivery of stored water should not allow any state to exceed their basic apportionment when reductions apply in the Lower Basin (except limited inadvertent overruns, augmentation, and tributary conservation water)
  - The volume of water stored should be subtracted from the total system contents before reductions are calculated, to not diminish the volume of reduction that would otherwise occur absent the stored water
  - Can be used toward meeting reduction obligations, operational flexibility and wet water deliveries (with limitations)
  - · Larger (5-10 MAF) cumulative limit
  - Other provisions TBD

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# New Information from Bureau of Reclamation regarding Glen Canyon Dam

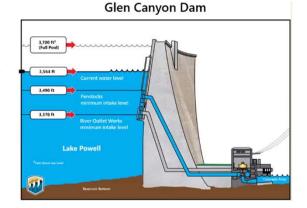
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## Glen Canyon Dam Operational Information

#### **According to Reclamation:**

- Priority is safe and reliable operations
- Glen Canyon Dam was not envisioned to operate solely through the river outlet works for extended periods of time
- New and emerging information and operating guidance
- Active studies and investigations





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## **New Information and Operational Experience**

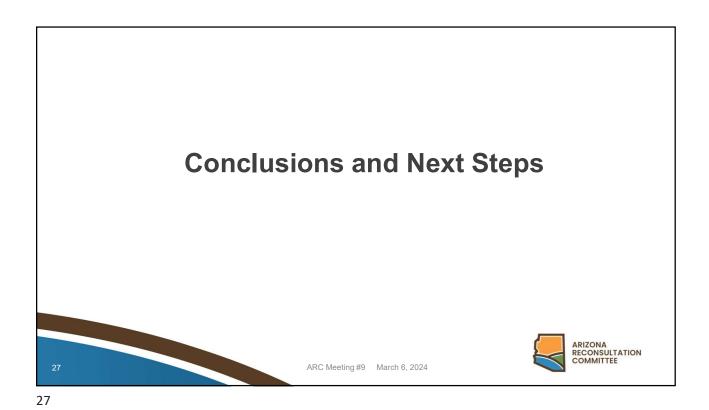
#### **According to Reclamation:**

- Emerging Information
  - Cavitation of the outlet works pipes at low reservoir elevations
  - · Thinning of pipe wall
  - Tailrace sedimentation scouring from outlet works operation
  - Unknown issues from operating the outlet works for extended periods, especially as sole means of release



River outlet works and tailrace at base of Glen Canyon Dam





#### **Lower Basin Alternative**

- Innovative, system wide approach
- Considerate of Compact and Law of the River requirements
- Addresses the structural deficit
- Creates a framework where Lower Basin reductions are determined by the health of the system as a whole and not just one reservoir
- Preliminary analyses using Reclamation provided hydrologies show the Alternative avoids deadpool at Powell and Mead and provides robust protection of elevations at Powell and Mead

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#### **Lower Basin Alternative Outstanding Issues**

- Sharing Initial and Static Reductions among Arizona water users
- How to share Basin-wide Reduction Zones
- Further Tribal discussions and negotiations
- Conservation, augmentation and storage programs
- Discussions with Mexico as part of a binational process
- Continued negotiations with the Upper Basin

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## **Arizona Next Steps**

- Lower Basin States are requesting Reclamation to analyze the Lower Basin Alternative as part of the EIS operational alternatives development process
- MAWG Meeting on March 11<sup>th</sup>
- Convene an internal Arizona stakeholder process
- Seek consensus across the basin, including Tribes, NGOs and water users

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