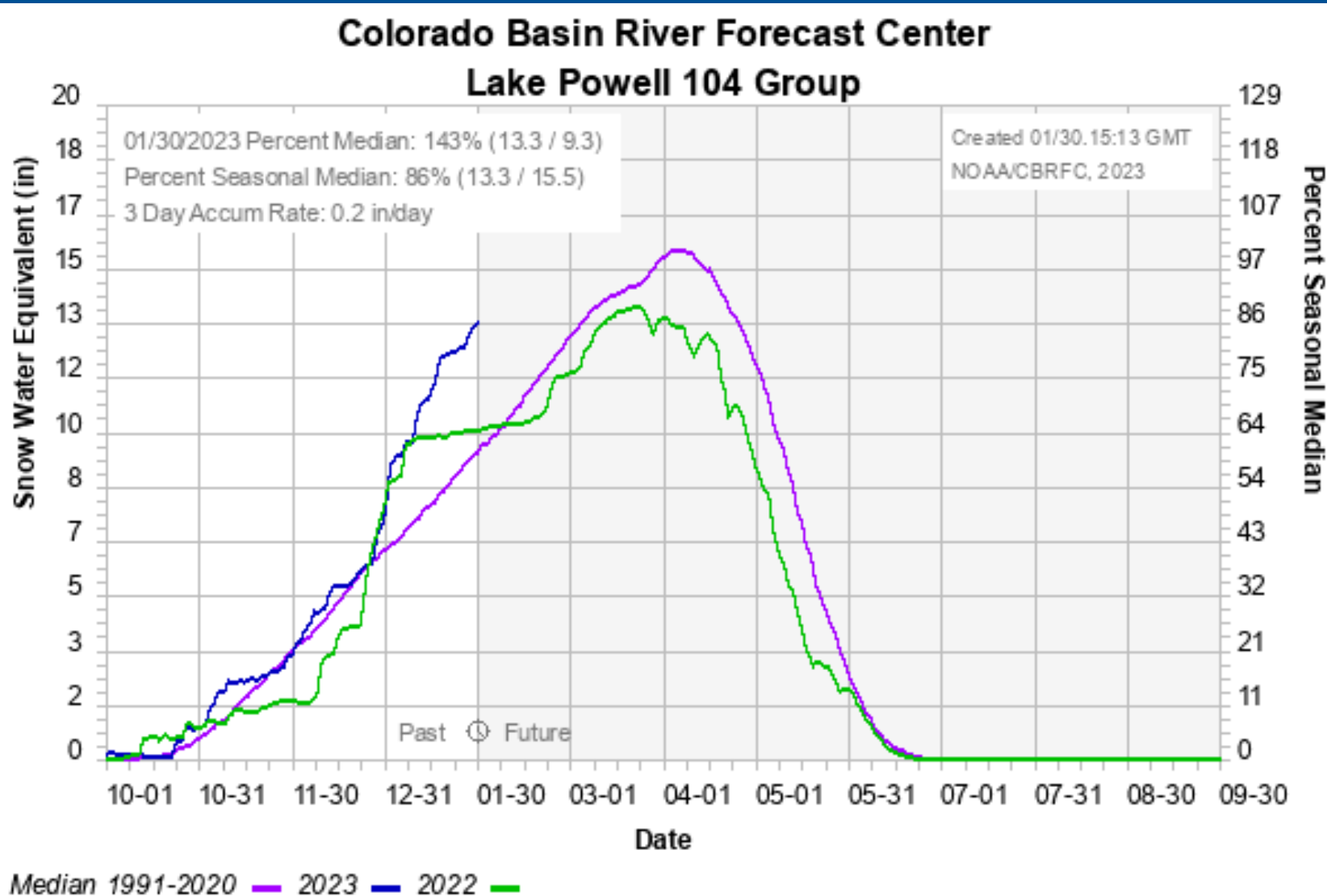


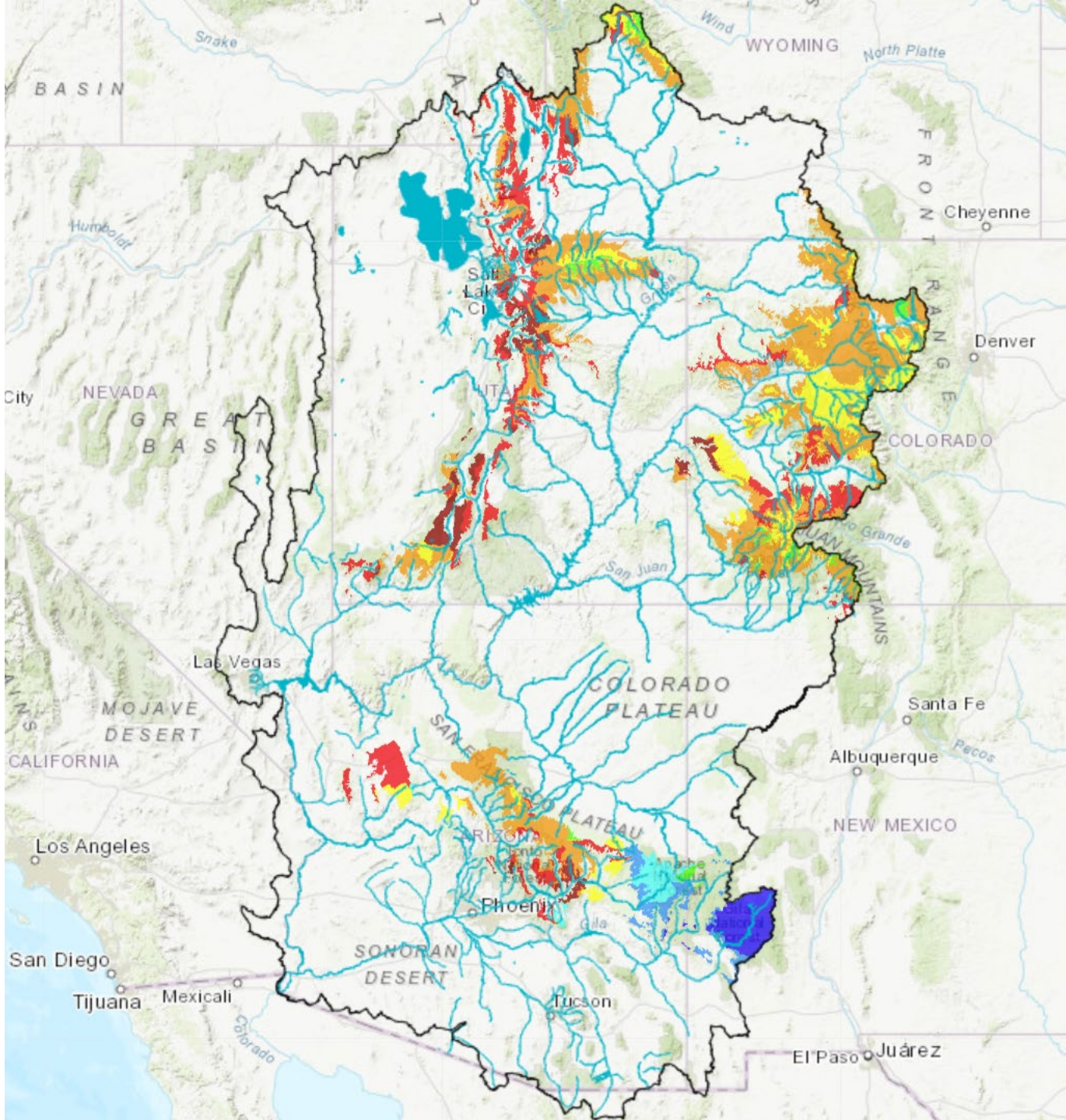
# *Agribusiness and Water Council of Arizona: Association of Women in Water and Agriculture Annual Meeting*



*Kristen Johnson  
Manager, Colorado River Programs  
Arizona Department of Water Resources  
January 31, 2023*

# Recent Hydrology





Soil Moisture

Show

[Help](#)



Fall % Average (November 2 2022)

% Average

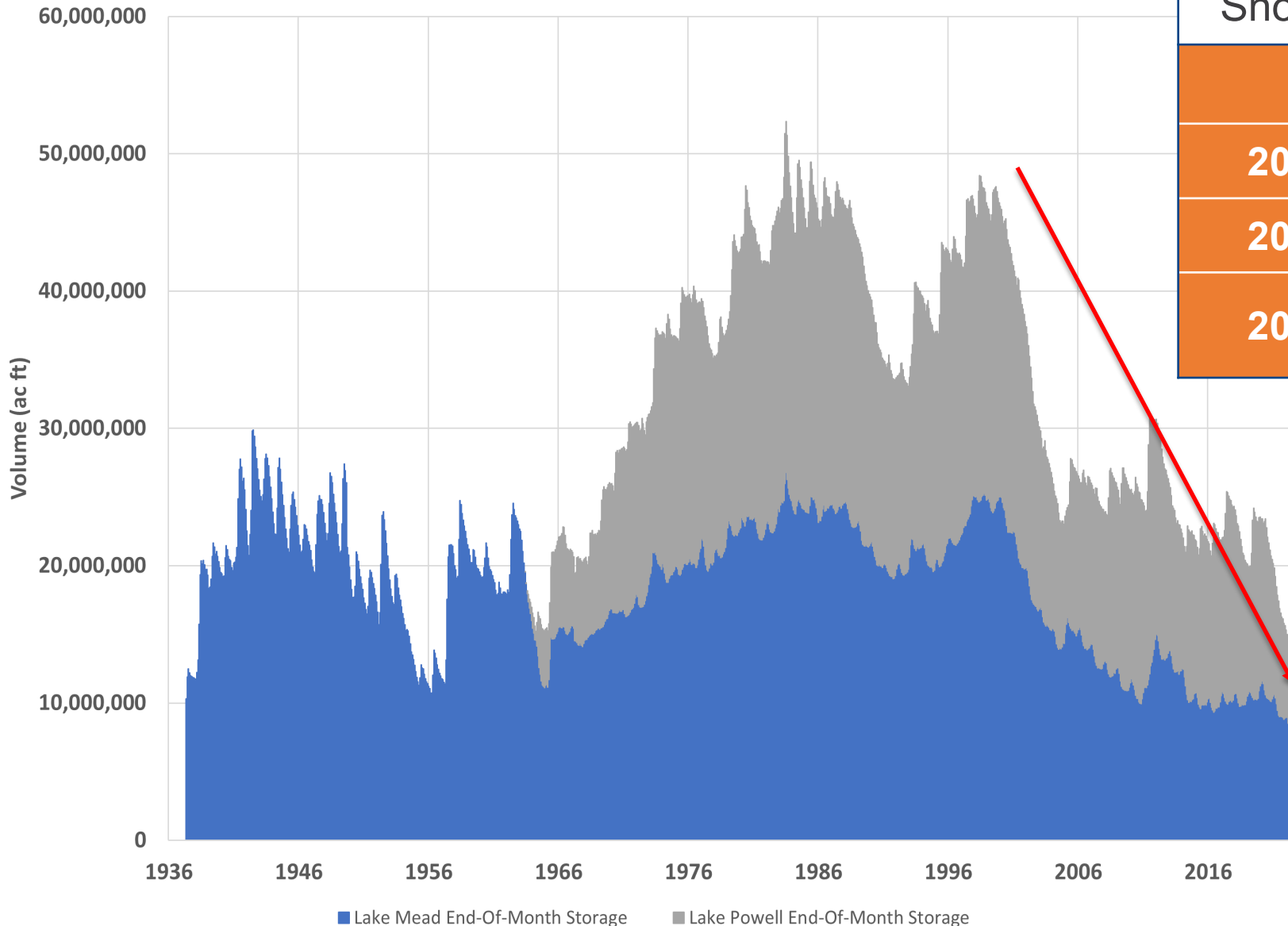
- >500%
- 300-500%
- 200-300%
- 150-200%
- 130-150%
- 110-130%
- 100-110%
- 90-100%
- 70-90%
- 50-70%
- 30-50%
- 0-30%

January 31, 2023

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# Recent Hydrology

Combined System End-Of-Month Storage



Snowpack vs. Runoff (% of average)

	Snowpack	Runoff
2020	105%	61%
2021	86%	37%
2022	90%	63%

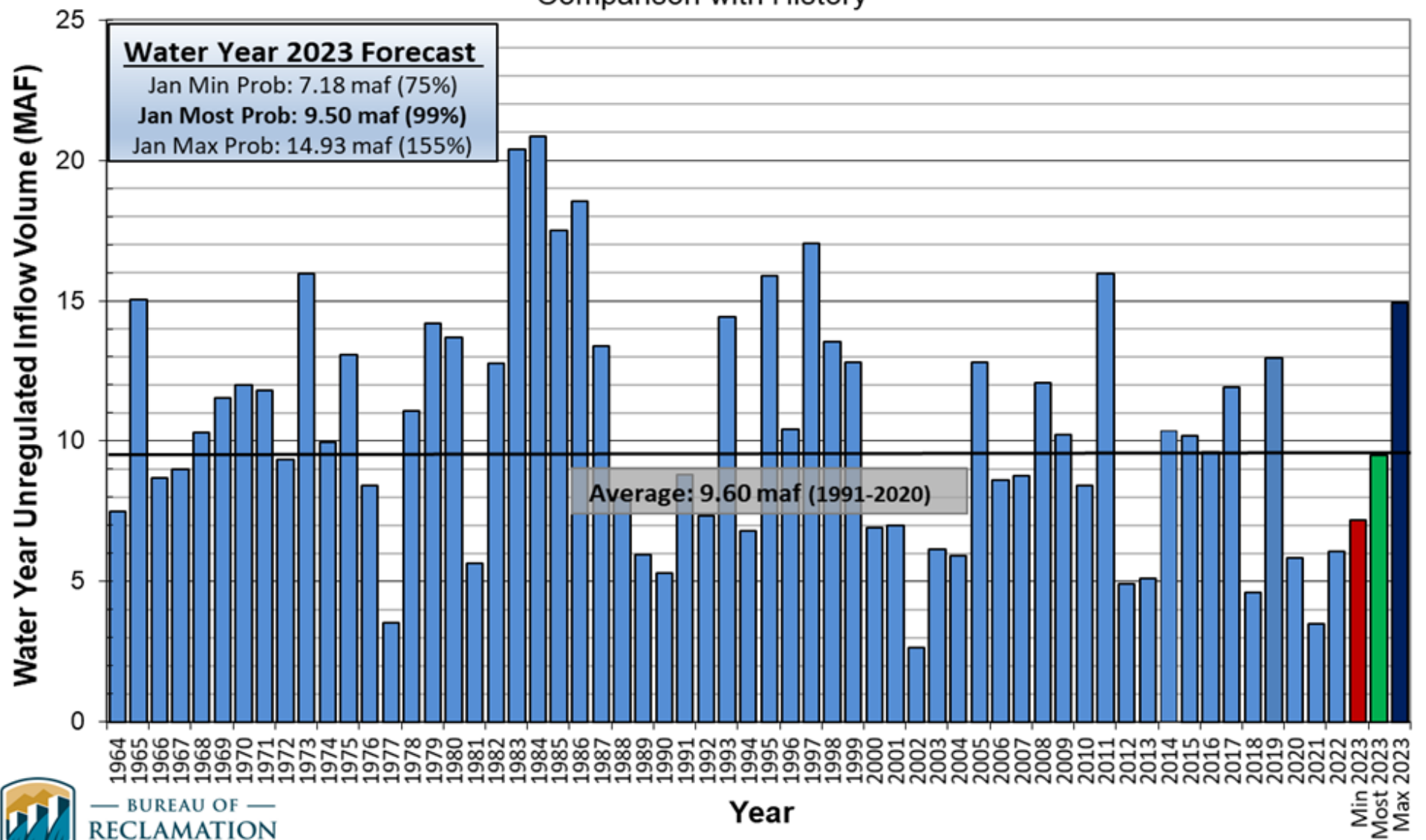
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# Lake Powell Unregulated Inflow

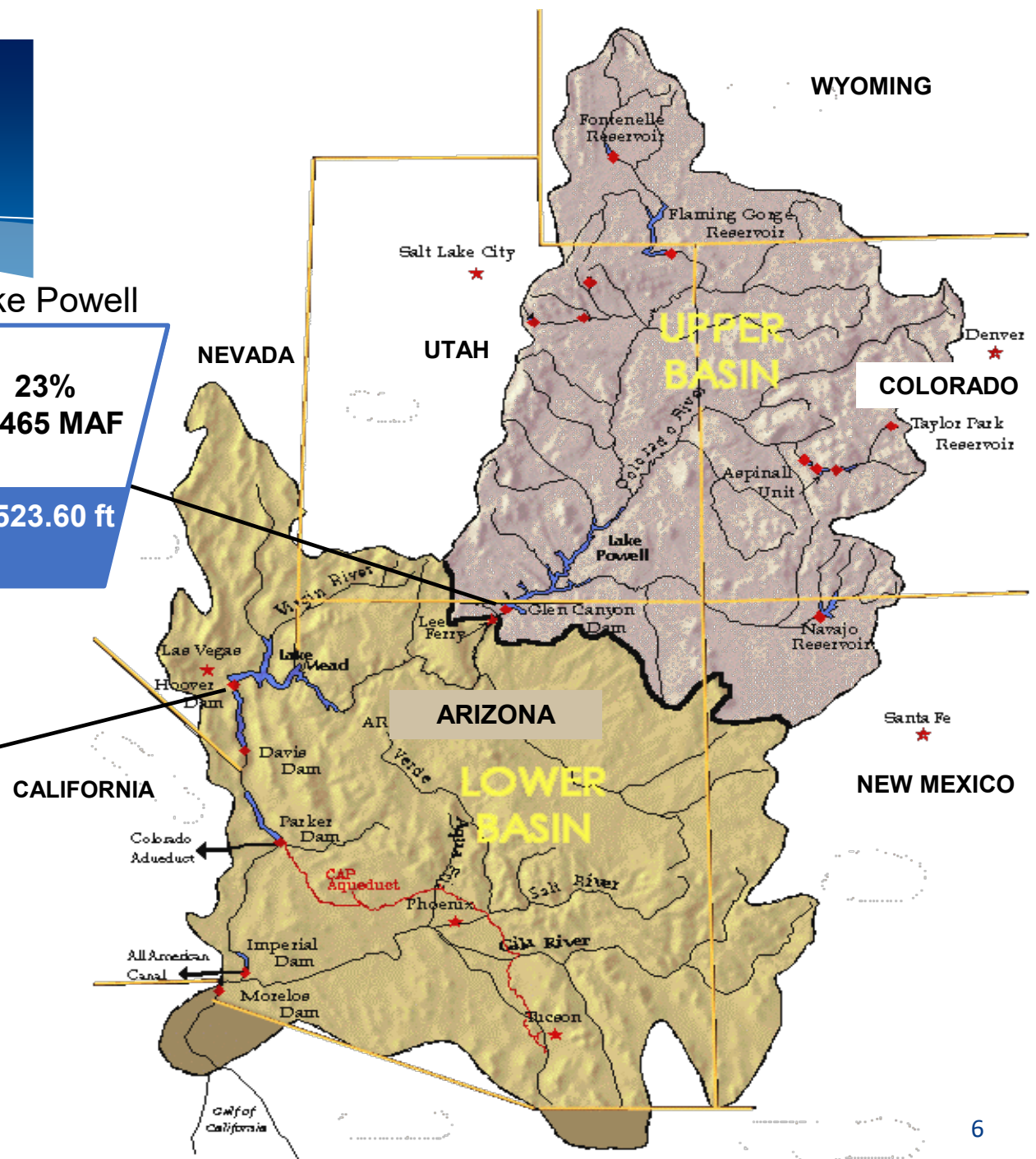
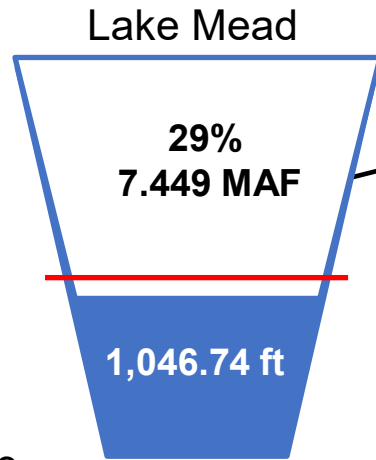
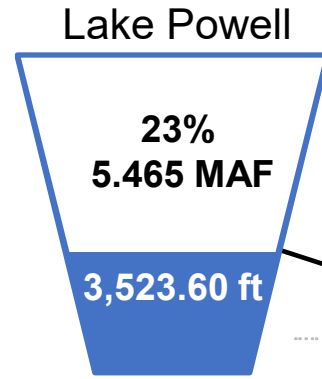
## Water Year 2023 Forecast *(issued January 5)*

Comparison with History



# Reservoir Status

	Percent Full	Storage (MAF)
Total System Storage	33%	19.09
Total System Storage <i>(at this time last year)</i>	37%	21.84



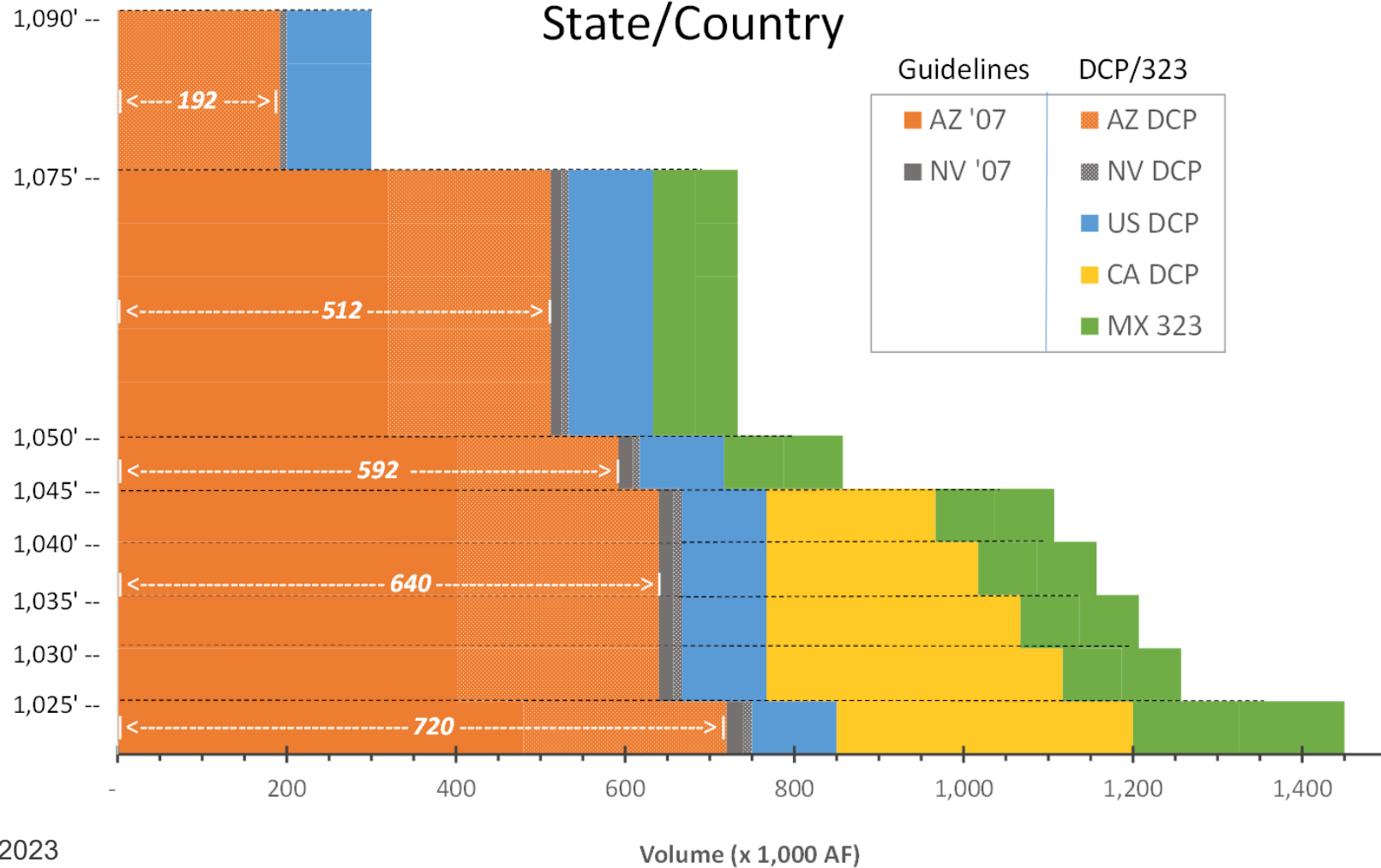
Updated as of January 30, 2023

January 31, 2023

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# Lower Basin Shortage Sharing

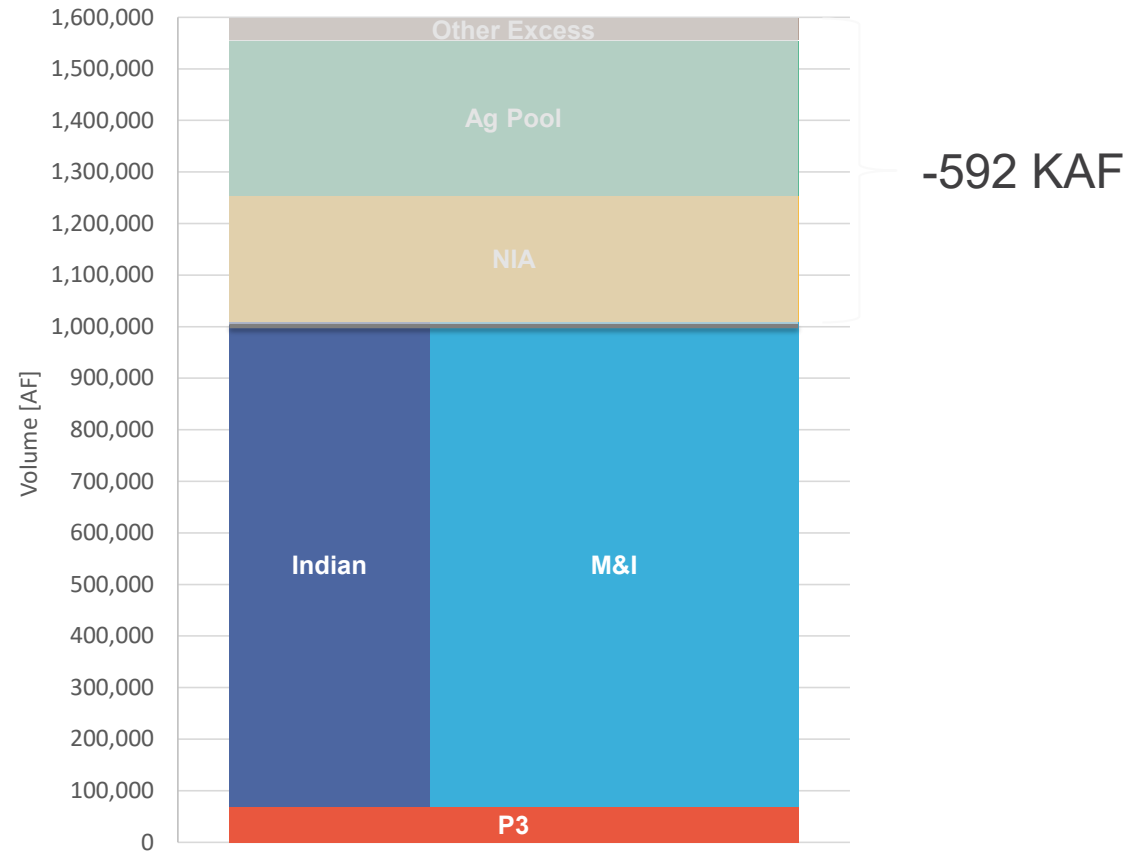
## DCP Shortage Reductions, Contributions and Protection Actions by Lake Mead Elevation and State/Country



# Estimated Pre-Mitigation Shortage Impact

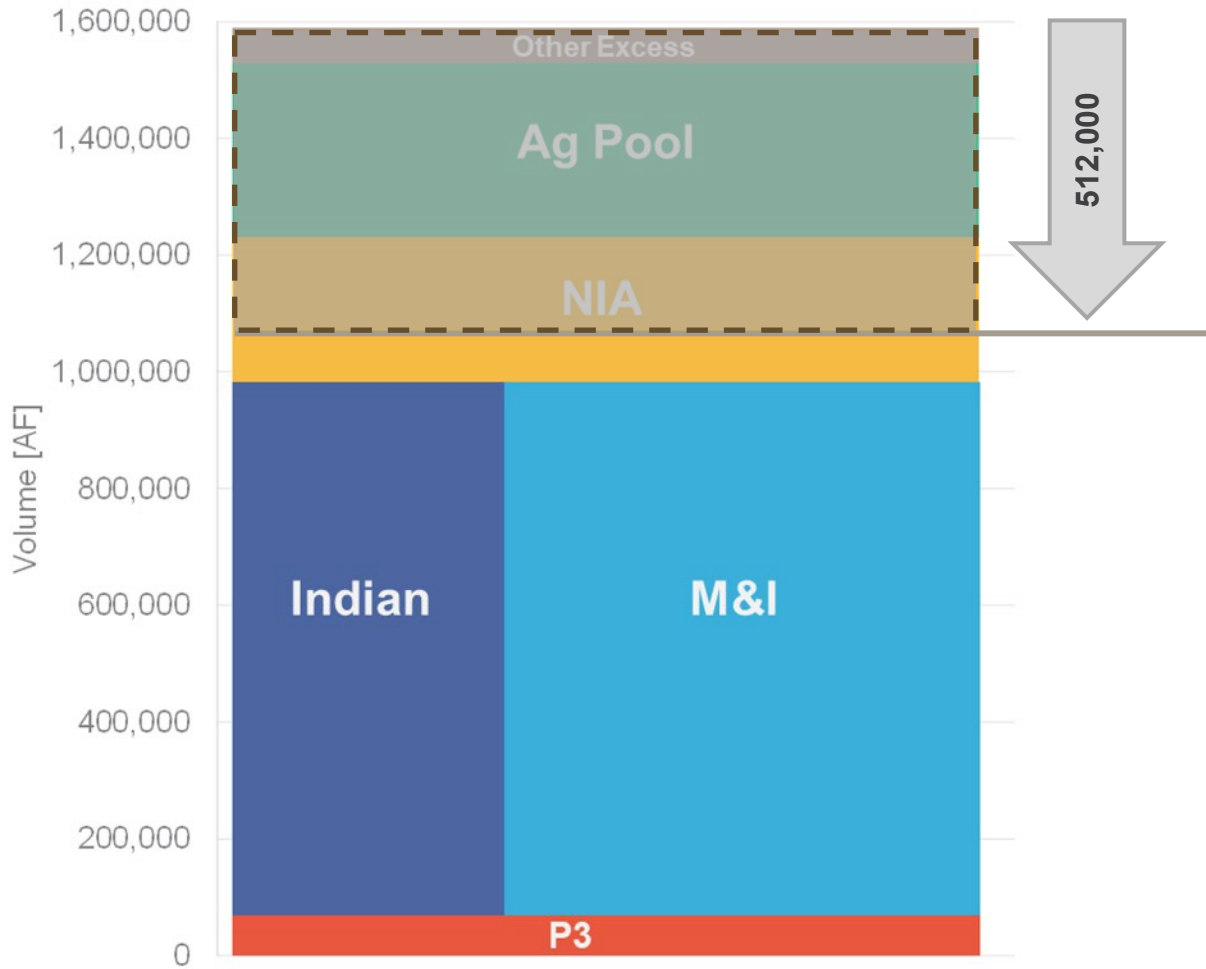
Tier 2a

- Lower Basin will operate in Tier 2a in 2023
- Shortage volume increases by 80 KAF from Tier 1 to 2a
  - 512 KAF vs. 592 KAF



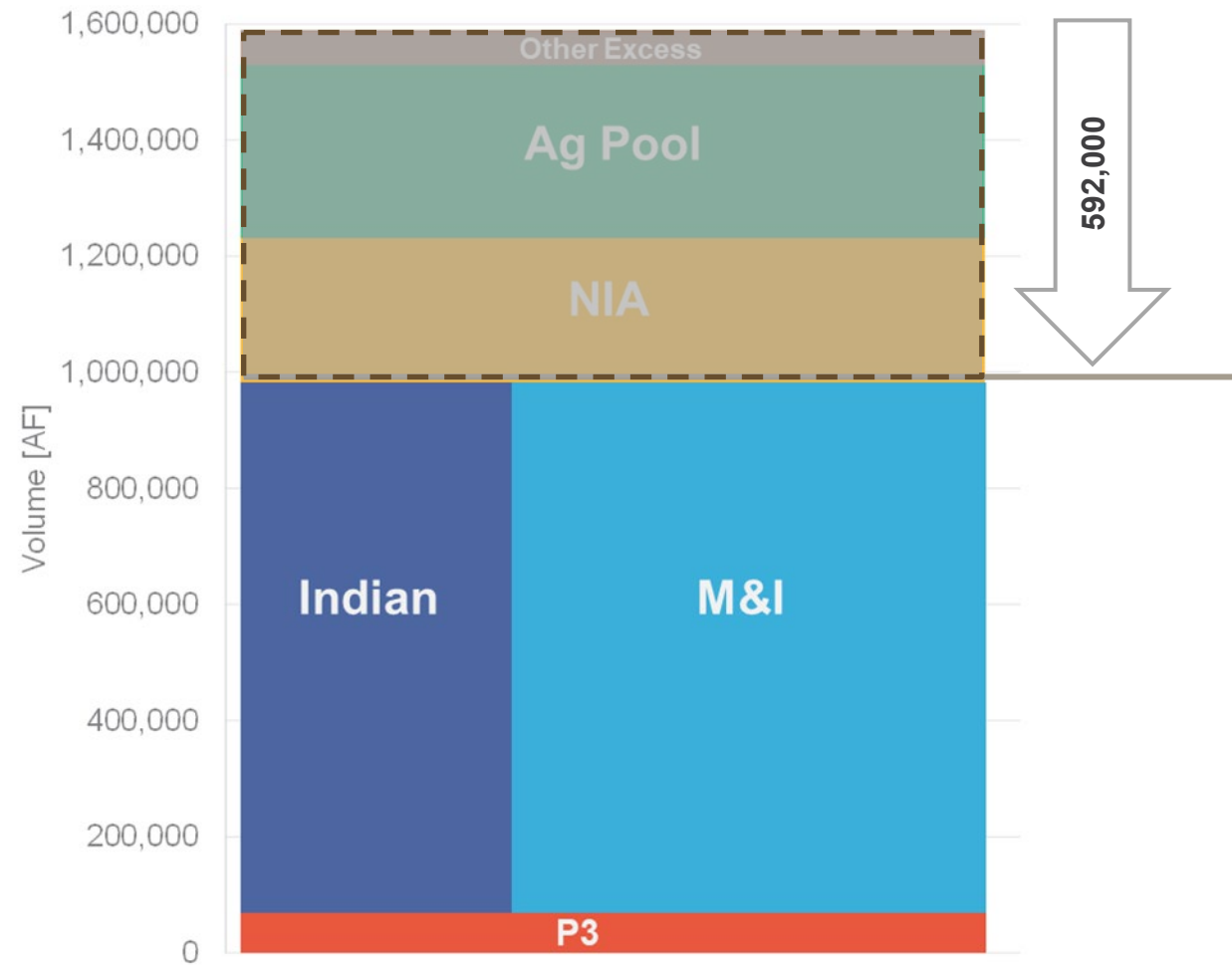


# Tier 1 2022

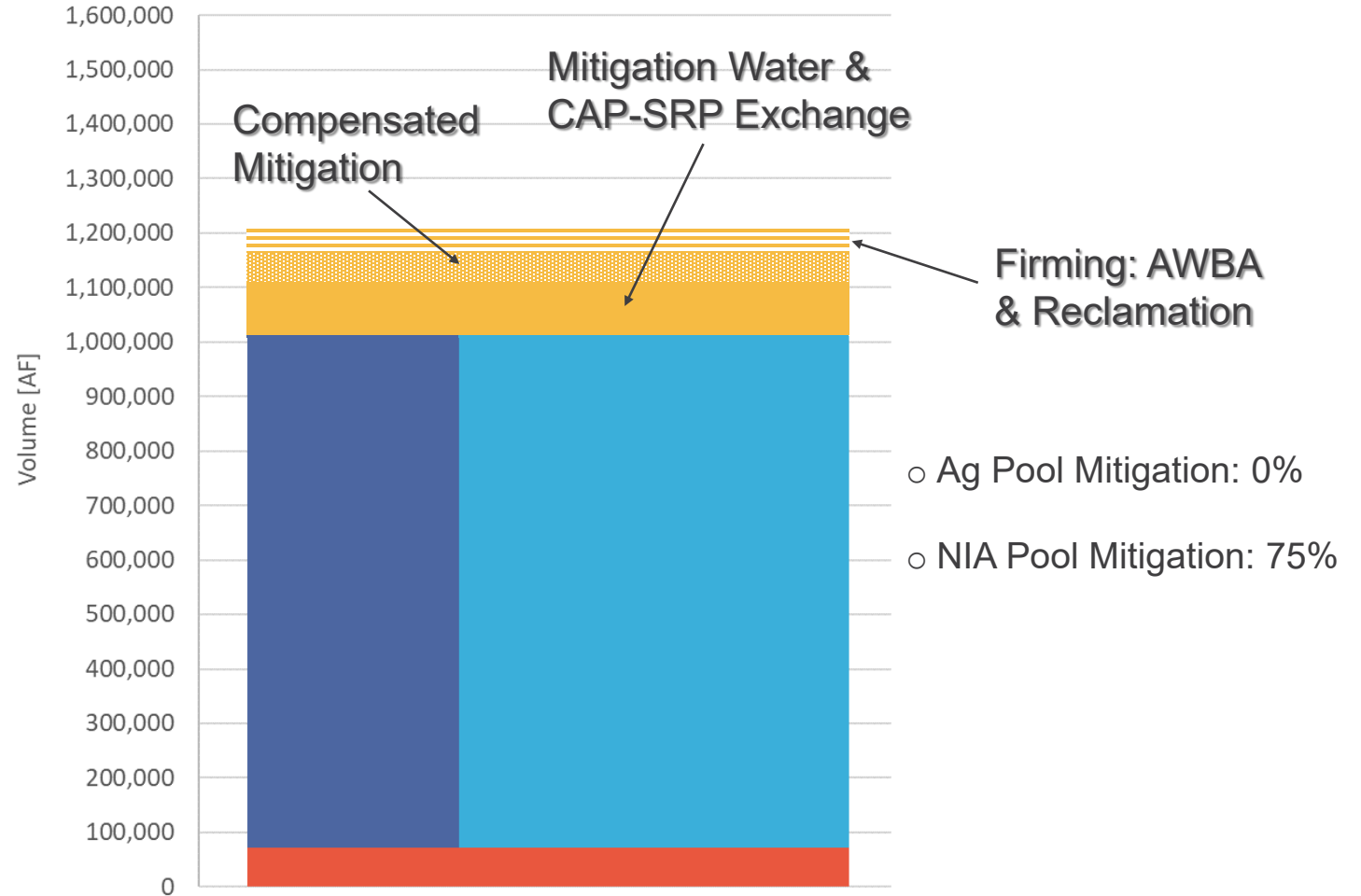
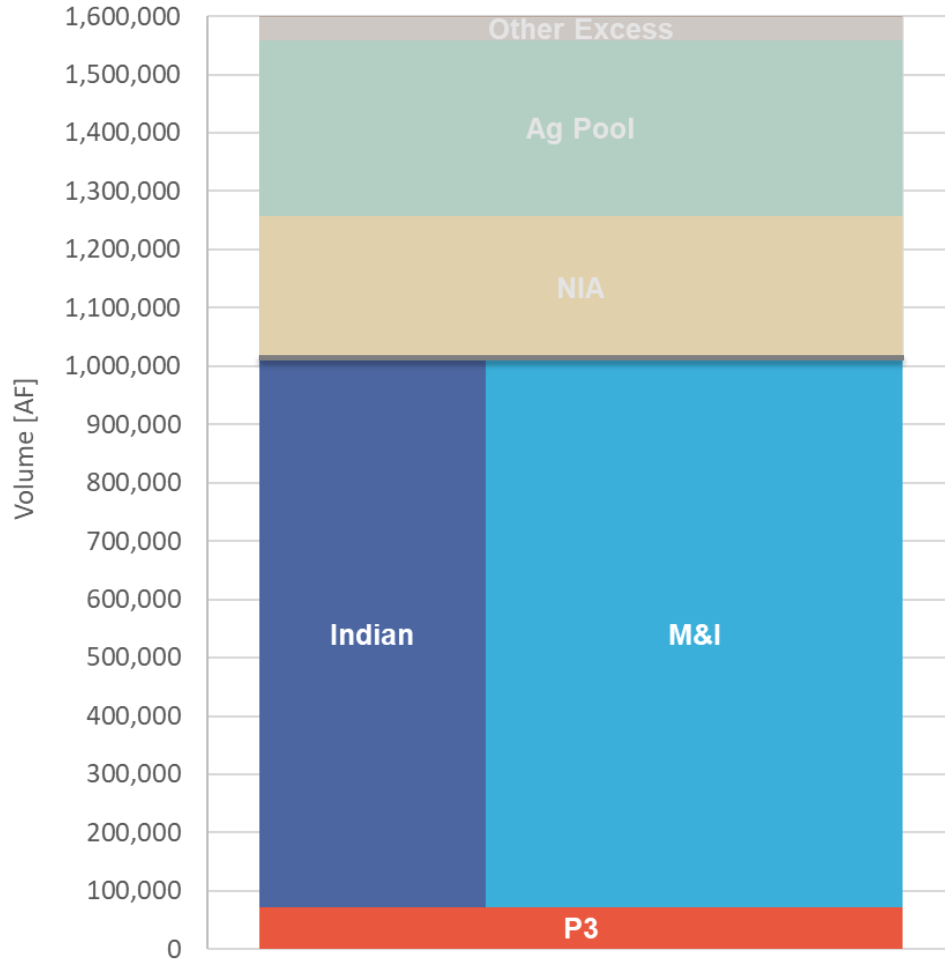


\* P5/6 reductions accounted for separately.

# Tier 2a 2023



# 2023 – Tier 2a Shortage w/ Mitigation



DRAFT - Volumes Subject to Change

# Federal Register Notice (87 F.R. 69042-69045)

November 17, 2022

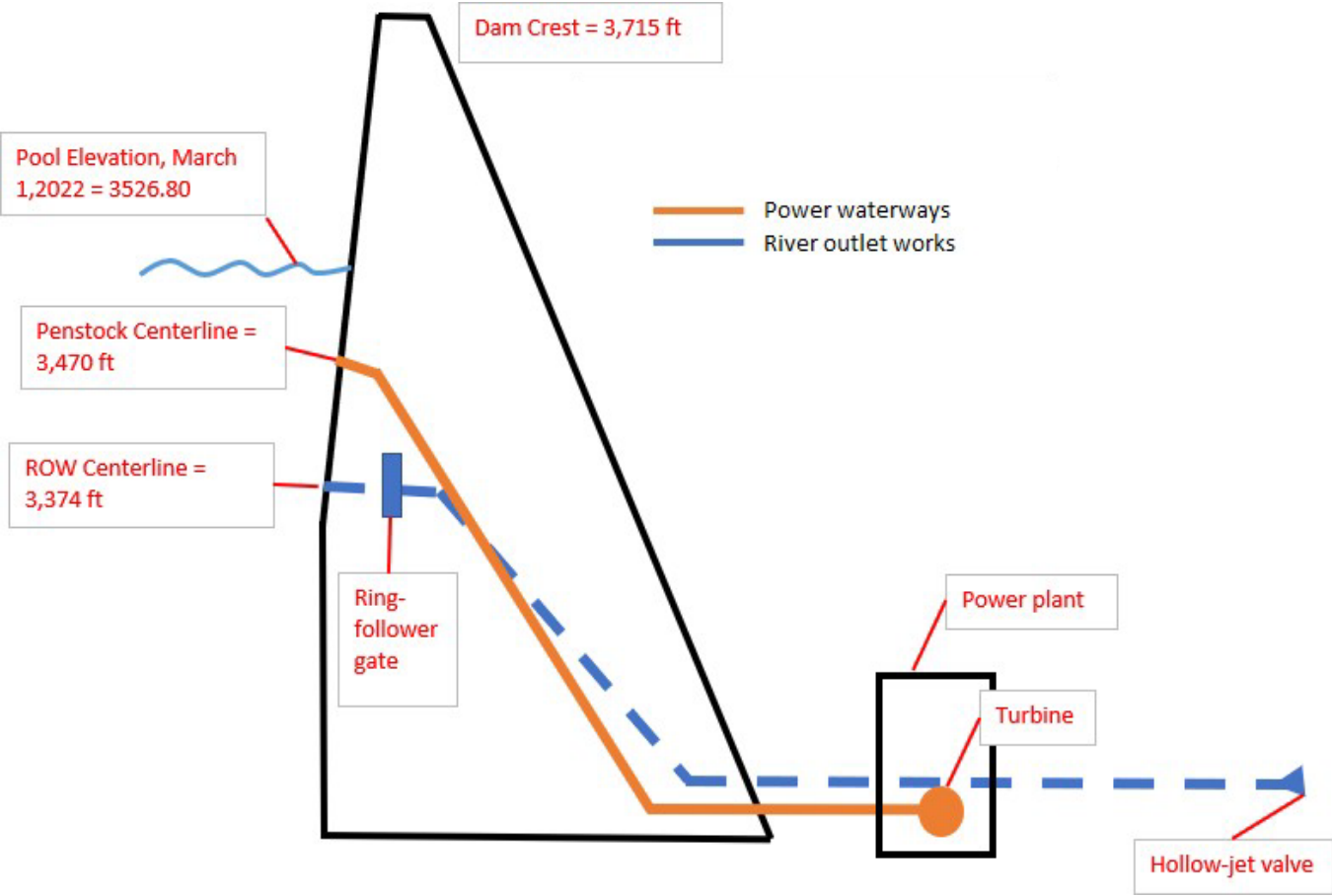
“In order to ensure that Glen Canyon Dam continues to operate under its intended design, Reclamation may need to modify current operations and reduce Glen Canyon Dam downstream releases, thereby impacting downstream riparian areas and reservoir elevations at Lake Mead. Accordingly, in order to protect Hoover Dam operations, system integrity, and public health and safety, Reclamation also may need to modify current operations and reduce Hoover Dam downstream releases.”

January 31, 2023

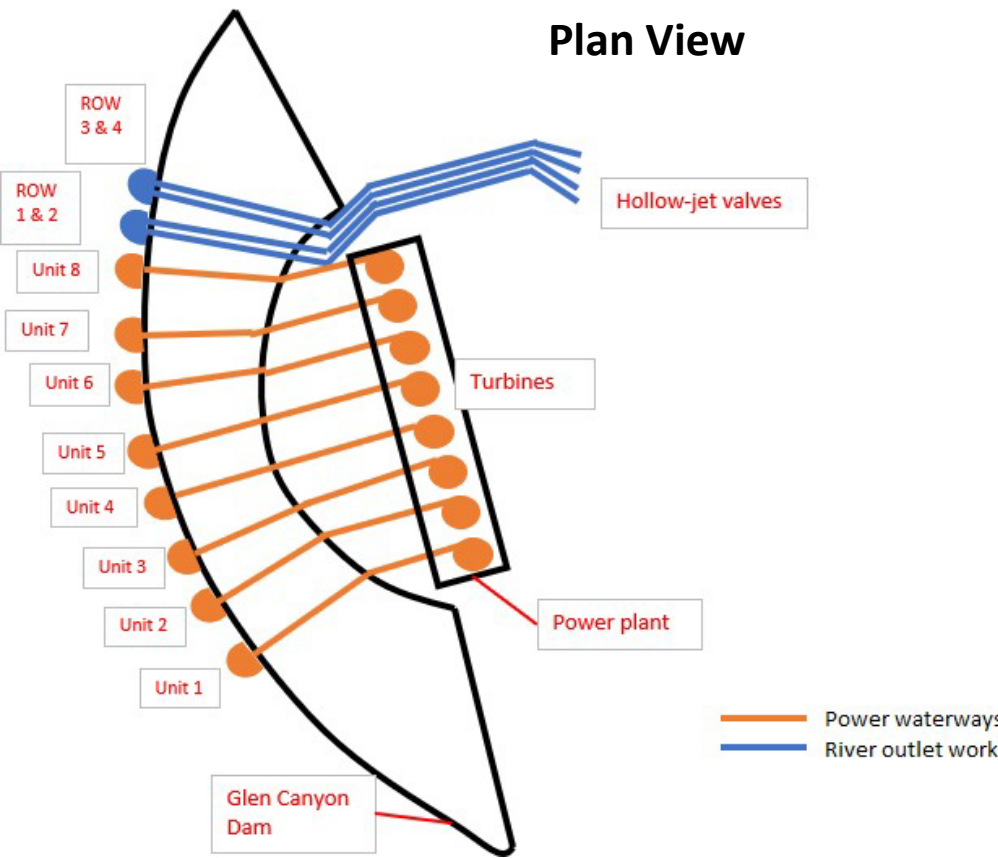
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# Glen Canyon Dam

### Section through Dam



### Plan View



January 31, 2023



# Purpose of the Federal Register Notice

- Due to critically-low current reservoir conditions, and the potential for worsening drought which threatens critical infrastructure and public health and safety, the Department recognizes that operational strategies must be revisited
- Potential impacts of low runoff conditions in the coming winter (2022-23) pose unacceptable risks to operations of Glen Canyon and Hoover Dams
- Accordingly, modified operating guidelines need to be expeditiously developed through a Supplemental Environmental Impact Statement (SEIS)
- Development of modified operating guidelines will inform operations in 2023-24; and may also inform potential operations in 2025-26



January 31, 2023

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# Preliminary Alternatives

- **No Action**
  - Describes continued implementation of existing operational agreements
- **Framework Agreement Alternative**
- **Reservoir Operations Modification Alternative**

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# Anticipated Impacts of No Action

- Critically low elevations at Lakes Powell and Mead
- Water delivery and operations limitations
- Loss of hydropower production
- Flow limitations in the Grand Canyon
- Limited flows for ecological programs
- Reduced water availability to water users basin-wide
- U.S.-Mexico Water Treaty obligation



# Preliminary Alternatives

- No Action
- Framework Agreement Alternative
  - Additional consensus-based actions
- Reservoir Operations Modification Alternative

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# Framework Agreement Alternative components

- Reclamation would evaluate scoping comments as part of this alternative
- Comments could focus on issues such as:
  - What elevations might be protected in Lake Powell and Lake Mead
  - How much water might be released from Lake Powell
  - How much water might be released from Lake Mead
  - How shortages might be defined for Lower Basin States

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# Consensus Based Modeling Alternative

- Basin States committed to Reclamation in December to work through January to prepare a consensus-based alternative.
- Six states have come to agreement on a Consensus Based Modeling Alternative.
  - The Consensus Based Modeling Alternative was transmitted to Reclamation yesterday.
  - It provides a Modeling Framework for Reclamation to analyze.
  - It *does not* convey a consensus agreement or any negotiated position on how to administer or attribute any additional shortage reductions.

For Immediate Release  
January 30, 2023

Media Contacts: *See below*

## **Colorado River States Submit a Consensus-Based Modeling Alternative to Bureau of Reclamation**

*Six states reach consensus on criteria for environmental review to help protect lakes Powell and Mead*

January 30, 2023 – Today, states sharing the Colorado River submitted a letter to the Bureau of Reclamation (Reclamation) that outlines a Consensus-Based Modeling Alternative for Reclamation to evaluate and incorporate into its development of a Supplemental Environmental Impact Statement (SEIS) to revise current Operating Guidelines ('07 Guidelines) for Glen Canyon Dam at Lake Powell and Hoover Dam at Lake Mead.

Revisions to the '07 Guidelines are necessary to protect critical elevations and infrastructure within the two reservoirs to ensure the Colorado River system – which has been significantly impacted by more than two decades of prolonged drought exacerbated by climate change and depleted storage – can continue to serve more than 40 million people, approximately 5.5 million acres of irrigated farmland, Basin Tribes, environmental resources, and power production across seven states and portions of Mexico.

The states of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming jointly submitted the Consensus-Based Modeling Alternative, and the states remain committed to working cooperatively with their local water users, the federal government, other Basin States, Basin Tribes, non-governmental organizations and stakeholders throughout Reclamation's environmental review and in accordance with the National Environmental Policy Act (NEPA).

While the Consensus-Based Modeling Alternative is not a formal agreement between the Colorado River Basin States, it serves as an alternative framework for Reclamation to analyze in its SEIS process. It provides an approach to help protect Glen Canyon Dam and Hoover Dam infrastructure, water deliveries, and power production to mitigate the risk of either Lake Powell or Lake Mead reaching dead pool.

The Consensus-Based Modeling Alternative includes, but is not limited to, the following modeling criteria for Reclamation to consider and analyze:

- Adjustments to the existing '07 Guidelines, including reduced releases from Lake Powell and Lake Mead to ensure the deliverability of water downstream and power production.
- Adjustments to Lower Basin contributions required under Drought Contingency Plan.
- Accounting for more than 1.5 million acre-feet of losses within the Lower Basin that are necessary to protect infrastructure.
- Additional combined reductions of 250,000 acre-feet to Arizona, California and Nevada at Lake Mead elevation 1,030 feet and below.
- Additional combined reductions of 200,000 acre-feet to Arizona, California and Nevada at Lake Mead elevation 1,020 feet and below, as well as additional reductions necessary to protect Lake Mead elevation 1,000 feet.
- Actions outlined within the Upper Basin State's Drought Response Operations Agreement.
- Additional voluntary conservation measures that take into account hydrologic shortage in the Upper Division States.

~ MORE ~

"This modeling proposal is a key step in the ongoing dialogue among the Seven Basin States as we continue to seek a collaborative solution to stabilize the Colorado River system," said Tom Buschatzke, Director of the Arizona Department of Water Resources.

"The CBMA includes the significant and necessary step of assessing evaporation and transit losses against Lower Basin uses. The Lower Basin actions operate in coordination with additional actions in the Upper Basin. We can only save the Colorado River system if we act together. The CBMA approach appropriately distributes the burden across the Basin and provides safeguards for the Tribes, water users, and environmental values in the Upper Basin," said Becky Mitchell, Colorado Commissioner, Upper Colorado River Commission and Director Colorado Water Conservation Board of the Colorado River Department of Natural Resources.

"While our goal remains achieving a seven-state agreement, developing and submitting this consensus-based alternative is a positive step forward in a multi-phased environmental review process critical to protecting the Colorado River system," said John Entsminger, Southern Nevada Water Authority General Manager.

"The CBMA is a vital step forward as Reclamation considers new additional actions to operate the Colorado River system for the next few years. We recognize that the process to prepare a proposal in such a short timeframe was imperfect. We need to continue discussions among all 7 Basin States and to engage directly with tribal leaders and others as we prepare to move forward with the components of the CBMA across the Upper and Lower Basin. We have much more to do, but the CBMA is a tremendous step in the right direction," said Estevan Lopez, New Mexico Colorado River Commissioner.

"The challenge we continue to face is dry hydrology and depleted storage across the Colorado River Basin. The CBMA provides a path forward so that every state can contribute to finding a solution in close collaboration with our Tribes and water users," said Gene Shawcroft P.E, Utah Colorado River Commissioner.

"The concepts identified in the CBMA are a significant step toward building the consensus necessary to take incredibly challenging but vital actions to address the crisis on the River. We look forward to continuing to work with all the States to build on the CBMA concepts and move forward together," said Brandon Gebhart, Wyoming State Engineer.

A copy of the Consensus-Based Modeling Alternative is linked [here](#).

### **Media Contacts:**

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#### **Upper Colorado River Commission**

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# Preliminary Alternatives

- No Action
- Framework Agreement Alternative
- Reservoir Operations Modification Alternative
  - A set of actions adopted pursuant to Secretarial authority under applicable federal law
    - Could complement a consensus-based alternative that may not sufficiently mitigate current and projected risks to Colorado River System reservoirs

January 31, 2023

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20 - 2007 Interim Guidelines SEIS Public Informational Webinars, November 29 and December 2, 2022





# Next Steps

- Expect Reclamation to issue a Draft SEIS in March 2023
- A Final SEIS is expected in late Spring 2023 and a Record of Decision in Summer 2023
  - Statutorily required period of at least 30 days between issuing the FEIS and signing a ROD.
  - Would allow for potential implementation of actions analyzed in the SEIS in 2024 and announced at the August 24-Month Study.

January 31, 2023

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# Questions?

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