

RECLAMATION

Managing Water in the West

The Colorado River: Current and Projected Future Conditions

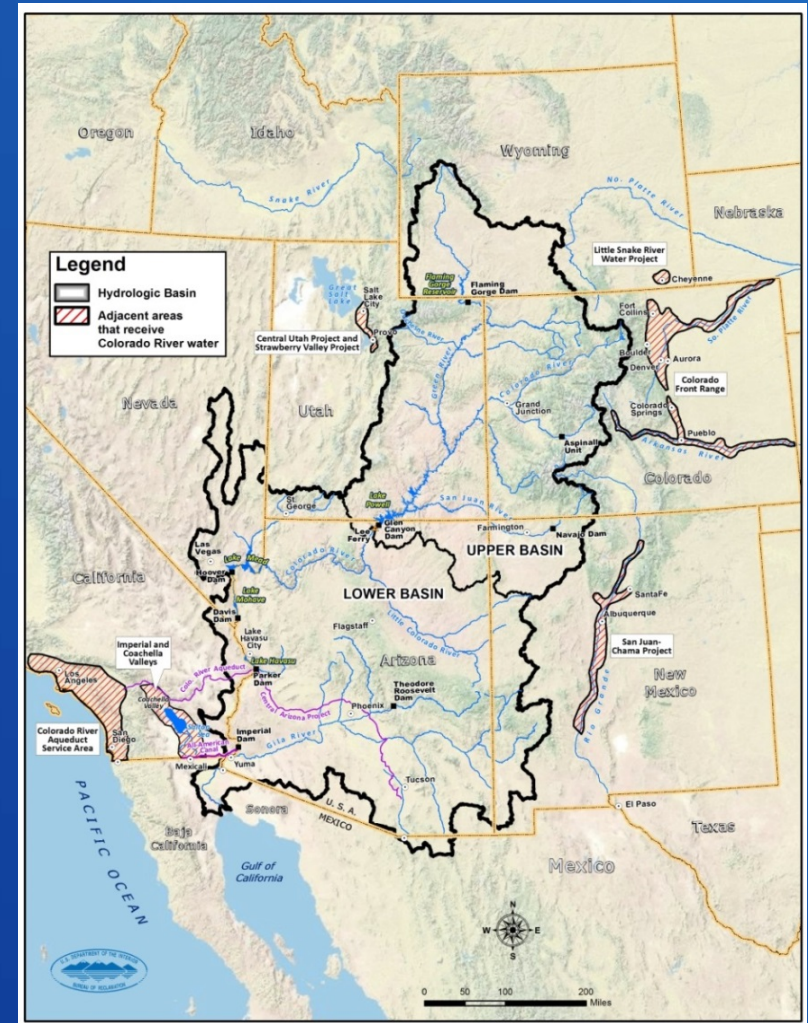
**Water Education Foundation
34th Annual Executive Briefing
March 23, 2017
Sacramento, CA**



U.S. Department of the Interior
Bureau of Reclamation

Overview of the Colorado River System

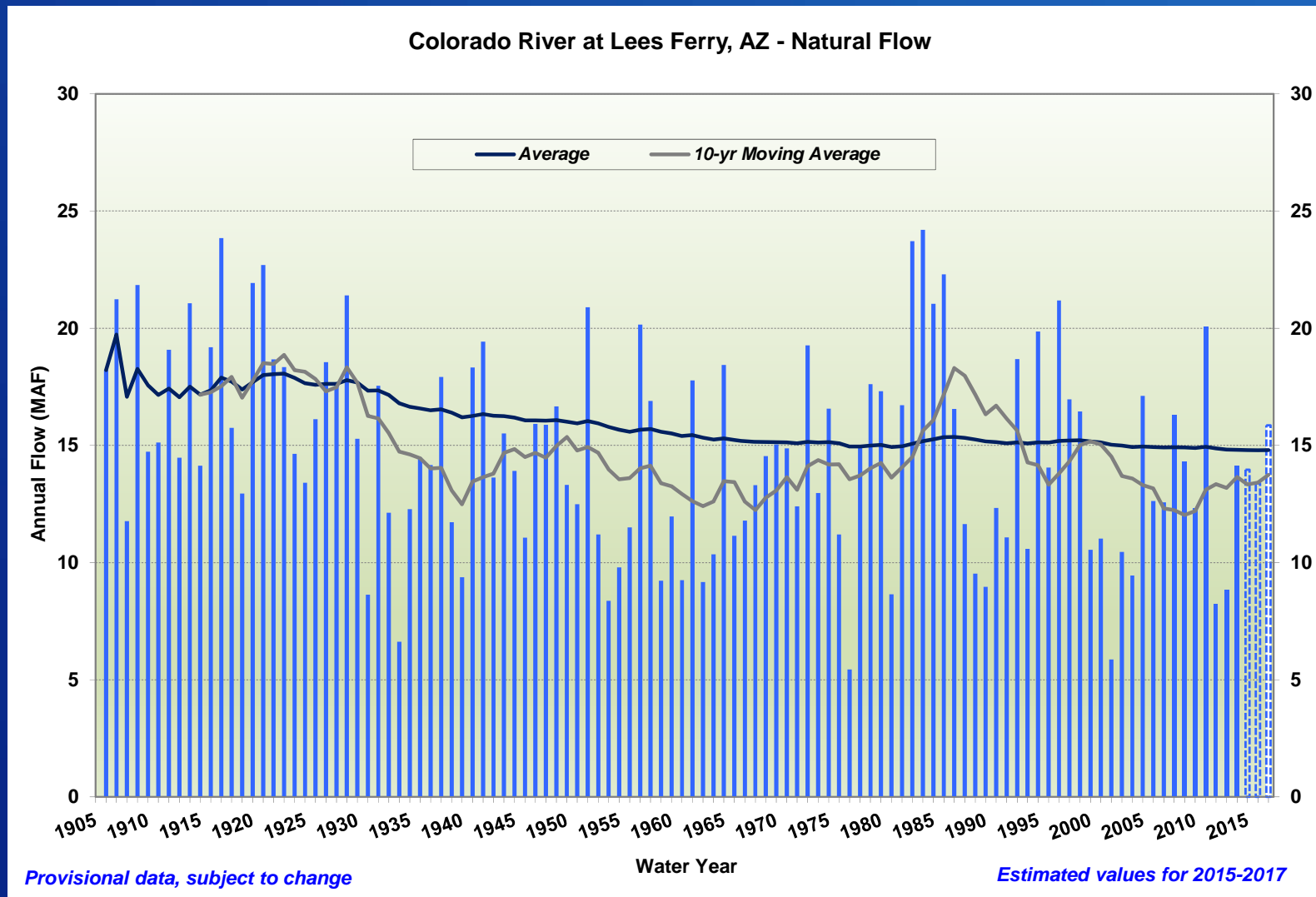
- 16.5 million acre-feet (maf) allocated annually
 - 7.5 maf each to Upper and Lower Basins
 - 1.5 maf to Mexico
- About 16 maf average annual “natural flow” (based on historical record)
 - 14.8 maf in the Upper Basin and 1.3 maf in the Lower Basin
- Inflows are highly variable from year-to-year
- 60 maf of storage (nearly 4-times the average annual inflow)
- Operations and water deliveries governed by the “Law of the River”



Natural Flow

Colorado River at Lees Ferry Gaging Station, Arizona

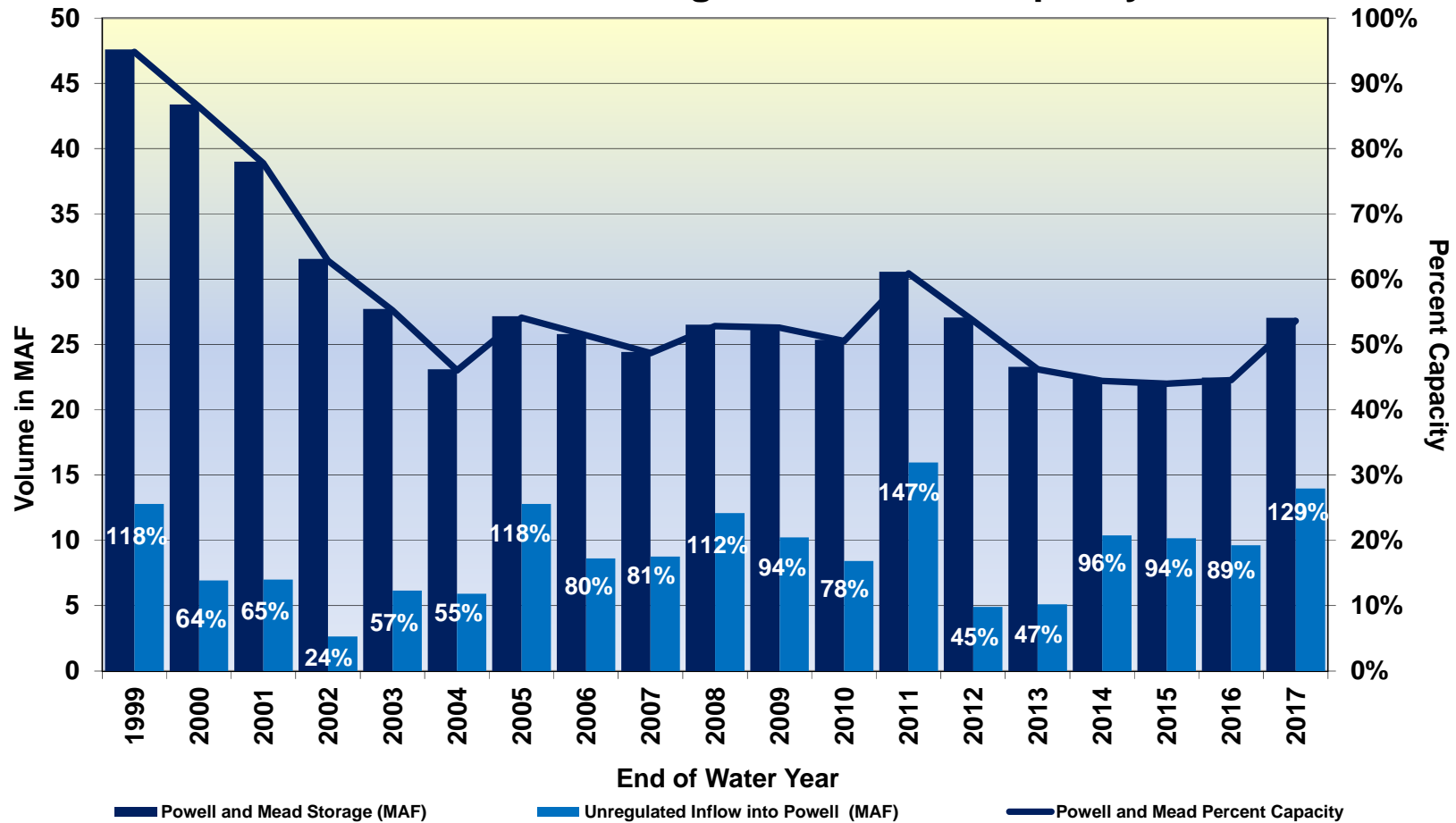
Water Year 1906 to 2017



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State of the System (Water Years 1999-2017)^{1,2}

Unregulated Inflow into Lake Powell Powell-Mead Storage and Percent Capacity



¹Values for Water Year 2017 are projected. Unregulated inflow is based on the latest CBRFC forecast dated March 15, 2017. Storage and percent capacity are based on the March 2017 24-Month Study.

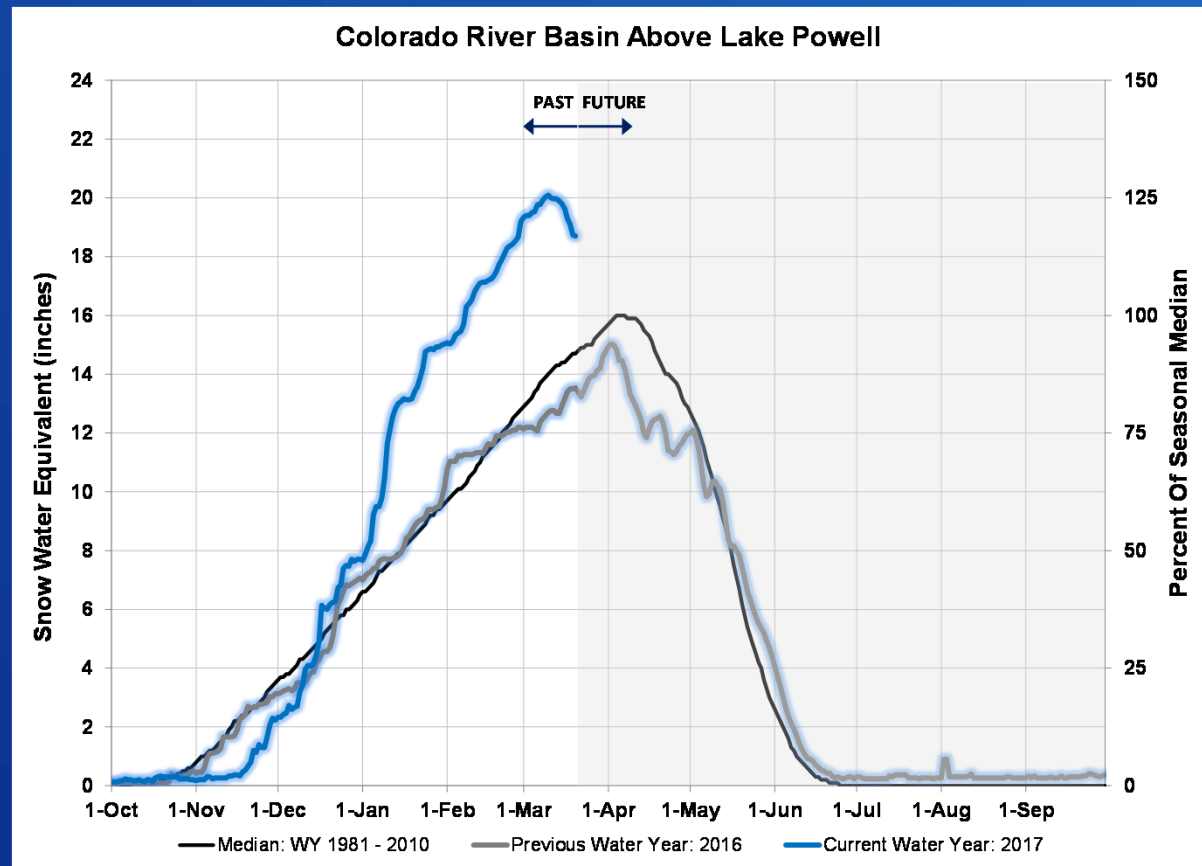
²Percentages at the top of the light blue bars represent percent of average unregulated inflow into Lake Powell for a given water year. The percent of average is based on the period of record from 1981-2010.

Water Year Snowpack and Precipitation as of March 20, 2017

Colorado River Basin above Lake Powell

Water Year 2017
Precipitation
(year-to-date)
123% of average

Current Snowpack
128% of median



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CBRFC Upper Colorado April-July Inflow Forecast dated March 15, 2017

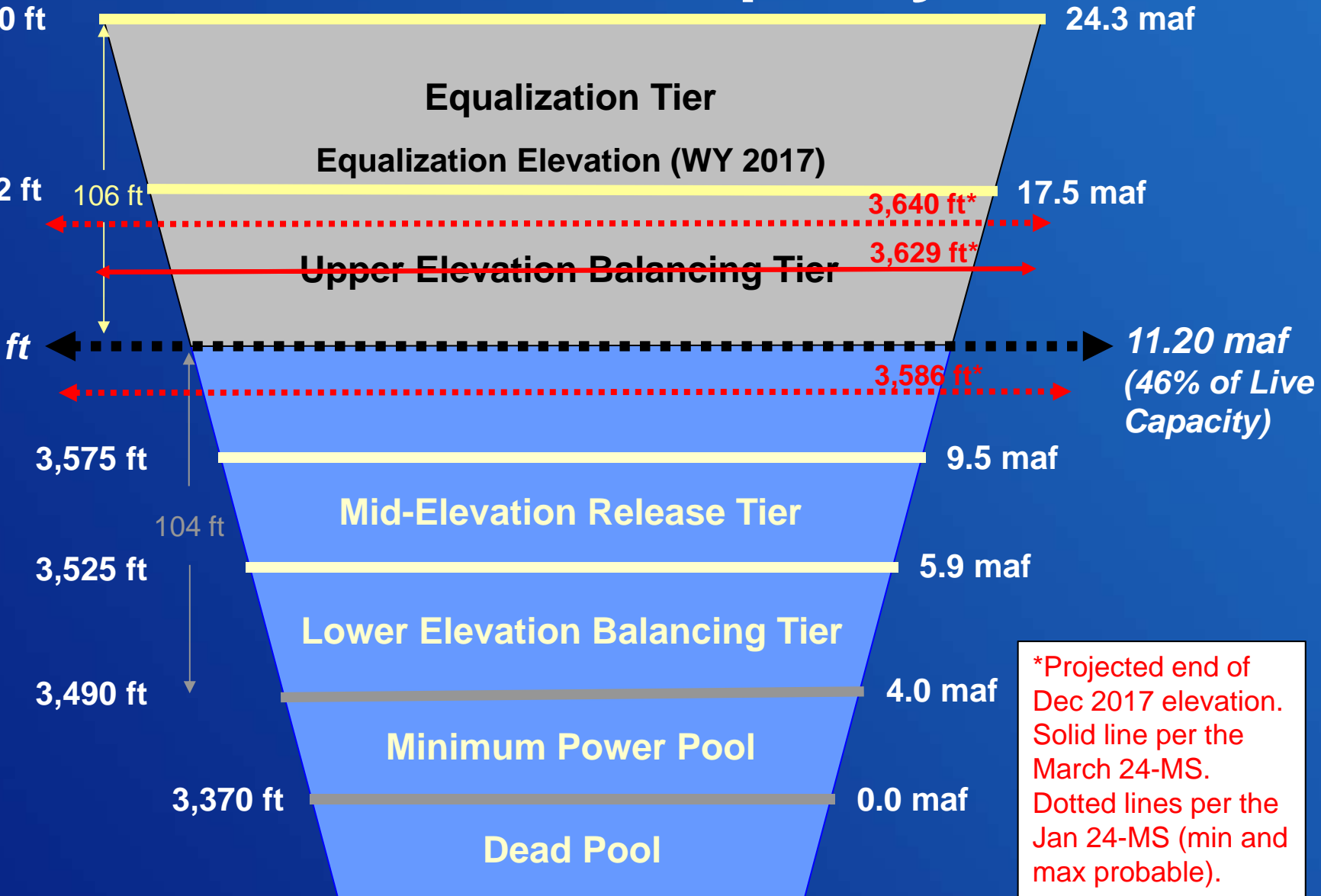


Reservoir	2017 April-July Inflow Forecast ¹ (percent of average)
Flaming Gorge	222
Blue Mesa	136
Navajo	103
Lake Powell	138

¹ Percent of average is based on the period of record from 1981-2010

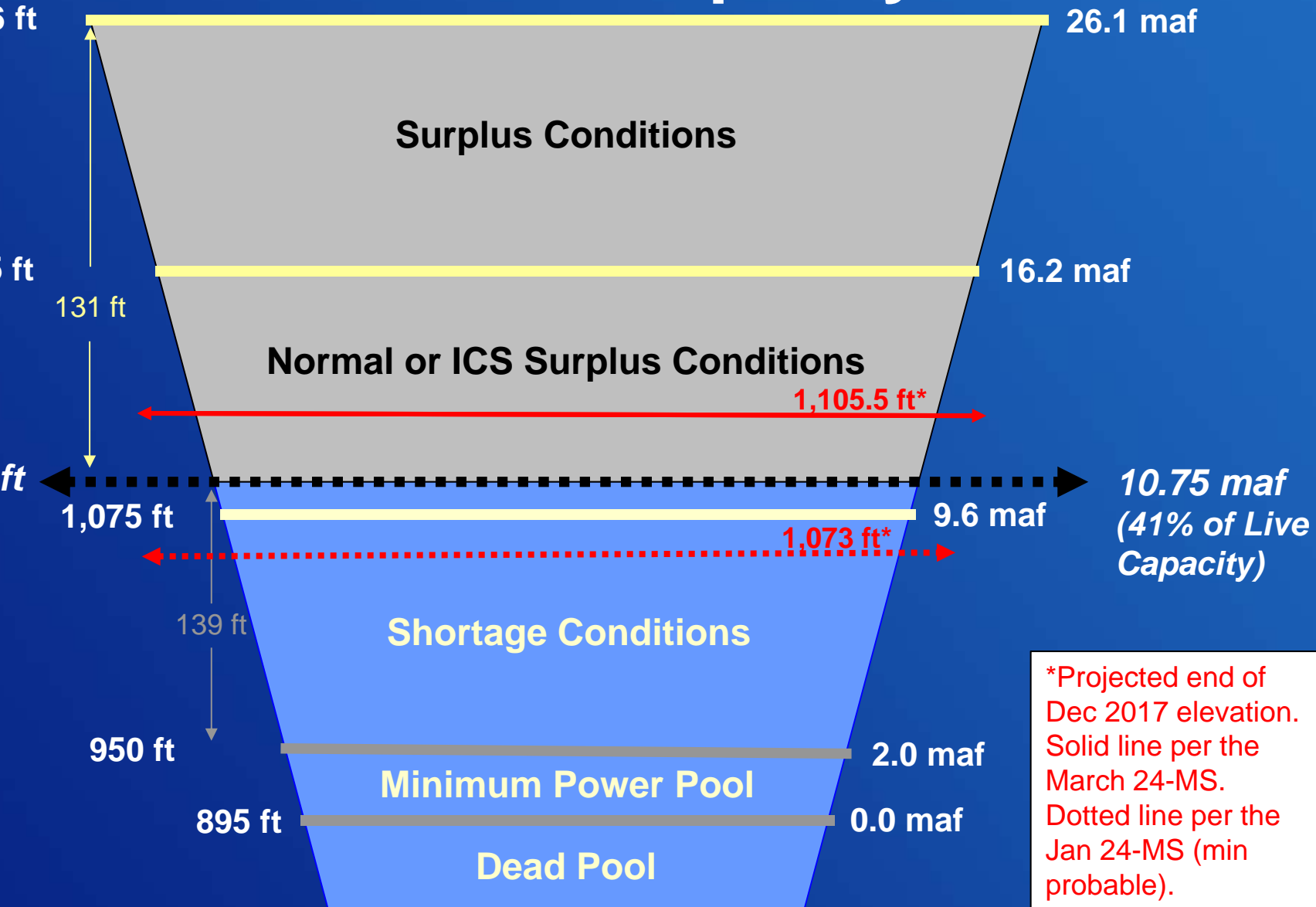
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Lake Powell Capacity



*Projected end of Dec 2017 elevation. Solid line per the March 24-MS. Dotted lines per the Jan 24-MS (min and max probable).

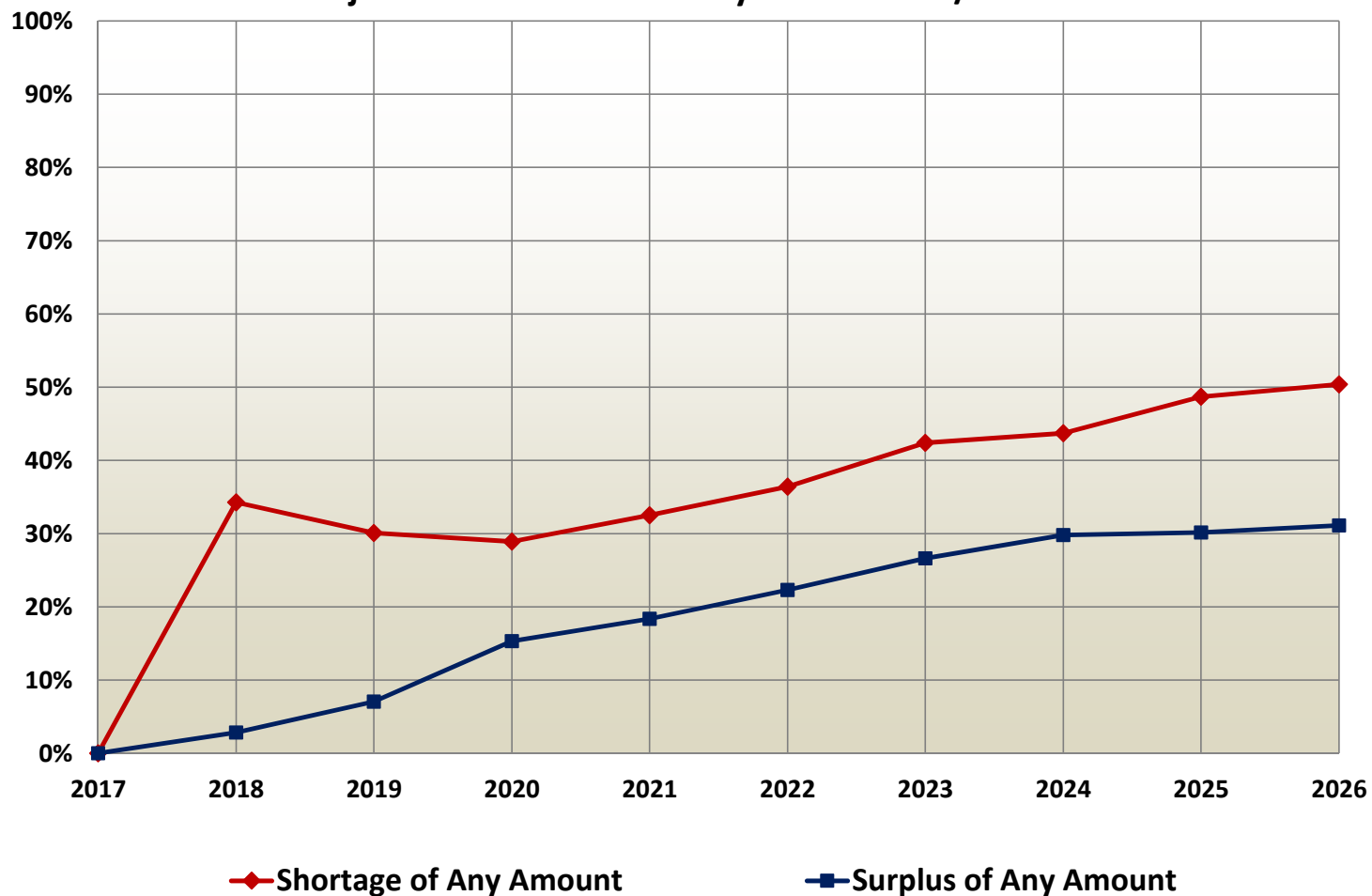
Lake Mead Capacity



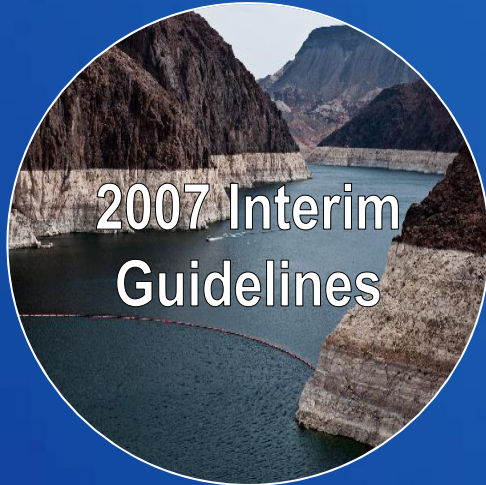
*Projected end of Dec 2017 elevation. Solid line per the March 24-MS. Dotted line per the Jan 24-MS (min probable).

Lower Basin Surplus & Shortage through 2026

Percent of Traces with Lower Basin Surplus or Shortage
Projections from the January 2017 MTOM/CRSS Run^{1,2,3}



Initial conditions based on results from 35 simulations of December 31, 2017 conditions using the Mid-term Probabilistic Operations Model. The 35 initial conditions were coupled with 107 hydrologic inflow sequences based on resampling of the observed natural flow record from

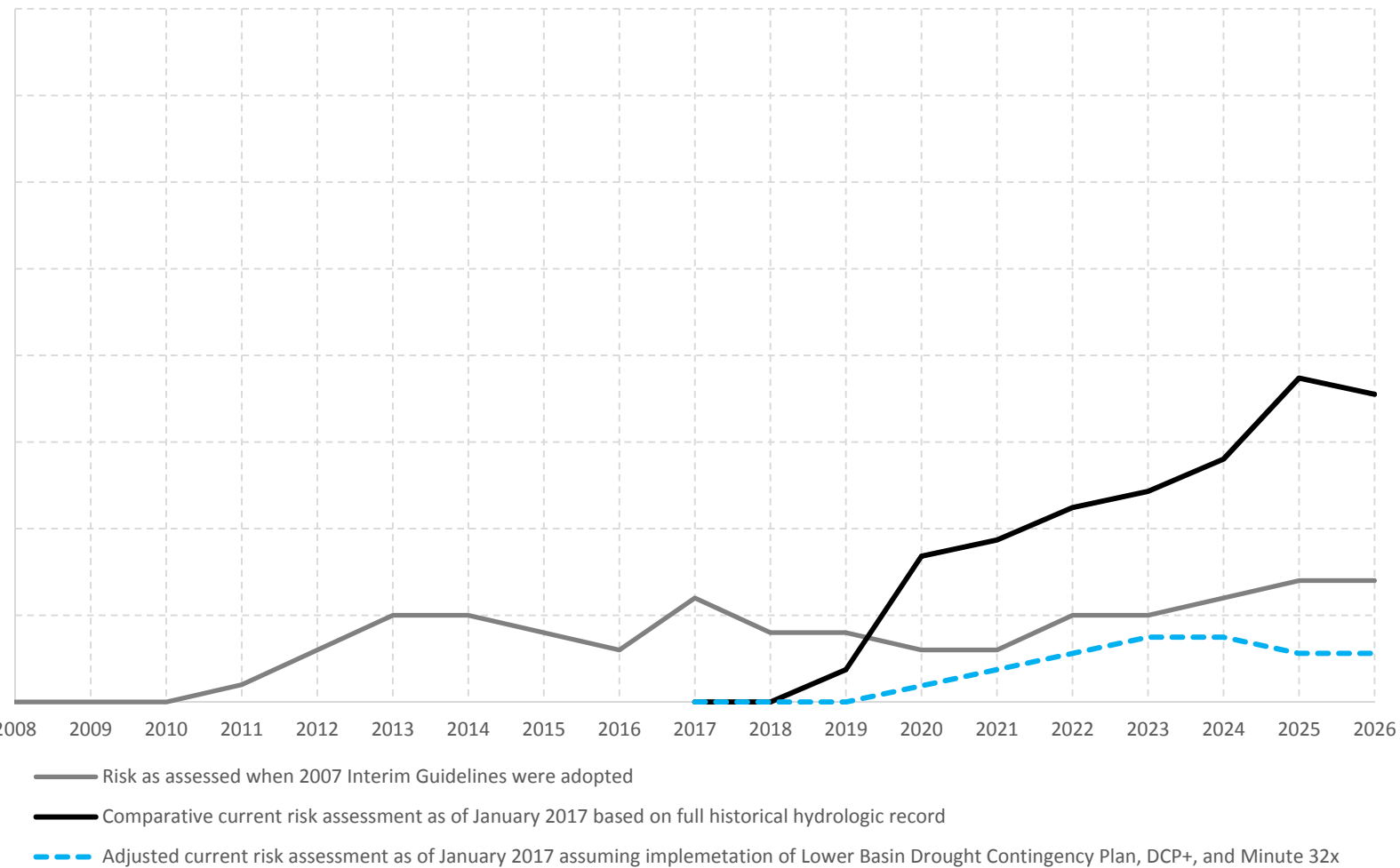


**Drought Response
Activities**



Risk of Lake Mead Reaching Critically Low Elevations With LB DCP, DCP+, and Minute 32x

Projected Probability of Lake Mead Elevation Less than 1,025' in December





Questions?