

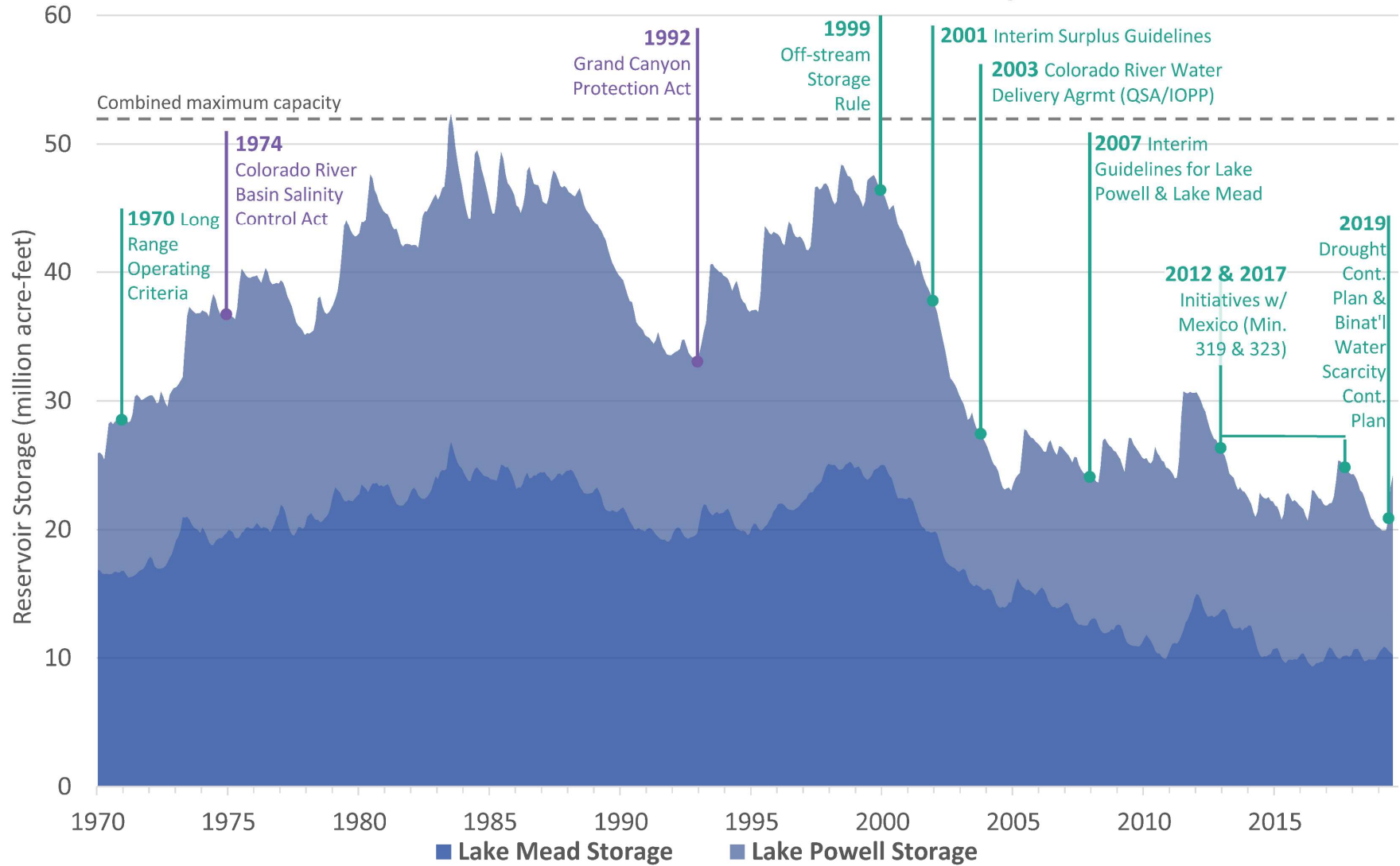
Arizona Water Reuse 2021 Symposium

When the river runs dry, where's the next water coming from?



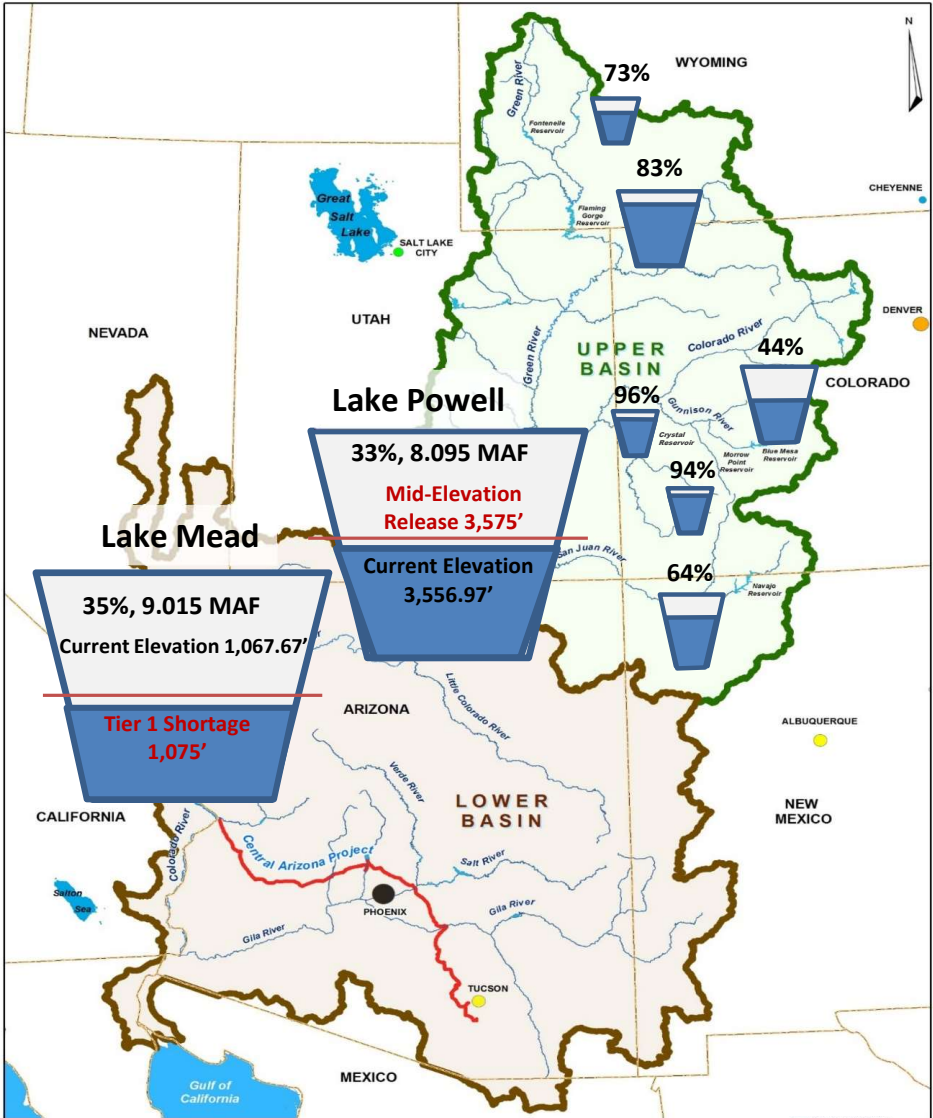
Clint Chandler
Deputy Director
Arizona Department of Water Resources
July 26, 2021

Lake Powell and Lake Mead Combined Storage



Colorado River Water Supply Report

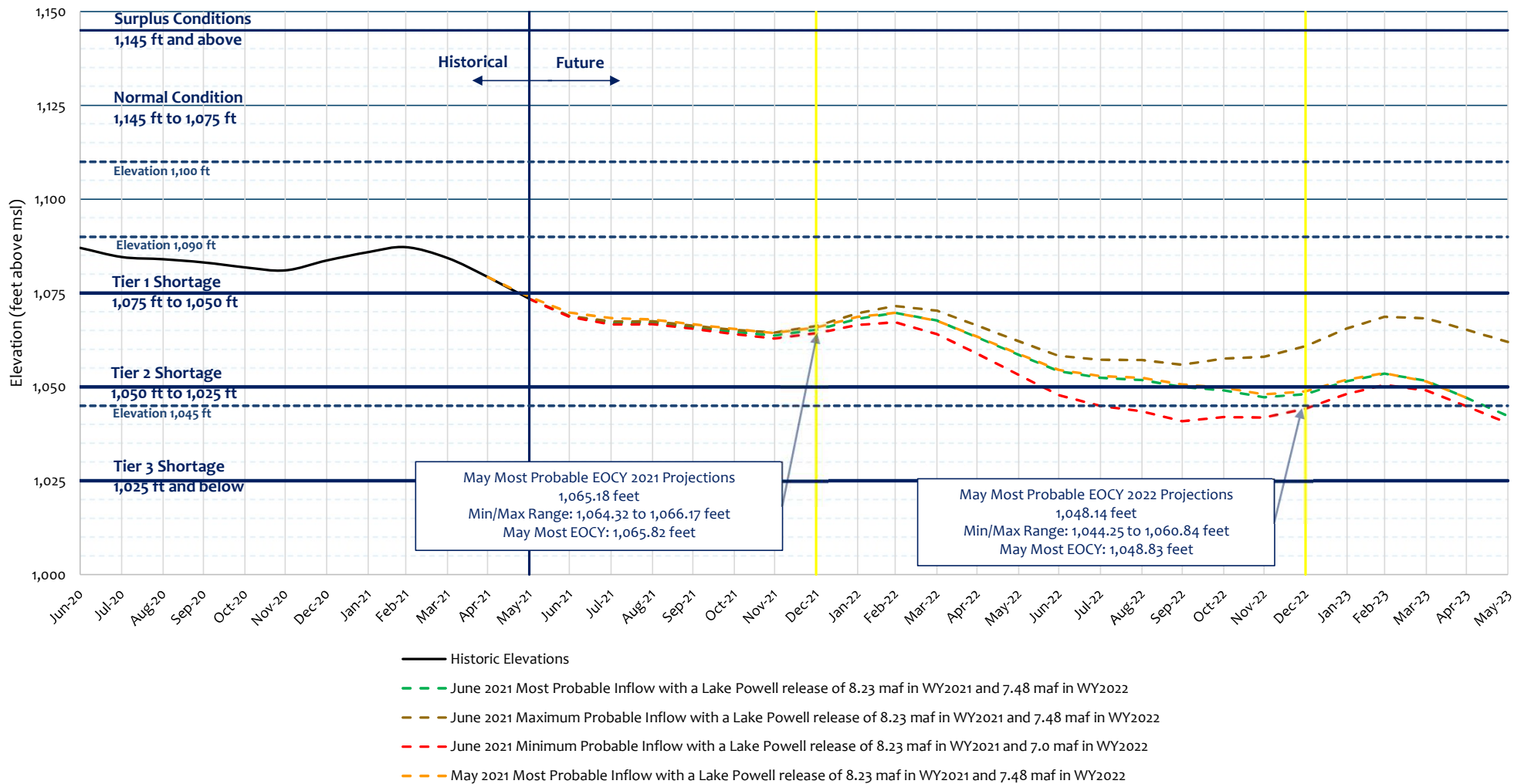
System Contents: 40% or 24,360 MAF
 As of July 15, 2021



| Reservoir Storage (MAF) - As of July 15, 2021 | | | |
|---|---------|-------------------|---------|
| Reservoir | Current | Storage Last Year | Maximum |
| Lake Mead | 9.015 | 10.486 | 26.120 |
| Lake Powell | 8.095 | 12.601 | 24.322 |
| Fontenelle | 0.253 | 0.330 | 0.345 |
| Flaming Gorge | 3.100 | 3.300 | 3.749 |
| Blue Mesa | 0.369 | 0.573 | 0.830 |
| Morrow Point | 0.110 | 0.111 | 0.117 |
| Navajo | 1.090 | 1.320 | 1.696 |

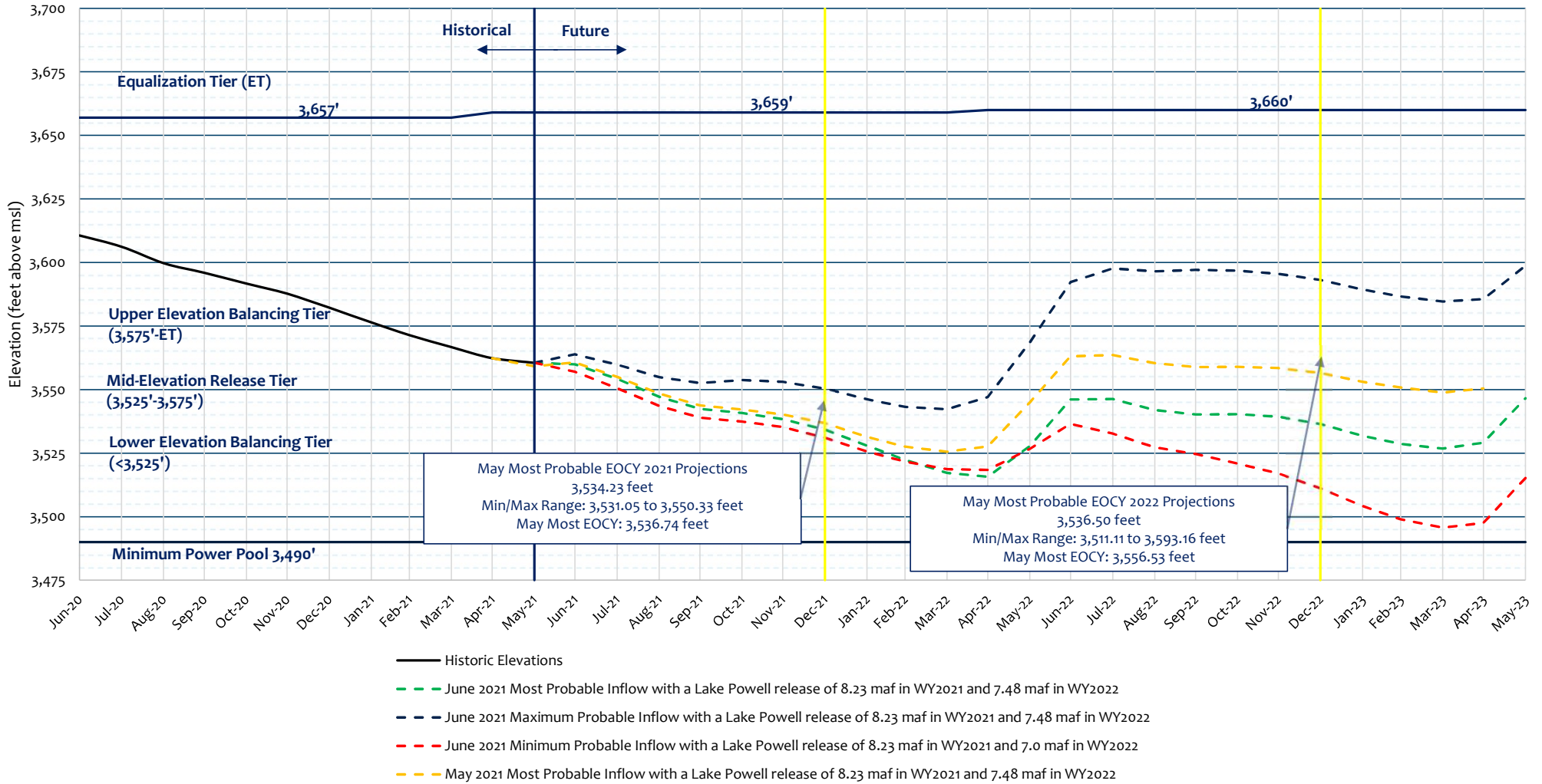
Lake Mead End of Month Elevations

Historic and Projected based on June and May 2021 24-Month Study Inflow Scenarios



Lake Powell End of Month Elevations

Historic and Projected based on June and May 2021 24-Month Study Inflow Scenarios



Comparison of April 2021 and June 2021 Projections Chance of Reaching Critical Reservoir Elevations Using the Stress Test Hydrology (1988-2019)

| | Run | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|------------|------|------|------|------|------|
| Lake Mead less than 1,025 feet | April 2021 | 0% | 0% | 8% | 36% | 44% |
| | June 2021 | 0% | 0% | 17% | 44% | 58% |
| | Difference | 0% | 0% | 9% | 8% | 14% |
| Lake Mead less than 1,000 feet | April 2021 | 0% | 0% | 0% | 4% | 13% |
| | June 2021 | 0% | 0% | 0% | 9% | 21% |
| | Difference | 0% | 0% | 0% | 5% | 8% |
| Lake Powell less than 3,525 feet | April 2021 | 0% | 13% | 18% | 20% | 23% |
| | June 2021 | 0% | 79% | 30% | 25% | 30% |
| | Difference | 0% | 66% | 12% | 5% | 7% |
| Lake Powell less than 3,490 feet | April 2021 | 0% | 0% | <1% | 9% | 12% |
| | June 2021 | 0% | 0% | 5% | 17% | 16% |
| | Difference | 0% | 0% | <5% | 8% | 4% |

All results computed as the chance of falling below the threshold in any month in the calendar (water) year for Lake Mead (Lake Powell).



Lower Basin – Lake Mead

Percent of Traces with Event or System Condition

Results from June 2021 CRMMS-ESP/CRSS using the **Full Hydrology** and **Stress Test Hydrology** (values in percent)

| Event or System Condition | 2021 | 2022 | 2023 | 2024 | 2025 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|------|------|------|------|------|------|------|------|------|------|
| Surplus Condition – any amount (Mead \geq 1,145 ft) | 0 | 0 | 0 | <1 | 4 | 0 | 0 | 0 | 0 | 0 |
| Surplus – Flood Control | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Normal or ICS Surplus Condition (Mead < 1,145 and > 1,075 ft) | 100 | 0 | 3 | 12 | 15 | 100 | 0 | 5 | 3 | 1 |
| Recovery of DCP ICS / Mexico's Water Savings (Mead $>/\geq$ 1,110 ft) | 0 | 0 | 0 | 3 | 7 | 0 | 0 | 0 | 0 | 0 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,090 and > 1,075 ft) | 100 | 0 | 3 | 9 | 9 | 100 | 0 | 5 | 3 | 1 |
| Shortage Condition – any amount (Mead \leq 1,075 ft) | 0 | >99 | 97 | 88 | 81 | 0 | >99 | 95 | 97 | 99 |
| <i>Shortage / Reduction – 1st level (Mead \leq 1,075 and \geq 1,050)</i> | 0 | >99 | 74 | 31 | 23 | 0 | >99 | 60 | 30 | 28 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,075 and > 1,050 ft) | 0 | >99 | 74 | 31 | 23 | 0 | >99 | 60 | 30 | 28 |
| <i>Shortage / Reduction – 2nd level (Mead < 1,050 and \geq 1,025)</i> | 0 | 0 | 23 | 54 | 39 | 0 | 0 | 34 | 65 | 32 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,050 and > 1,045 ft) | 0 | 0 | 17 | 9 | 8 | 0 | 0 | 26 | 4 | 7 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,045 and > 1,040 ft) | 0 | 0 | 5 | 10 | 7 | 0 | 0 | 8 | 10 | 8 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,040 and > 1,035 ft) | 0 | 0 | 0 | 13 | 8 | 0 | 0 | <1 | 12 | 4 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,035 and > 1,030 ft) | 0 | 0 | 0 | 13 | 10 | 0 | 0 | 0 | 22 | 9 |
| DCP Contribution / Mexico's Water Savings (Mead \leq 1,030 and \geq 1,025 ft) | 0 | 0 | 0 | 8 | 5 | 0 | 0 | 0 | 18 | 5 |
| <i>Shortage / Reduction – 3rd level (Mead < 1,025)</i> | 0 | 0 | 0 | 3 | 20 | 0 | 0 | 0 | 2 | 38 |
| DCP Contribution / Mexico's Water Savings (Mead $</\leq$ 1,025 ft) | 0 | 0 | 0 | 3 | 20 | 0 | 0 | 0 | 2 | 38 |

Notes:

¹ Modeled operations include the 2007 Interim Guidelines, Upper Basin Drought Response Operations, Lower Basin Drought Contingency Plan, and Minute 323, including the Binational Water Scarcity Contingency Plan.

² Reservoir conditions from June-December 2021 were simulated using the June 2021 CRMMS in ensemble mode using the CRRFC unregulated inflow forecast ensemble dated June 3, 2021 (CRMMS-ESP).

³ Each of the 35 initial conditions from CRMMS-ESP were coupled with 114 hydrologic inflow sequences from the Full Hydrology that resamples the observed natural flow record from 1906-2019 for a total of 3,990 traces analyzed and with 32 hydrologic inflow sequences from the Stress Test Hydrology that resamples the observed natural flow record from 1988-2019 for a total of 1,120 traces analyzed.

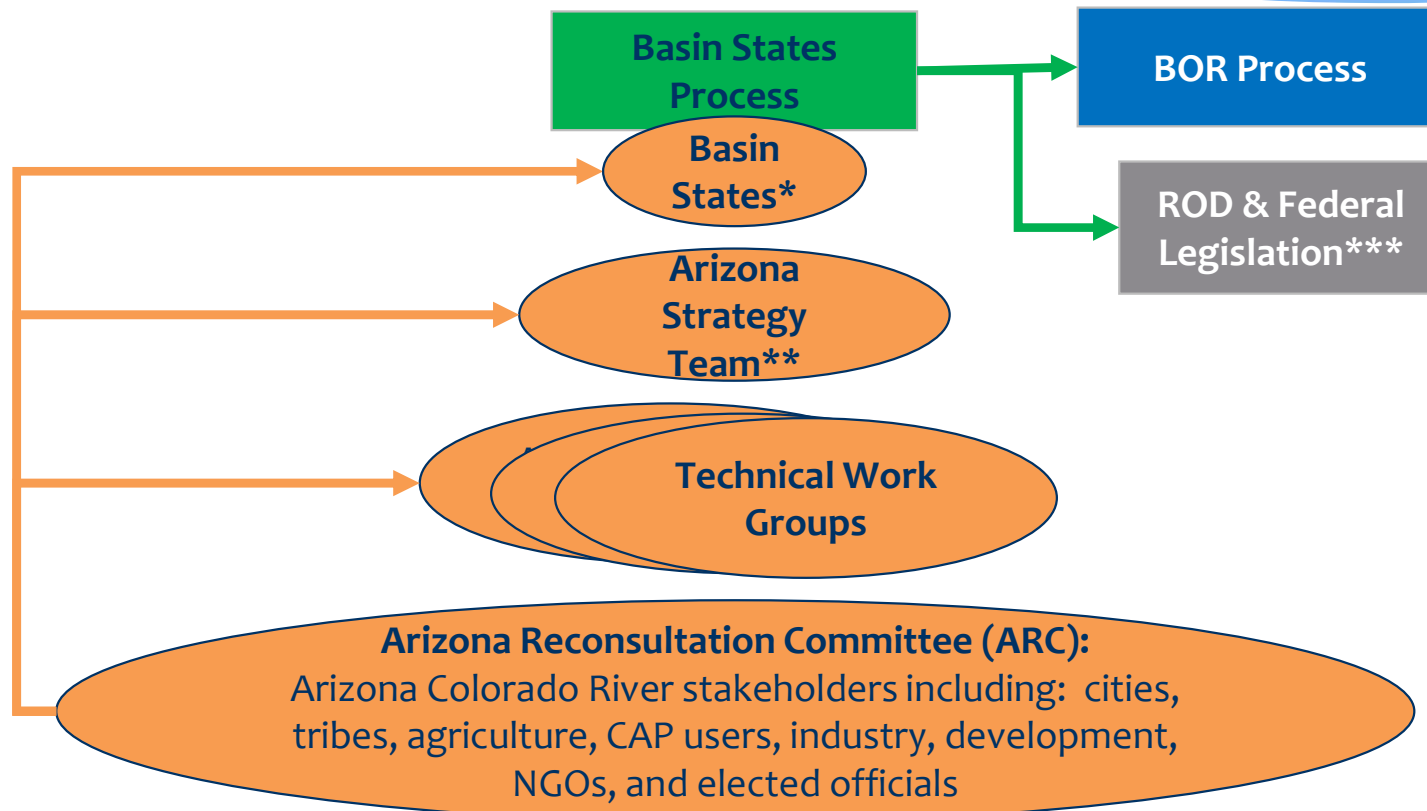
⁴ Percentages shown in this table may not be representative of the full range of future possibilities that could occur with different modeling assumptions.

⁵ Percentages shown may not sum to 100% due to rounding to the nearest percent.

⁶ While all CRMMS-ESP projections show Lake Mead's December 31, 2021 elevation falling below 1,075', the August 2021 24-Month Study will set the 2022 Lower Basin operating tier.



Arizona Reconsultation Process

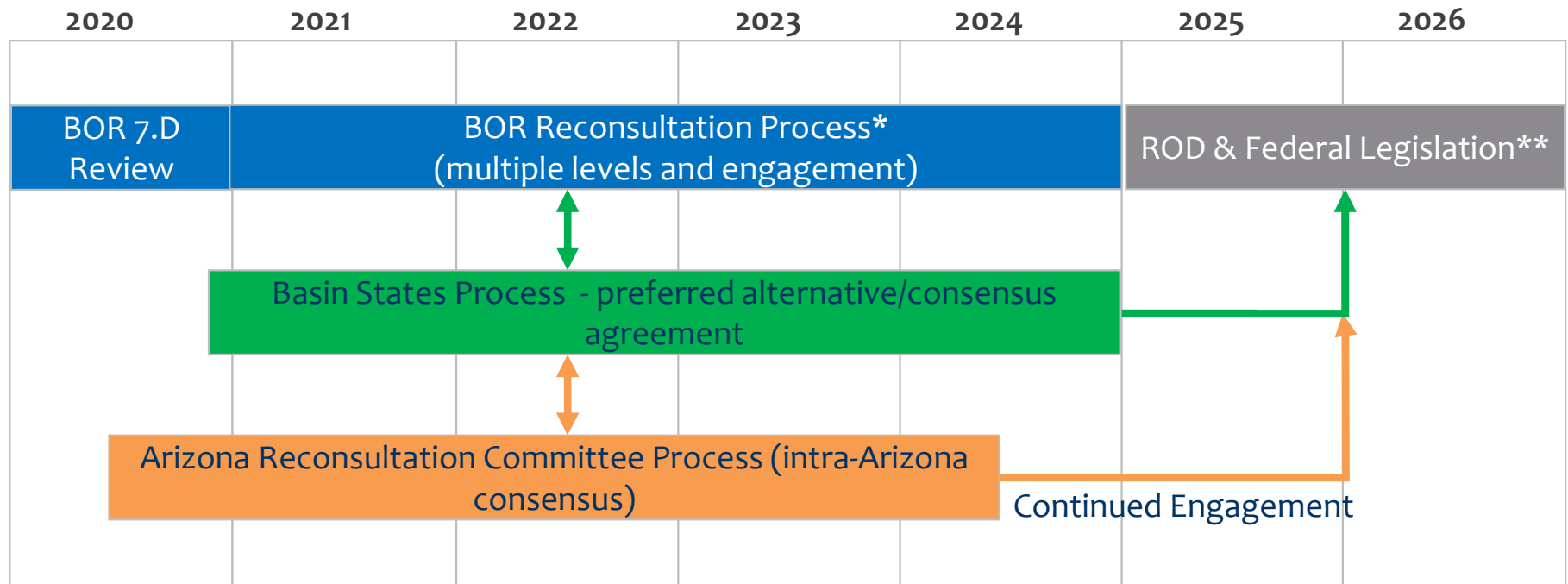


*By invitation to support the co-Chairs

**Requires confidentiality agreement for legal advice and negotiating strategies

***Federal legislation if necessary

Arizona's Estimate of Reconsultation Processes & Timeline



*Exact timing of BOR Reconsultation Process yet to be determined

** Federal legislation if necessary

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