Governor’s Drought Interagency Coordinating Group

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Colorado River Management
Arizona Department of Water Resources

May 8, 2019
TOTAL SYSTEM CONTENTS – 46% or 27.63 MAF

COLORADO RIVER SYSTEM
RESERVOIR STATUS
May 8, 2019

Lake Powell
39% 9.516 MAF
3,655 ft, WY 2019 Equalization Level

Lake Mead
41% 10.73 MAF
1,088.52 ft
1,075 ft, First Tier Shortage

Reservoir Storage (MAF) - As of May 8, 2019

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Current</th>
<th>Storage Last Year</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Mead</td>
<td>10.730</td>
<td>10.301</td>
<td>26.120</td>
</tr>
<tr>
<td>Lake Powell</td>
<td>9.516</td>
<td>12.670</td>
<td>24.322</td>
</tr>
<tr>
<td>Fontenelle</td>
<td>0.142</td>
<td>0.142</td>
<td>0.345</td>
</tr>
<tr>
<td>Flaming Gorge</td>
<td>3.310</td>
<td>3.200</td>
<td>3.749</td>
</tr>
<tr>
<td>Blue Mesa</td>
<td>0.371</td>
<td>0.492.2</td>
<td>0.830</td>
</tr>
<tr>
<td>Morrow Point</td>
<td>0.115</td>
<td>0.113</td>
<td>0.117</td>
</tr>
<tr>
<td>Navajo</td>
<td>1.160</td>
<td>1.220</td>
<td>1.696</td>
</tr>
</tbody>
</table>

Data Source: United States Bureau of Reclamation
# Lake Powell and Lake Mead Projected Elevations and Storages

(Projected Figures from Reclamation's April 2019 24-Month Study)

<table>
<thead>
<tr>
<th></th>
<th>Lake Powell Elevation (Feet above MSL)</th>
<th>Lake Powell Storage (1,000s AF) (^1)</th>
<th>Lake Mead Elevation (Feet above MSL) (^2)</th>
<th>Lake Mead Storage (1,000s AF) (^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current - May 8, 2019</td>
<td>3,574.98</td>
<td>9,516 (39% full)</td>
<td>1,088.52</td>
<td>10,730 (41% full)</td>
</tr>
<tr>
<td>Projected January 1, 2020</td>
<td>3,607.49</td>
<td>12,479 (43% full)</td>
<td>1,084.27</td>
<td>10,368 (39% full)</td>
</tr>
<tr>
<td>Projected January 1, 2021</td>
<td>3,619.38</td>
<td>13,698 (56% full)</td>
<td>1,079.55</td>
<td>9,974 (38% full)</td>
</tr>
</tbody>
</table>

\(^1\) Lake Powell's maximum capacity is 24.32 MAF.

\(^2\) Lake Mead Jan. 1 elevation from Aug. 24-Mo Study to determine first tier of shortage ≤ 1,075 ft.

\(^3\) Lake Mead's maximum capacity is 26.12 MAF.
CBRFC Unregulated Inflow Forecast
dated April 16, 2019

2019 April-July Inflow Forecast

<table>
<thead>
<tr>
<th>Month/Period</th>
<th>Inflow (kaf)</th>
<th>Percent of Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 2019 (Observed)</td>
<td>624</td>
<td>94</td>
</tr>
<tr>
<td>Apr 2019</td>
<td>1300</td>
<td>123</td>
</tr>
<tr>
<td>May 2019</td>
<td>3,000</td>
<td>128</td>
</tr>
<tr>
<td>Jun 2019</td>
<td>3,600</td>
<td>135</td>
</tr>
<tr>
<td>2019 Apr-Jul</td>
<td>9,200</td>
<td>128</td>
</tr>
<tr>
<td>WY 2019</td>
<td>12,105</td>
<td>112</td>
</tr>
</tbody>
</table>

Flaming Gorge 102%
Blue Mesa 127%
Navajo 119%
Lake Powell 128%
COLORADO BASIN RIVER FORECAST CENTER
CURRENT SNOWPACK

Source: Colorado Basin River Forecast Center
Lake Mead End of Month Elevations
Projections from the April 2019 24-Month Study Inflow Scenarios

End of CY 2019
Projection: 1084.27 ft (39%)

End of CY 2020 Projection: 1079.55 ft (38% full)

Elevation (feet above msl)


- April 2019 Probable Maximum Inflow with a Lake Powell release of 9.00 maf in WY 2019 and 12.84 maf in WY 2020
- April 2019 Most Probable Inflow with a Lake Powell release of 9.00 maf in WY 2019 and WY 2020
- April 2019 Probable Minimum Inflow with a Lake Powell release of 9.00 maf in WY 2019 and 8.72 maf in WY 2020
- Historical Elevations
Potential Lake Powell Release Scenarios
Water Year 2019 Release Volume as a Function of Unregulated Inflow Volume based on April 2019 24-Month Study Conditions

Water Year 2019
Upper Elevation Balancing Tier
Initial Release 8.23 maf
April adjustment to Balancing

Apr Maximum Probable Inflow Scenario
WY Unreg Inflow = 15.26 maf (141%)
Powell Release = 9.0 maf

Apr 2019 Most Probable
WY Unreg Inflow = 12.11 maf (112%)
Powell Release = 9.0 maf

Apr Minimum Probable Inflow Scenario
WY Unreg Inflow = 9.68 maf (89%)
Powell Release = 9.0 maf

YTD Observed Unregulated Inflow
2.1 maf

Potential Glen Canyon Water Year Release Volume (maf)
# Probabilities of Lower Colorado River Basin Shortage

Based on Bureau of Reclamation CRSS Model Run – January 2019  
(values in percent)

<table>
<thead>
<tr>
<th>Probability of any level of shortage (Mead $\leq 1,075$ ft.)</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1^{st}$ level shortage (Mead $\leq 1,075$ and $\geq 1,050$ ft)</td>
<td>0</td>
<td>69</td>
<td>50</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>$2^{nd}$ level shortage (Mead $&lt;1,050$ and $\geq 1,025$ ft)</td>
<td>0</td>
<td>0</td>
<td>31</td>
<td>39</td>
<td>31</td>
</tr>
<tr>
<td>$3^{rd}$ level shortage (Mead $&lt;1,025$)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Bureau of Reclamation Results from January 2019 CRSS model run
Questions?

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