



2024 Shortage Conditions and Planning for the Future

Vineetha Kartha, Manager, Colorado River Programs Deanna Ikeya, Senior Planning Analyst, Colorado River Programs

Current, Near-Term and Long-Term Processes

| PLANNING EFFORT | CURRENT OPERATIONS (24-Month Study) | NEAR-TERM COLORADO RIVER OPERATIONS (Supplemental Environmental Impact Statement) | LONG-TERM COLORADO RIVER OPERATIONS (POST-2026) |
|--------------------|---|--|--|
| DURATION | > 2023-2024 (2 YEARS) | 2024-2026 (3 YEARS) | 2026 AND BEYOND |

24-Month Study



- The 24-Month Study projects out Colorado River system conditions for 2 years using:
- Previous end-of-month reservoir elevations
- Considers three hydrologic scenarios minimum, most and maximum
- Water demands
- Operating policies
- Two important months
 - April conclusion of the snow accumulation season, when an accurate projection of runoff can be determined
 - August runoff period has fully concluded and storage contents in the reservoirs are fully known





August 2023 24-Month Study Lake Powell Operations



August 2023 24-Month Study **Lake Mead Operations**





Lake Mead

1075'

1050' 1045

1025'

2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan Total Volumes (kaf)

Combined Volumes by Country Binational US: (2007 Interim Guidelines Shortages + 2007 Interim Minute 323 Total DCP Water Water Total DCP Contributions) Guidelines Combined Savings Scarcity Combined Delivery Mexico: (Minute 323 Delivery Reductions + Shortages Reductions Reductions Contributions Contingency Volumes Lake Mead Binational Water Scarcity Contingency Plan Plan Savings Elevation Savings) (feet msl) Lower Lower Lower ΑZ NV CA Basin Basin Mexico Basin AZ AZ CA NV NV Mexico Mexico Total Total Total States Total States + States + Mexico Mexico Total Tier 0 0 0 0 0 192 8 0 8 0 41 241 1,090 - 1,075 41 192 200 Tier 1 320 13 192 512 21 80 613 1.075 - 1050 50 383 8 0 30 0 533 Tier 2a 400 17 487 192 34 592 25 617 104 721 1.050 - 1.045 70 8 0 0 Tier 2b 17 487 240 10 200 76 27 200 867 1.013 1,045 - 1,040 400 70 640 146 Tier 2c 17 487 250 27 250 917 1.071 1,040 - 1,035 400 70 240 10 84 640 154 Tier 2d 487 240 300 27 300 162 1.129 1,035 - 1,030 400 17 70 10 92 640 967 Tier 2e 400 17 70 487 240 10 350 101 640 27 350 1.017 171 1.188 1.030 - 1.025 Tier 3 480 20 125 625 240 10 350 150 720 30 1.100 275 1.375 <1.025 350

2024 Reductions + Contributions

CAP Contributions in Shortage: 2024



Send questions to CAPUniversity@cap-az.com

7

Colorado River System Conditions in 2022



 Lowest System Storage since initial filling

 Triggered calls
for additional actions



Colorado River Storage Increased by 10% in 2023

| Snowpack vs. Runoff (% of average) | | | | |
|---------------------------------------|----------|--------|--|--|
| | Snowpack | Runoff | | |
| 2020 | 105% | 61% | | |
| 2021 | 86% | 37% | | |
| 2022 | 90% | 63% | | |
| 2023 | 161% | 141% | | |

9



Send questions to CAPUniversity@cap-az.com

24 MS Forecast Date

Supplemental Environmental Impact Statement

PLANNING **EFFORT**

NEAR-TERM COLORADO **RIVER OPERATIONS (SEIS)**

Limited sections of the 2007 Interim Guidelines;

RANGE OF OPERATIONS

DURATIO

Develop the operational tools needed to address extreme drought and low water levels.

2024 - 2026 (3 YEARS)

Lower Basin States Proposal

Arizona - 1.15 MAF*

- CAWCD-ADWR ICS Preservation Program**
- CAP Subcontractor Conservation***
- Tribal CAP Contractor Conservation***
- **On-River Conservation*****

California - 1.6 MAF*

Nevada – 285 KAF*

*Volumes are approximate and subject to change ** Funded by ADWR and CAWCD *** Federally Funded Programs





End of Water Year Colorado River Basin Total System Storage Water Years 1960 - 2023* 1999 System Storage was 55.8 maf 110% (94% of capacity) Total System Storage 100% 90% 80% Sys Sep 2023 System Storage is projected Total System Storage (maf) to be 25.2 maf (43% of capacity)* 70% tem Content 60% 50% (%) 40% 30% 20% 10% 0% 2010 Lake Mead Storage Lake Powell Storage □ Other System Storage

*Storage value for the end of WY 2023 is based on the August 2023 24-Month Study projection.

ARIZONA ARION

Post-2026 Environmental Impact Statement

- The Guidelines that govern the operation of Lake Powell and Lake Mead expire at the end of 2026.
- NEPA process has commenced to develop post-2026 Operational Guidelines
 - To improve management of the Colorado River system
 - To provide greater degree of predictability with respect to the amount of annual water deliveries
 - Continued stability of the Colorado River System
- Basin States anticipate working together to develop an alternative for Post-2026 EIS





Adapting for the Future

Augmentation and Diversification

- Innovative Conservation Partnerships
- Binational and Brackish Groundwater Desalination
- Weather Modification
- Improving Water Use Efficiency
- Reuse/Recycling
- Recovery
- System Use Agreement (wheeling nonproject water)







Arizona Conservation Efforts

Arizona Conservation and DCP Contributions





On-Farm Irrigation Efficiency Projects



Goals:

- Explore innovative technologies
- Benefits to include protection and/or enhancement of irrigation-based economy
- Increased or similar crop yields with 30-50% water savings
- Early success over different crops and soil types at farm scale



Augmentation Opportunity: MWD Regional Recycled Water Project

- Advanced treatment of effluent from Joint Water Pollution Control Plant
- Delivered in MWD system
- Colorado River exchange







Planning for the Future: Key Take-Aways

- CAP is adapting to lower supplies on Colorado River system and continuing to provide a resilient and reliable water supply – this includes researching efficiency measures, investing in climate change research and working with other utilities across the Basin
- We are working with others to augment and conserve our Colorado River supply, create new opportunities through desalination, innovative partnerships and reuse strategies, and to increase our capacity to convey new supplies through the CAP system









Thank you!

Email Questions to: CAPUniversity@cap-az.com

Keep in touch by subscribing at <u>www.knowyourwaternews.com</u> and by following us on Facebook, Twitter, LinkedIn and Instagram!