Meeting Logistics

• Electronic public comment forms are available for anyone wishing to submit a comment or question during the meeting
  o www.cap-az.com/meetings/briefings-roundtables

• Submissions will be addressed during the questions period at the end of the meeting

• Meeting material will be posted on the ADWR and CAP pages
  o new.azwater.gov
  o www.cap-az.com
Agenda

• Introduction
• Current Status of Mead & Powell
• Colorado River Hydrology & Operations
• Activities of the Basin States
• CAP Activities and Water Supply Outlook
• Scottsdale Drought Management Plan
• Questions
• Next Steps and Closing Remarks

Colorado River System Conditions

• Colorado River Basin drought has lasted more than 22 years
• The driest conditions in the Colorado River Basin in more than 1,200 years
• Dry soil, higher temperatures, and low precipitation have contributed to low runoff conditions
  o Water Year 2021 inflows were the second lowest on record
  o Water Year 2022 is projected to be below average (62%)
Lake Powell

• Lake Powell is currently at elevation 3,523’, which is at 24% of capacity, the lowest since first filling
• Below elevation 3,490’ releases would rely on the river outlet works, for which there is little operational experience
• The river outlet works may lack the capacity to meet Lower Basin delivery volumes, and Reclamation has reliability concerns about long-term operations

Lake Mead

• Lake Mead is currently at elevation 1,054’, which is 31% of capacity
  o 3.4 MAF above elevation 1,000’
  o 7.8 MAF above 895’ (“dead pool”)  
• Even with the actions of the 2007 Guidelines, DCP, Minute 323 and the 500+ Plan, the “bank account” of water behind Hoover Dam will be further debited in 2022
• We expect further significant actions to reduce water use will be required in the Lower Basin to protect Lake Mead now and for the future
• Reductions larger than Tier 3 could be required in the near-term

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables
Colorado River Basin
Current Conditions & Operational Update

Daniel Bunk
Chief, Boulder Canyon Operations Office
Bureau of Reclamation, Lower Colorado Basin Region

Colorado River Shortage Preparedness Briefing
May 6, 2022

Colorado River – Current Conditions
(as of May 4, 2022)

• Driest 22-year period (2000–2021) on record
• Water Year 2021 – second lowest inflow into Lake Powell since 1964
• Lake Powell and Lake Mead at historically low water levels
  o Lake Powell current elevation is 3,523 feet or 24% of capacity
  o Lake Mead current elevation is 1,054 feet or 31% of capacity
Water Year Snowpack and Precipitation\(^1,2\)
as of May 2, 2022

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Water Year 2022
Precipitation (year-to-date)
92% of average
Current Snowpack
75% of median

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End of Calendar Year 2022 Projections
April 2022 24-Month Study Most Probable Inflow Scenario\(^1\)

Based on a Lake Powell release of 7.48 maf in WY 2022

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\(^1\) WY 2022 unregulated inflow into Lake Powell is based on the CBRFC forecast dated 4/4/22.
CRMMS 2-Year Probabilistic Projections are available online at: https://www.usbr.gov/lc/region4/g4000/riverops/crmms-2year-projections.html

Lake Powell – Key Elevations

The target elevation of 3,525 ft provides Lake Powell with a 35-vertical-foot buffer designed to minimize the risk of dropping below the minimum power pool elevation of 3,400 ft.
CRMMS 2-Year Probabilistic Projections are available online at: https://www.usbr.gov/lc/region/g4000/riverops/crmms-2year-projections.html

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
Under the 2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan (DCP)*, and Binational Water Scarcity Contingency Plan
(Volumes in thousand acre-feet)

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<tbody>
<tr>
<td>AZ NV Mexico</td>
<td>Lower Basin States + Mexico</td>
<td>AZ NV CA Mexico</td>
<td>AZ Total NV CA Total Lower Basin States Total Mexico Total</td>
<td>Lower Basin States Total Mexico Total</td>
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<td>1,090 - &gt;1,075</td>
<td>0 0 0</td>
<td>0 192 8 0</td>
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</tbody>
</table>

*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.
Actions to Preserve Delivery Capacity from Lake Powell

The Department of the Interior and the Bureau of Reclamation have consulted with the Basin States on actions to protect the integrity of Glen Canyon Dam infrastructure

- 500 KAF will be released from Flaming Gorge Reservoir to Lake Powell, pursuant to the Drought Response Operations Agreement ("DROA") over the next 12 months

- Reclamation will hold 480 KAF in Lake Powell, resulting in a release of 7.0 MAF to Lake Mead in Water Year 2022, rather than 7.48 MAF
  - For the determination of shortage tiers, Lake Mead’s elevation will be calculated as if the 480 KAF had been delivered, i.e. “Operational Neutrality”
  - This action alone will not result in a deeper shortage in 2023

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables
Operational Neutrality

• The volume of shortage to the Lower Basin and Mexico will be made as if the 480 KAF had been released from Glen Canyon Dam in Water Year 2022

• Ensure the temporary release reductions are tracked in future years

• Address future release of the 480 KAF from Lake Powell to Lake Mead in consultation with the Basin States

• Continue to evaluate the risks of Lake Powell and Lake Mead reaching critical elevations and developing strategies to mitigate such risks

Lower Basin and Mexico Actions to Date

• Mandatory reductions under the 2007 Guidelines and Minute 323
  o Cuts to Arizona, Nevada and Mexico

• Mandatory contributions under the Lower Basin DCP and Minute 323
  o Cuts or contributions of previously conserved volumes from Arizona, California, Nevada and Mexico
  o Additional conservation commitments from the United States

• Voluntary additional conservation actions under the 500+ Plan
  o Goal of conserving at least 1 MAF over two years
**Actions in Arizona in 2022**

- Tier 1 Guidelines shortage reduction: 320 KAF
- Tier 1 DCP contribution: 192 KAF
- 500+ Plan conservation: ~214 KAF*
- Other conservation actions: ~86 KAF

**Total:** ~812 KAF

* 500+ Plan Funding – US, ADWR, CAWCD, Metropolitan Water District of Southern California, Southern Nevada Water Authority

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**500+ Plan in Arizona**

<table>
<thead>
<tr>
<th>Arizona 500+ Plan Activity Included in the April 24-Month Study (volumes in AF)</th>
<th>2021 (Provisional)</th>
<th>2022 (Projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gila River Indian Community</td>
<td>40,000</td>
<td>129,565</td>
</tr>
<tr>
<td>Colorado River Indian Tribes</td>
<td>4,685</td>
<td>19,604</td>
</tr>
<tr>
<td>CAP ICS delivery offset</td>
<td>401</td>
<td>19,604</td>
</tr>
<tr>
<td><strong>Total Arizona Volume Included in the April 24-Month Study</strong></td>
<td>45,086</td>
<td>149,169</td>
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</table>

<table>
<thead>
<tr>
<th>Additional 500+ Plan Activity Planned (volumes in AF) (as of April 26, 2022)</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado River Indian Tribes</td>
<td>4,685</td>
</tr>
<tr>
<td>Mohave Valley Irrigation and Drainage District</td>
<td>9,592</td>
</tr>
<tr>
<td>Yuma Mesa Irrigation and Drainage District</td>
<td>15,000</td>
</tr>
<tr>
<td>Phoenix, Scottsdale, Gilbert, Mesa, El Mirage, Tempe, Surprise, Glendale, Metro Water, Queen Creek Irrigation and Drainage District, Harquahala Valley Irrigation and Drainage District</td>
<td>35,506</td>
</tr>
<tr>
<td><strong>Total Additional 500+ Plan Activity Planned</strong></td>
<td>64,783</td>
</tr>
</tbody>
</table>

| Total Arizona 500+ Plan Activity - Modeled and Planned | 45,086 | 213,952 |

| Total Arizona 500+ Plan Activity - Modeled and Planned (2021 and 2022) | 259,038 |
Lower Basin “Mass Balance”

**Estimated** Calendar Year 2022 Physical Supply Accounting as of April 28, 2022

<table>
<thead>
<tr>
<th>Supply / Demand</th>
<th>Volume (MAF)</th>
<th>Planned</th>
<th>&quot;Normal&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powell release</td>
<td>7.00</td>
<td>8.23</td>
<td></td>
</tr>
<tr>
<td>Intervening flows</td>
<td>0.78</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Lake Mead evaporation</td>
<td>(0.45)</td>
<td>(0.45)</td>
<td></td>
</tr>
<tr>
<td>Delivery Losses &amp; Bypass Flows</td>
<td>(0.74)</td>
<td>(0.74)</td>
<td></td>
</tr>
</tbody>
</table>

Data based on Bureau of Reclamation reservoir release data, decree accounting, and 24-Month Study.

<table>
<thead>
<tr>
<th>Consumptive uses</th>
<th>Nevada</th>
<th>Arizona</th>
<th>California</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.26)</td>
<td>(2.11)</td>
<td>(4.59)</td>
<td>(1.42)</td>
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<tr>
<td></td>
<td>(8.38)</td>
<td>(8.38)</td>
<td>(8.38)</td>
<td>(8.38)</td>
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</tbody>
</table>

- Basic apportionment is 0.3 MAF
- Basic apportionment is 2.8 MAF
- Basic apportionment is 4.4 MAF (~0.2 MAF withdrawal of previously conserved water)
- Allocation is 1.5 MAF

| Change in Lake Mead Storage     | (1.79)*      | (0.56)**  |

* Equivalent to a decline of ~23 feet of elevation.
** Equivalent to a decline of ~6 feet of elevation.

Estimated Calendar Year 2022 Physical Supply Accounting as of April 28, 2022

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables

2023 CAP Water Supply Outlook

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables
**Estimated Pre-Mitigation Shortage Impact**

- Current projections indicate the likelihood of Tier 2a in 2023
  - 1050' ≤ Tier 2a > 1045'
- Shortage volume increases by 80 KAF from Tier 1 to 2a
  - 512 KAF vs. 592 KAF
AZDCP Mitigation Commitments

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables

Anticipated AZDCP Mitigation Resources in 2023

- Firming for Gila River Indian Community (up to 15 KAF of NIA priority by AWBA)
- Firming for Tohono O’odham (up to 28.2 KAF of NIA by USBR)
- SRP Exchange (10 KAF)
- Lake Pleasant supply (5 KAF)
- CAWCD ICS (tbd)
- Compensated Mitigation (tbd)

Credits [Water Previously Stored]

Water from Pleasant & SRP System
Water from Lake Mead
Money

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables
500+ Plan for 2023

• We will be soliciting **broad** and **substantial** contributions of water from all eligible water users as part of the 500+ Plan

• We are continuing to work with the United States, the other Lower Basin States, and Arizona water users to build on participation in the 500+ Plan

Looking Ahead

• There is no imminent threat to water at the tap inside your home and business

• Near-term implementation of water providers’ drought plans can provide benefits

• Outdoor water use will likely be the first to be impacted

• Post-2026 firming by the Arizona Water Banking Authority will not fully offset impacts to water suppliers

• Coordination and communication is important between water suppliers and water users

• Additional voluntary conservation is necessary and may delay larger mandatory shortages

• Tier 3 reductions will force difficult decisions

To submit questions, visit:  www.cap-az.com/meetings/briefings-roundtables
Drought Management Plan

• Adopted in 2021 with 5 stages
  Stage 0 – Water Shortage Preparation
  Stage 1 – Supply reduction up to 6 mgd (Tier 1 &2a)
  Stage 2 – Supply reduction up to 13 mgd (Tier 2b)
  Stage 3 – Supply reduction up to 24 mgd (Tier 3)
  Stage 4 – Supply reduction greater than 24 mgd (Tier 4/Protect)

Drought Management Plan

• Plan activated at Stage 1 on August 17, 2021
• City Drought Management Team meets and pledges a 5% reduction for calendar year 2022
• Communications plan activated
• 5% reduction in water use asked of all customers
Results

Water shortage prompts Scottsdale to reduce usage

Why don’t Arizona cities request residents to conserve water? Simple, really

Scottsdale asking residents to cut water use amid Colorado River water shortage: here’s what you need to know

Next Steps

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<tr>
<td><strong>CAP/ADWR Briefing</strong></td>
<td><strong>CAP Annual Operating Plan Development</strong></td>
<td><strong>ADWR and CAP Individual and Group Stakeholder Engagement</strong></td>
<td><strong>CAP Water Users Shortage Briefing: June 24</strong></td>
<td><strong>CAP Annual Water Users Briefing: August 24</strong></td>
<td><strong>CAP Water Orders Due: October 1</strong></td>
<td><strong>Mitigation Parties Coordination Meetings</strong></td>
<td><strong>2023 Implementation &amp; Prep for 2024</strong></td>
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CY 2023 Lower Basin Shortage Determination

Start of WY 2023

Upper Basin 2023-24 DROA Plan

ADWR and CAP Individual and Group Stakeholder Engagement

2023 Implementation & Prep for 2024

Engagement

Coordination

Basin States consultation with DOI on Lake Powell release plan for remainder of WY 2023

To submit questions, visit: www.cap-az.com/meetings/briefings-roundtables

*Dates subject to change
Questions

Submit questions or comments using the electronic public comment form at:

[www.cap-az.com/meetings/briefings-roundtables]

Closing Remarks

For additional information and updates, visit

ADWR: new.azwater.gov
CAP: www.cap-az.com
Reclamation: www.usbr.gov