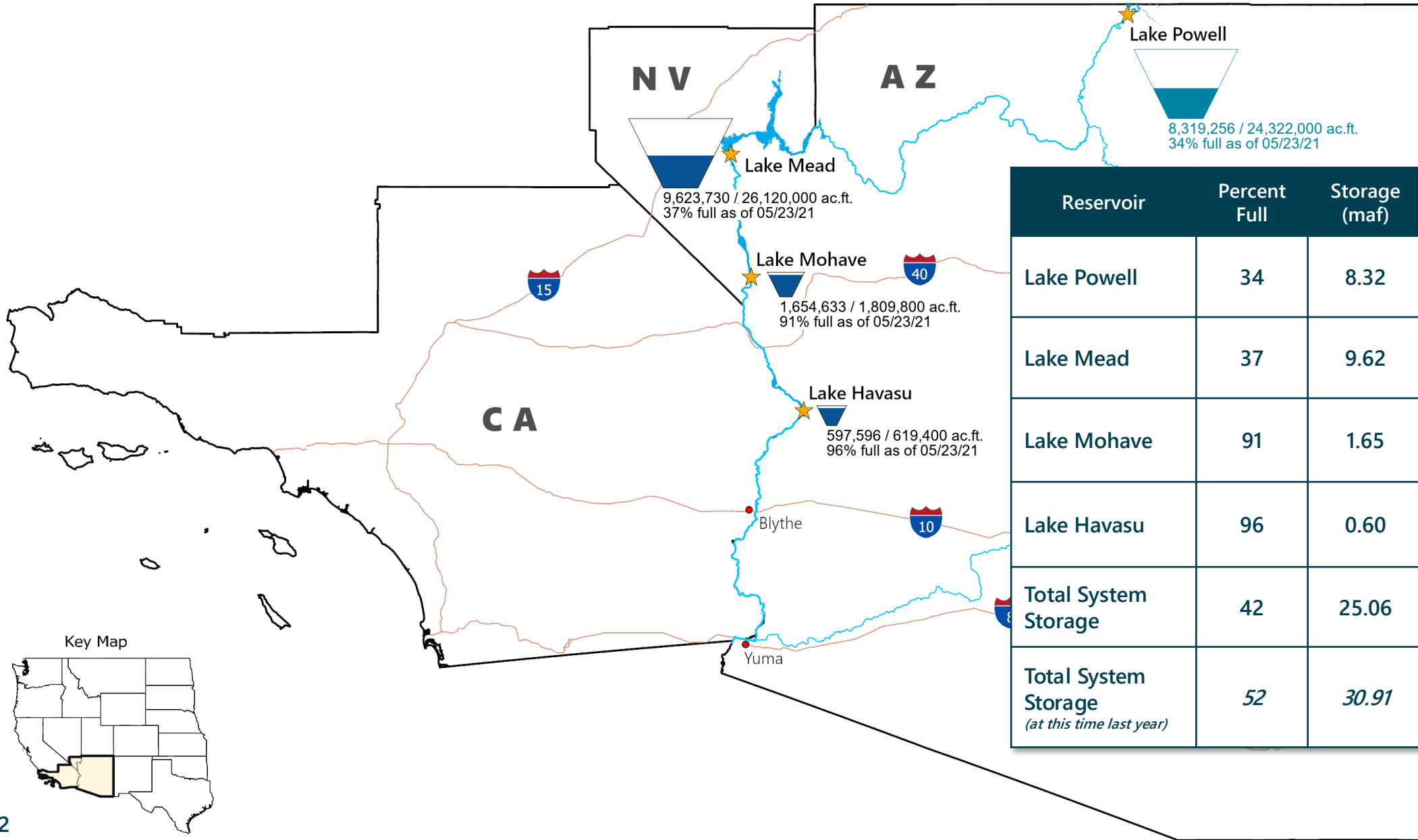


# Overview of the Colorado River Basin

- Operation is governed by the “Law of the River”
- 16.5 million acre-feet of water use allocated annually
- 60 million acre-feet of storage capacity
- 4,200 Megawatts of installed hydropower capacity
- 70% of all use is for agriculture
- 40% the water is exported outside of the Basin
- Aside from the pulse flow event, the river hasn't made it to the delta in decades



# Lower Colorado Basin System Conditions (as of May 23, 2021)



Reservoir	Percent Full	Storage (maf)	Elevation (feet)
Lake Powell	34	8.32	3,559.95
Lake Mead	37	9.62	1,075.28
Lake Mohave	91	1.65	641.38
Lake Havasu	96	0.60	448.91
<b>Total System Storage</b>	<b>42</b>	<b>25.06</b>	-
<b>Total System Storage <i>(at this time last year)</i></b>	<b>52</b>	<b>30.91</b>	-



# Colorado River Drought



Lake Mead near Hoover Dam in 2000

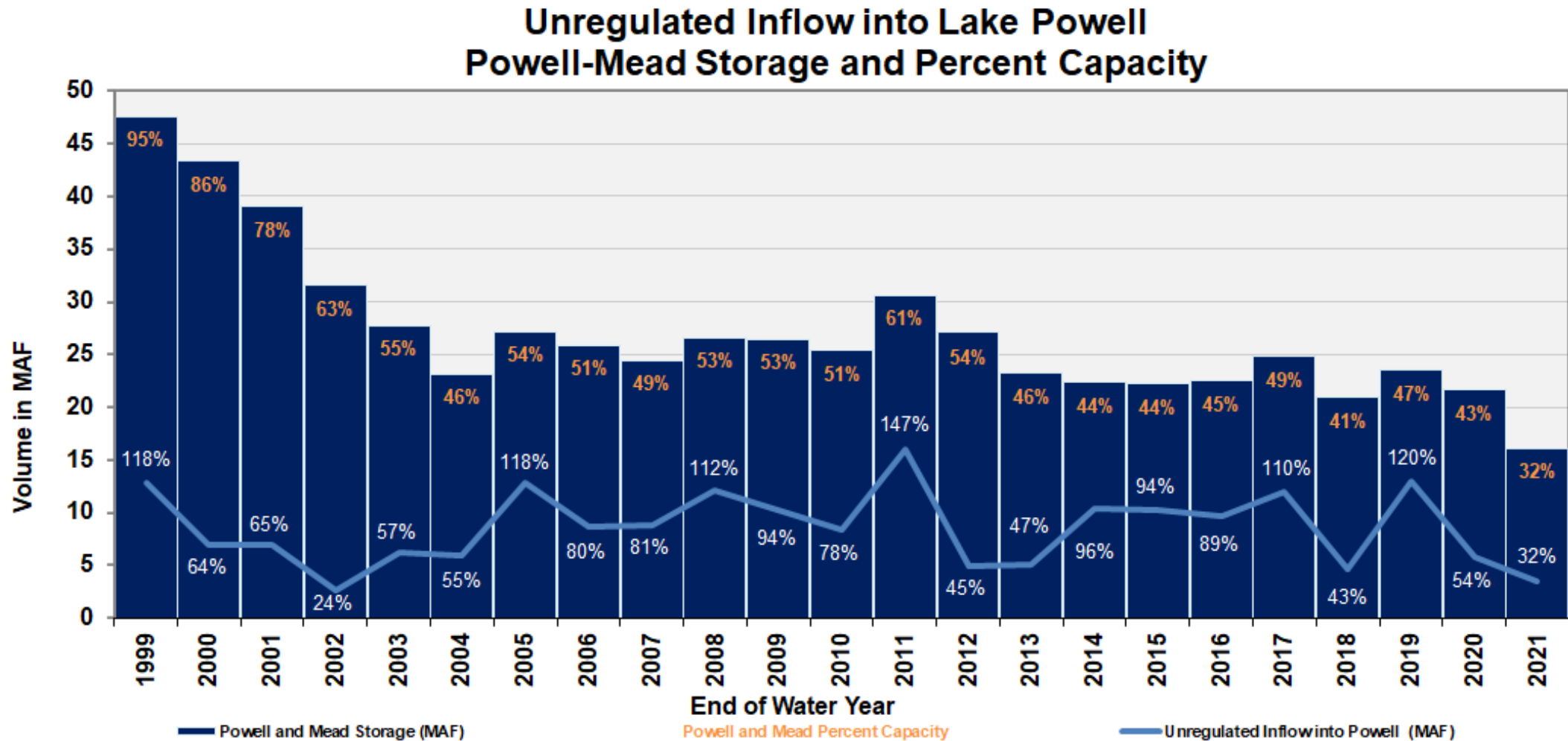


Lake Mead near Hoover Dam in 2016

- Driest 22-year period (2000–2021) on record
- Driest decade on record (2012–2021)
- Only five years of above-average inflow in the last 22 years
- Lake Powell's elevation has declined by about 140 feet since 2000
- Lake Mead's elevation has declined by about 130 feet since 2000



# State of the System (Water Years 1999-2021)<sup>1,2</sup>



<sup>1</sup> Values for Water Year 2021 are projected. Unregulated inflow is based on the latest CBRFC forecast dated May 17, 2021. Storage and percent capacity are based on the May 2021 24-Month Study.

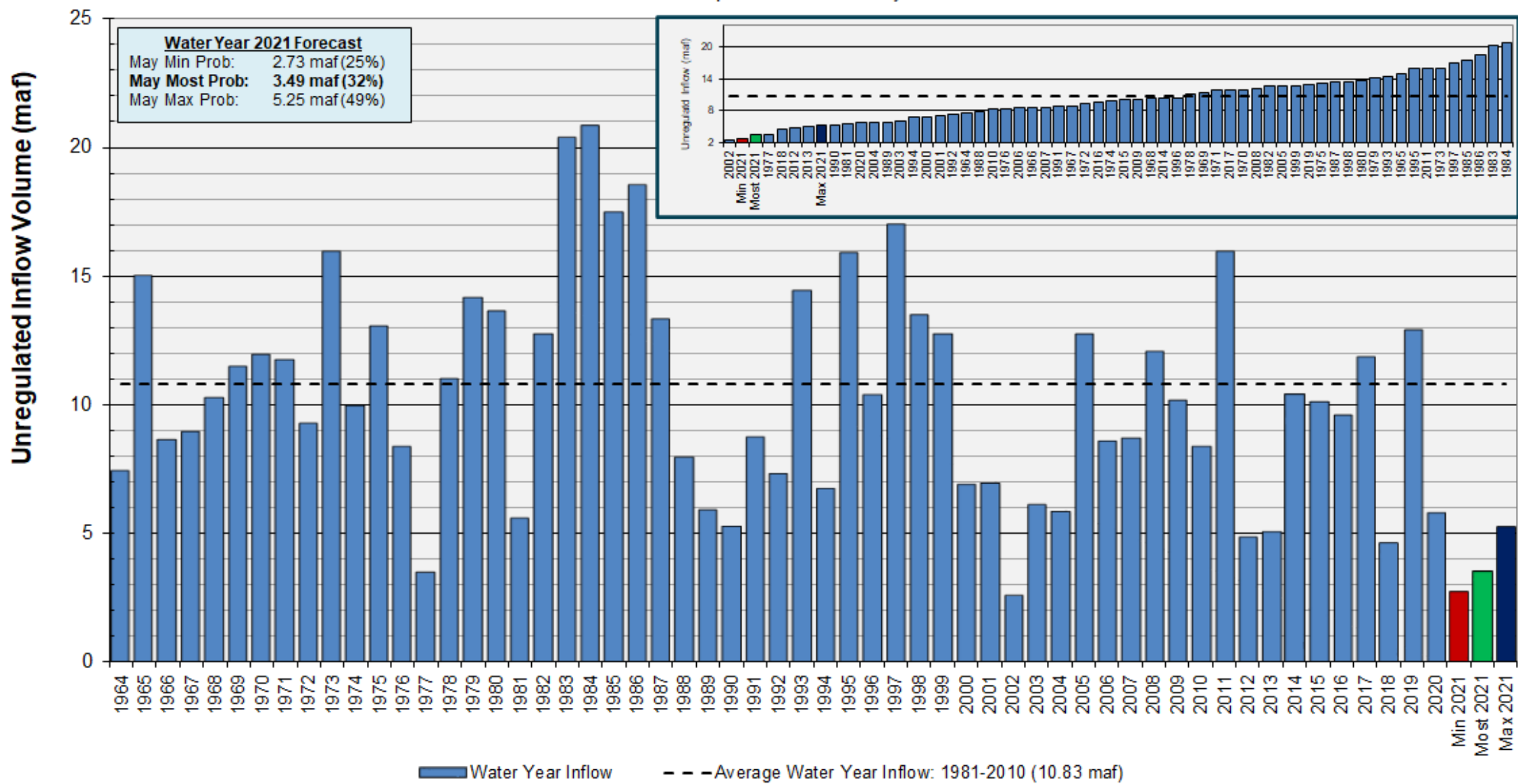
<sup>2</sup> Percentages on the light blue line represent percent of average unregulated inflow into Lake Powell for a given water year. The percent of average is based on the period of record from 1981-2010.



# Lake Powell Water Year Unregulated Inflow

Forecast as of May 17, 2021

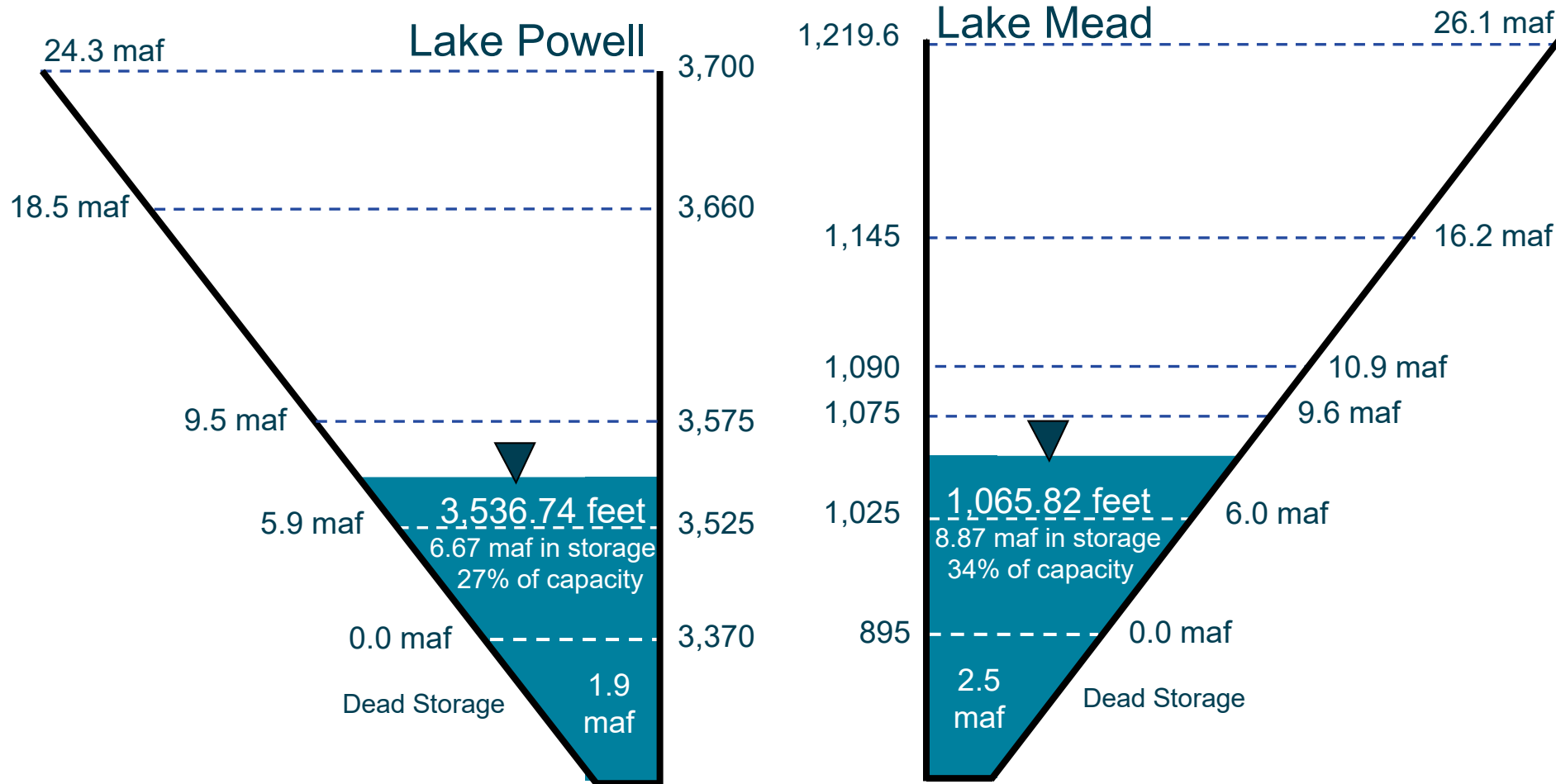
Comparison with History



# End of Calendar Year 2021 Projections

## May 2021 24-Month Study Most Probable Inflow Scenario<sup>1</sup>

Based on a Lake Powell release of 8.23 maf in WY 2021 and 7.48 maf in WY 2022



Not to Scale

<sup>1</sup> WY 2021 unregulated inflow into Lake Powell is based on the CBRFC forecast dated 5/4/21.



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

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country <i>US: (2007 Interim Guidelines Shortages + DCP Contributions)</i> <i>Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)</i>					Total Combined Volumes
	AZ	NV	Mexico	<b>Lower Basin States + Mexico</b>	AZ	NV	CA	Mexico	AZ Total	NV Total	CA Total	Lower Basin States Total	Mexico Total	<b>Lower Basin States + Mexico</b>
1,090 - 1,075	0	0	0	<b>0</b>	192	8	0	41	192	8	0	200	41	<b>241</b>
1,075 - 1050	320	13	50	<b>383</b>	192	8	0	30	512	21	0	533	80	<b>613</b>
1,050 - 1,045	400	17	70	<b>487</b>	192	8	0	34	592	25	0	617	104	<b>721</b>
1,045 - 1,040	400	17	70	<b>487</b>	240	10	200	76	640	27	200	867	146	<b>1,013</b>
1,040 - 1,035	400	17	70	<b>487</b>	240	10	250	84	640	27	250	917	154	<b>1,071</b>
1,035 - 1,030	400	17	70	<b>487</b>	240	10	300	92	640	27	300	967	162	<b>1,129</b>
1,030 - 1,025	400	17	70	<b>487</b>	240	10	350	101	640	27	350	1,017	171	<b>1,188</b>
<1,025	480	20	125	<b>625</b>	240	10	350	150	720	30	350	1,100	275	<b>1,375</b>

➔  
Projected 2022  
Reductions +  
Contributions

←  
Projected 2022  
Reductions +  
Contributions

The Secretary of the Interior will take affirmative actions to implement programs designed to create or conserve 100,000 acre-ft per annum or more of Colorado River System water 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 law, including availability of appropriations.



# Summary of 5-Year Projections: April 2021

Official projections now contain two sets of results with differing assumptions regarding future hydrology. These two sets are produced using the “Full” hydrology and “Stress Test” hydrology.

- **Full hydrology** resembles the long-term record (i.e. the last century), including the period of extended high precipitation during the early 1900s, with a mean flow of 14.8 maf/year at Lees Ferry.
- **Stress Test hydrology** resembles last ~30 years, approximately when Basin-wide temperatures started consistently being above the long-term average temperature, with a mean flow of 13.3 maf/year at Lees Ferry. It is 10% drier on average than the long-term record.

The future hydrology is uncertain and future reservoir conditions are highly sensitive to assumptions regarding future hydrology.

## Key Results

Event or System Condition	Full Hydrology					Stress Test Hydrology				
	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
Lake Powell										
Mid-Elevation Release Tier (Powell < 3,575 and ≥ 3,525 ft)	0%	91%	51%	31%	23%	0%	<b>91%</b>	65%	45%	35%
Below Minimum Power Pool (Powell < 3,490 ft)	0%	0%	1%	4%	6%	0%	0%	<1%	9%	<b>12%</b>
Lake Mead										
Shortage Condition – any amount (Mead ≤ 1,075 ft)	0%	<b>97%</b>	<b>94%</b>	<b>82%</b>	<b>77%</b>	0%	<b>97%</b>	<b>92%</b>	<b>91%</b>	<b>94%</b>
Shortage / Reduction – 3rd level (Mead < 1,025 ft)	0%	0%	0%	1%	11%	0%	0%	0%	<1%	<b>25%</b>

