# THE LOWER BASIN ALERRATIVE

**MARCH 2024** 

### **Colorado River Operations**

## The existing rules that govern the Colorado River are set to expire in 2026.

- 2007 Interim Guidelines
- 2019 Drought Contingency Plan
- Minute 323 (U.S. / Mexico)

States have been negotiating and developing a framework for operations post-2026.



### **2007 Interim Guidelines and DCP**

#### Under the 2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan (DCP)\*, and Binational Water Scarcity Contingency Plan (Volumes in thousand acre-feet) Binational Total 2007 Interim Total Water Minute 323 Combined Volumes of Shortage Reductions and Combined Guidelines DCP Water Savings Scarcity Combined Delivery Shortage Water Savings Contributions Shortage Contributions Contingency Volumes by Lower Basin State and by Country Reductions Reductions Reductions Plan Water (U.S. and (U.S.) Lake Mead (Mexico) (U.S. and (U.S. and Mexico) (U.S.) Savings Mexico) Elevations Mexico) (Mexico) (in feet) Lower Lower Lower Basin ΑZ CA Mexico Basin NV Basin ΑZ ΑZ NV CA NV Mexico Mexico States + States + Total Total Total States Total Mexico Mexico Total 0 0 0 41 192 8 0 241 1.090 - >1.075 0 192 8 0 200 41 Tier 1 320 13 50 192 8 0 30 512 21 0 533 80 613 1,075 - >1050 383 Tier 2a -0 1.050 - >1.045 400 17 70 487 192 8 0 34 592 25 617 104 721 400 17 240 200 1,045 - >1,040 70 487 10 76 640 27 200 867 146 1,013 400 17 250 84 27 1.040 - >1.035 70 487 240 10 640 250 917 154 1,071 Tier 2b 1,035 - >1,030 400 17 70 487 240 10 300 92 640 27 300 967 162 1.129 1.030 - 1.025400 17 487 240 350 101 70 10 640 27 350 1,017 171 1.188 Tier 3 <1.025 480 20 125 625 240 10 350 150 720 30 350 1,375 1,100 275

\*Under the Lower Basin DCP, the United States will take affirmative actions to create or conserve 100,000 acre-feet or more of Colorado River system water on an annual basis to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the Lower Basin. All actions taken by the United States shall be subject to applicable federal law, including availability of appropriations.

Shortage Reductions and Water Savings Contributions



### **2007 Interim Guidelines**

- Water year release determination
- Coordinated Operations:
  - Based on Lake Powell and Lake Mead Elevations
  - Balancing under many tiers has created conflicts between the two basins

	Lake Powell Operational Tiers						
(subject to April adjustments or mid-year review modifications)							
Lake Powell Elevation (feet)	Lake Powell Operational Tier	Lake Powell Active Storage (maf)					
3,700		24.32					
	<b>Equalization Tier</b> equalize, avoid spills or release 8.23 maf						
3,636 - 3,666		15.54 – 19.29					
(see table below)	<b>Upper Elevation Balancing Tier</b> release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	(2008 – 2026)					
3,575		9.52					
	<b>Mid-Elevation Release Tier</b> release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf						
3,525		5.93					
	<b>Lower Elevation Balancing Tier</b> balance contents with a min/max release of 7.0 and 9.5 maf						
3,370		0					

### **Post-2026 Colorado River Operations**

- BOR initiated the NEPA process in June 2023
- The Lower Basin states have developed a draft alternative for consideration in the EIS
- Additional work with stakeholders, water users, Mexico, and the Upper Basin is needed to reach consensus



#### Scoping Report for Post-2026 Colorado River Reservoir Operations

Upper and Lower Colorado Basin Regions



U.S. Department of the Interior

October 2023

### **Lower Basin Alternative**

#### **GOAL:**

Address impacts of drought and climate change through a holistic and sustainable approach to the coordinated operations of Lake Powell and Lake Mead that improves predictability for water users



### **Lower Basin Alternative**

#### In order to achieve the goal, the alternative:

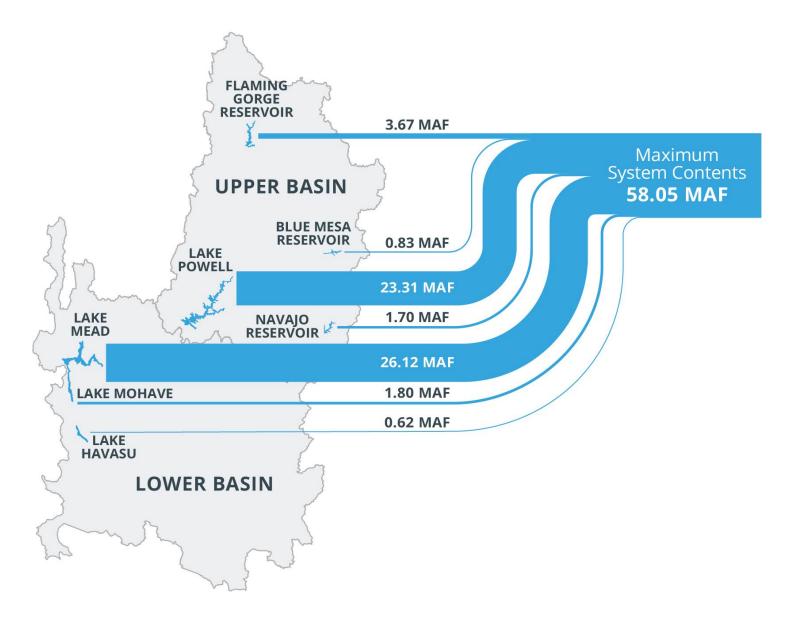
- Addresses the structural deficit in the Lower Basin
- Operates the reservoirs based on system contents rather than elevations at Lake Powell and Lake Mead
- Shares water use reductions broadly
- Creates provisions for the storage and delivery of stored water
- Releases from Lake Powell that are adaptable to a broad range of hydrologies and respond to "hydrologic shortages"



### **Water Use**

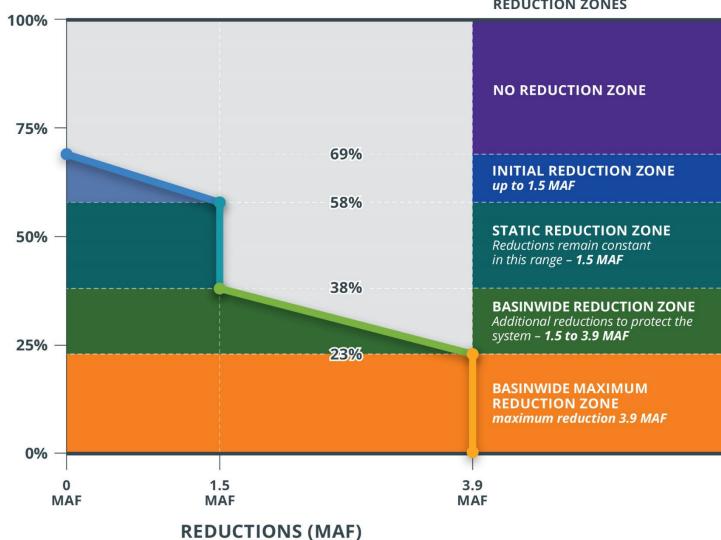
- Approach uses total system contents
  - CRSP Initial Units, Lake Powell, Lake Mead, Lake Mojave, and Lake Havasu
- Benefits of total system contents
  - More holistic view of system storage
  - Actions of one basin cannot be used to "game" the other basin
    - Whether the water is in Powell or Mead it produces the same reductions
  - Maximum reductions kick in with storage still remaining

### **Total System Contents**



### **Lower Basin Alternative:** Reduction Determination

#### **Reductions are based on available system contents**



**REDUCTION ZONES** 

### **Lower Basin Alternative:** Reductions by State

### First, the volume of the reduction must be calculated

69% - 58%: Cuts to Lower Basin water uses increasing from 0 to 1.5 maf

58% - 38%: Static cut to Lower Basin water uses of 1.5 maf

38% - 23%: Static cut to Lower Basin water uses of 1.5 maf plus
additional, at least half of the cuts to Upper Basin as total
system reductions increase from 1.5 maf to 3.9 maf

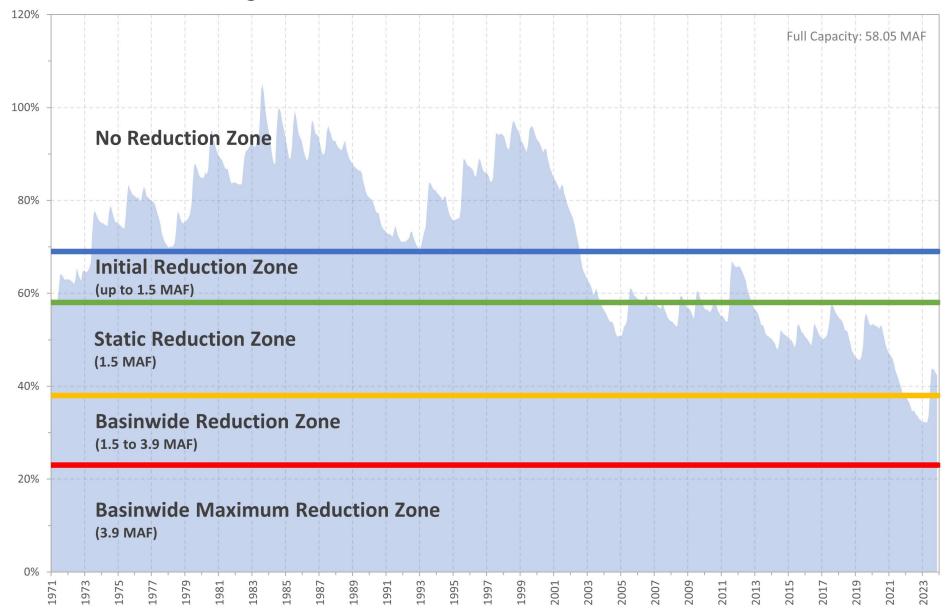
### **Lower Basin Alternative:** Reductions by State

## Second, the reduction volume is divided amongst the Lower Basin States

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

\*Mexico reductions are assumed to appropriately model cumulative effects but will be determined through separate negotiations

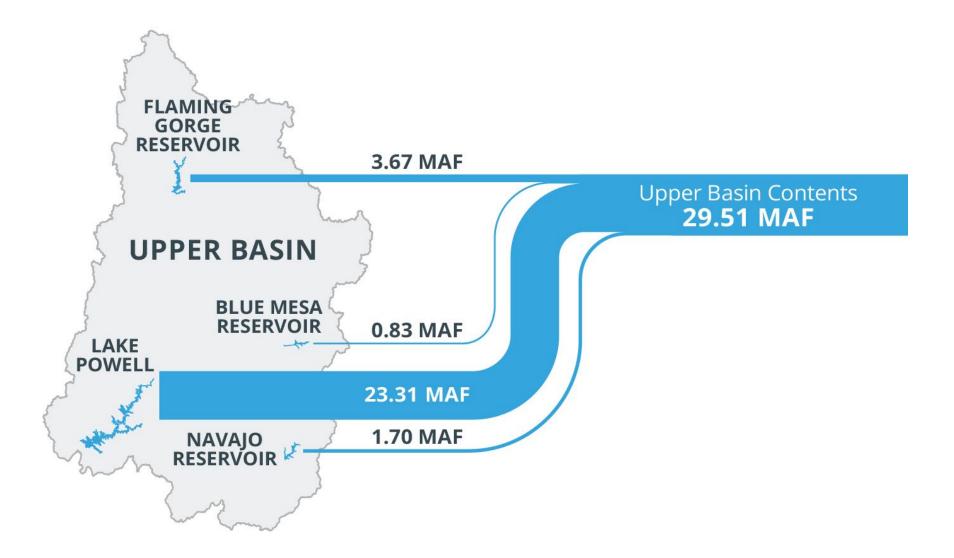
### **Historical Total System Contents**



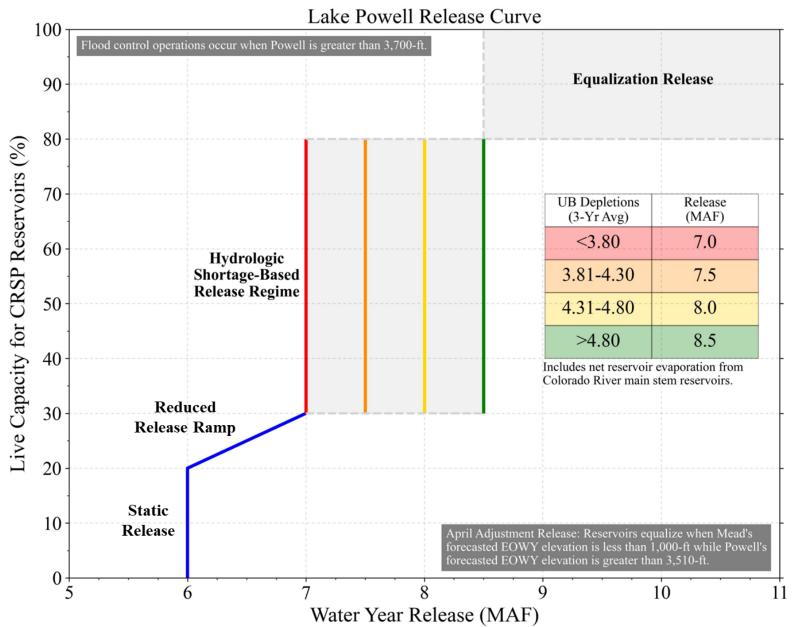
### **Coordinated Operations**

- Considerate of compact requirements
- Acknowledges and adjusts for hydrologic shortages
- Creates framework where ANY Upper Basin activity does not influence the release because the release remains the same regardless of what reservoir the water sits in

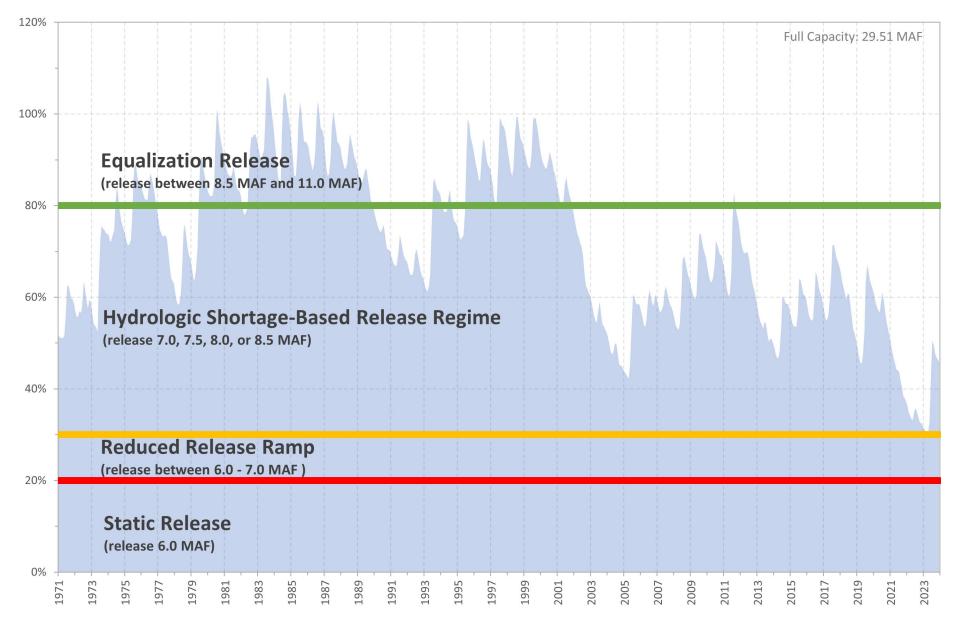
### **Colorado River Storage Project Reservoirs**



### **Coordinated Operations**



### **CRSP Contents**





## While there is more work to be done with stakeholders, the following storage mechanisms are included in the alternative:

- Entitlement holders meeting certain criteria would be allowed to develop storage accounts similar to ICS. This water can be used to help offset reductions
- Entitlement holders would maintain access to existing water stored under the 2007 Interim Guidelines, while creating a new storage mechanism to encourage conservation and augmentation
- Details still need to be negotiated and modeled to understand impacts, benefits, and tradeoffs

## **NEPA Next Steps**

- Proposed alternatives will be reviewed by Reclamation
- Lower Basin will work with its water users, tribes, NGOs, stakeholders, and Reclamation to further refine the alternative and associated programs and rules
- Basin States will continue to negotiate toward a consensus-based alternative

#### **Post-2026 Milestone Schedule**





## Process Next Steps

Modeling work and refining alternative

Intra-state Processes Consensus Building (Water users, Tribes, NGOs, stakeholders)

Working with Reclamation

**Mexico Negotiations** 

