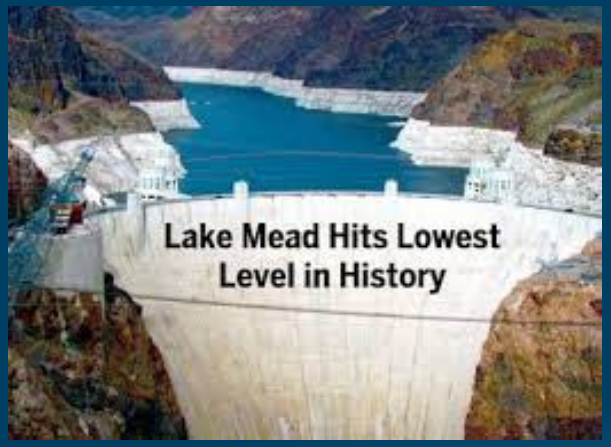
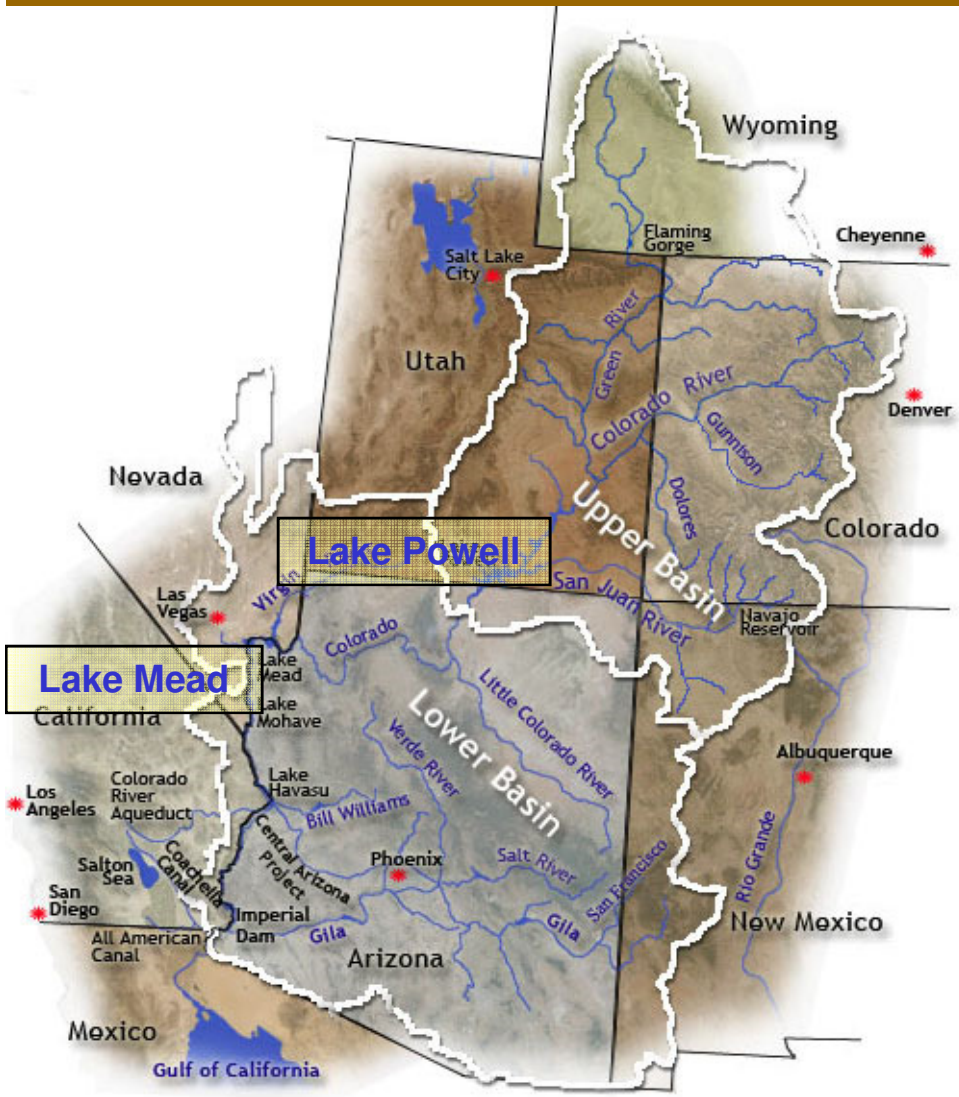
COLORADO RIVER BASIN UPDATE AND STATUS

September 2015



ARIZONA DEPARTMENT OF WATER RESOURCES
EST. 1980

Colorado River Basin
Current Conditions



As of September 8, 2015

Total Reservoir System Contents:

30.730 MAF or 52%

Total Reservoir System Contents Last Year: 30.145 MAF or 51%

This is a change of + 0.585 MAF

Final unregulated inflow to Lake Powell for April – July 2015 was

6.714 MAF or 94% of average

Forecasted water year 2015 inflow is 10.335 MAF or 95% of average

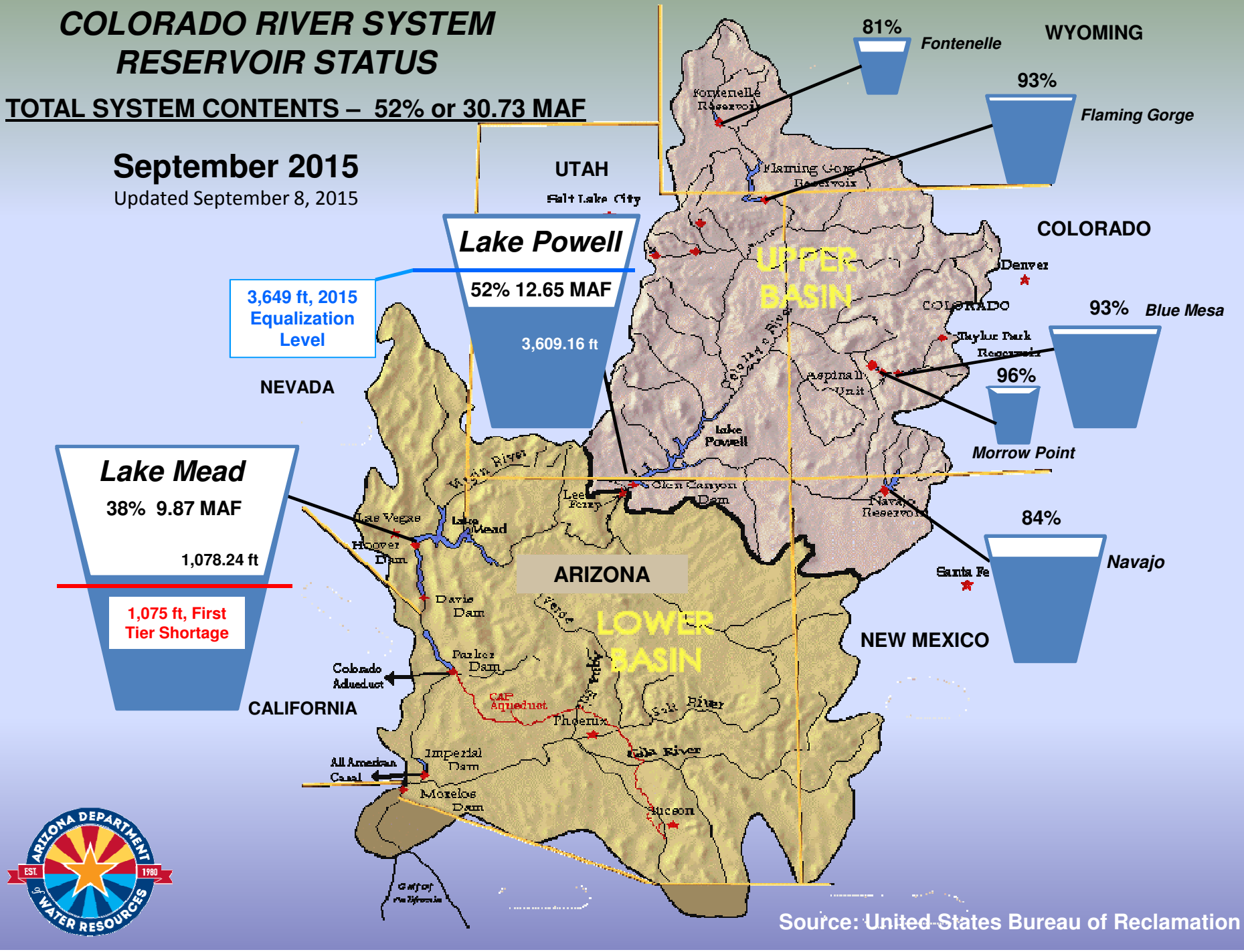
Source: United States Bureau of Reclamation

COLORADO RIVER SYSTEM RESERVOIR STATUS

TOTAL SYSTEM CONTENTS – 52% or 30.73 MAF

September 2015

Updated September 8, 2015



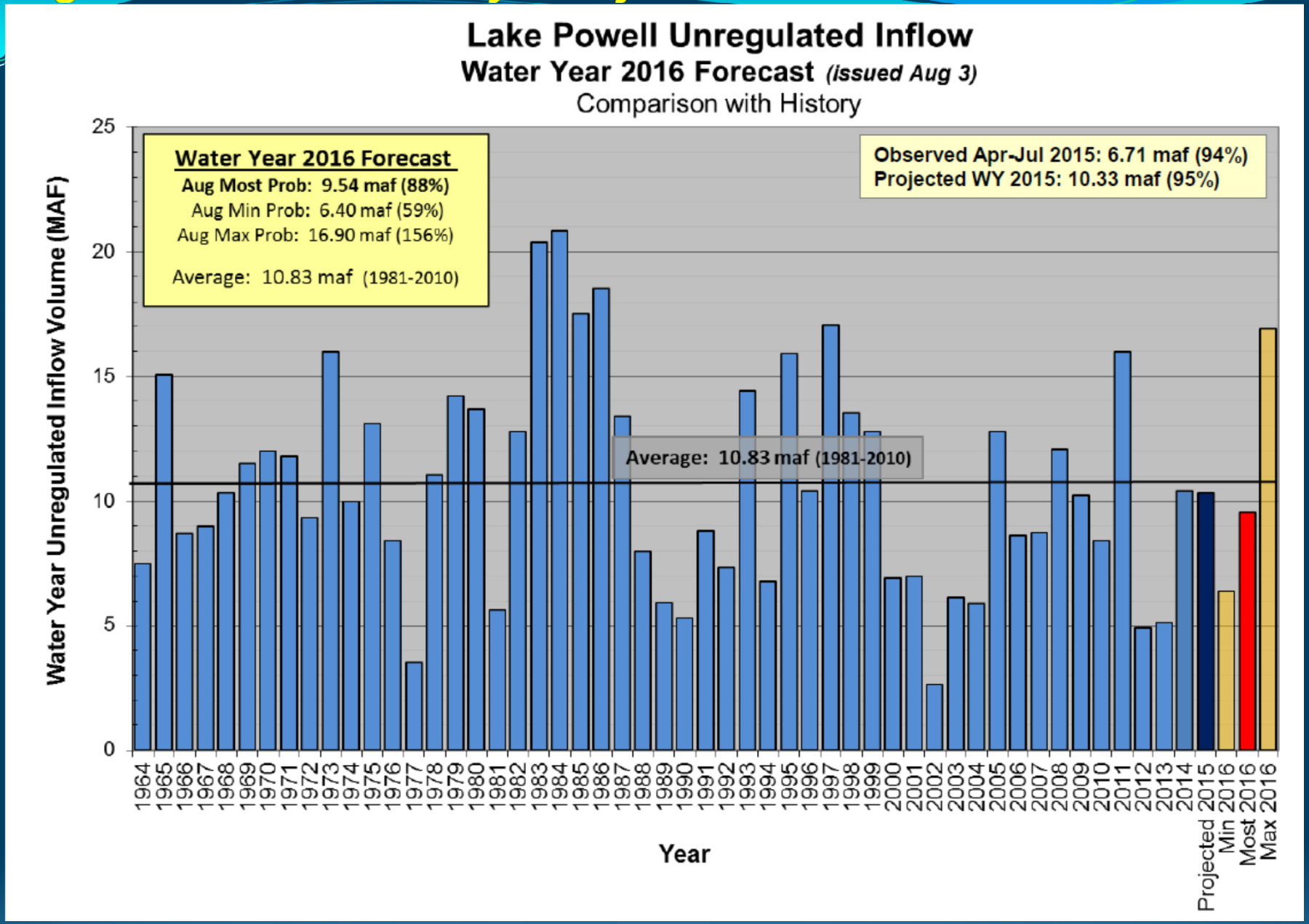
Source: United States Bureau of Reclamation

August 24-Month Study

Reclamation's August 24-Month Study projections of January 1 reservoir elevations in Lakes Powell and Mead determine the reservoir operations for the upcoming year (per the 2007 Interim Guidelines)

- **2015 August 24-month study is used**
- **Projects elevations for end-of-month December 2015**
- **Determines operational tiers for the volumes that will be released from Lake Powell and Lake Mead in 2016**

August 24-Month Study: Projected Lake Powell Inflows



Source: United States Bureau of Reclamation

August 24-Month Study Results

Operational Tiers for Water/Calendar Year 2016 determined with the August 2015 24-Month Study

Lake Powell

Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)[1]
3,700	**Equalization Tier** Equalize, avoid spills or release 8.23 maf	24.3
3,636 - 3,666 (2008-2026)	**Upper Elevation Balancing Tier**[2] Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	15.5 - 19.3 (2008-2026)
3,602.46 ft Jan 1, 2016 projection		
3,575	**Mid-Elevation Release Tier** Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf	9.5
3,525		5.9
3,490	**Lower Elevation Balancing Tier** Balance contents with a min/max release of 7.0 and 9.5 maf	4.0
3,370		0

Lake Mead

Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)[1]
1,220	**Flood Control Surplus or Quantified Surplus Condition** Deliver > 7.5 maf	25.9
1,200 (approx.)[2]	**Domestic Surplus or ICS Surplus Condition** Deliver > 7.5 maf	22.9 (approx.)[2]
1,145	**Normal or ICS Surplus Condition** Deliver ≥ 7.5 maf	15.9
1,105		11.9
1,082.33 ft Jan 1, 2016 projection		
1,075	**Shortage Condition** Deliver 7.167[4] maf	9.4
1,050	**Shortage Condition** Deliver 7.083[5] maf	7.5
1,025	**Shortage Condition** Deliver 7.0[6] maf Further measures may be undertaken[7]	5.8
1,000		4.3
895		0

Diagram not to scale

[1] Acronym for million acre-feet

[2] This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin and Lower Basin demands, and an assumed inflow.

[3] Subject to April adjustments which may result in a release according to the Equalization Tier

[4] Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada

[5] Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

[6] Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

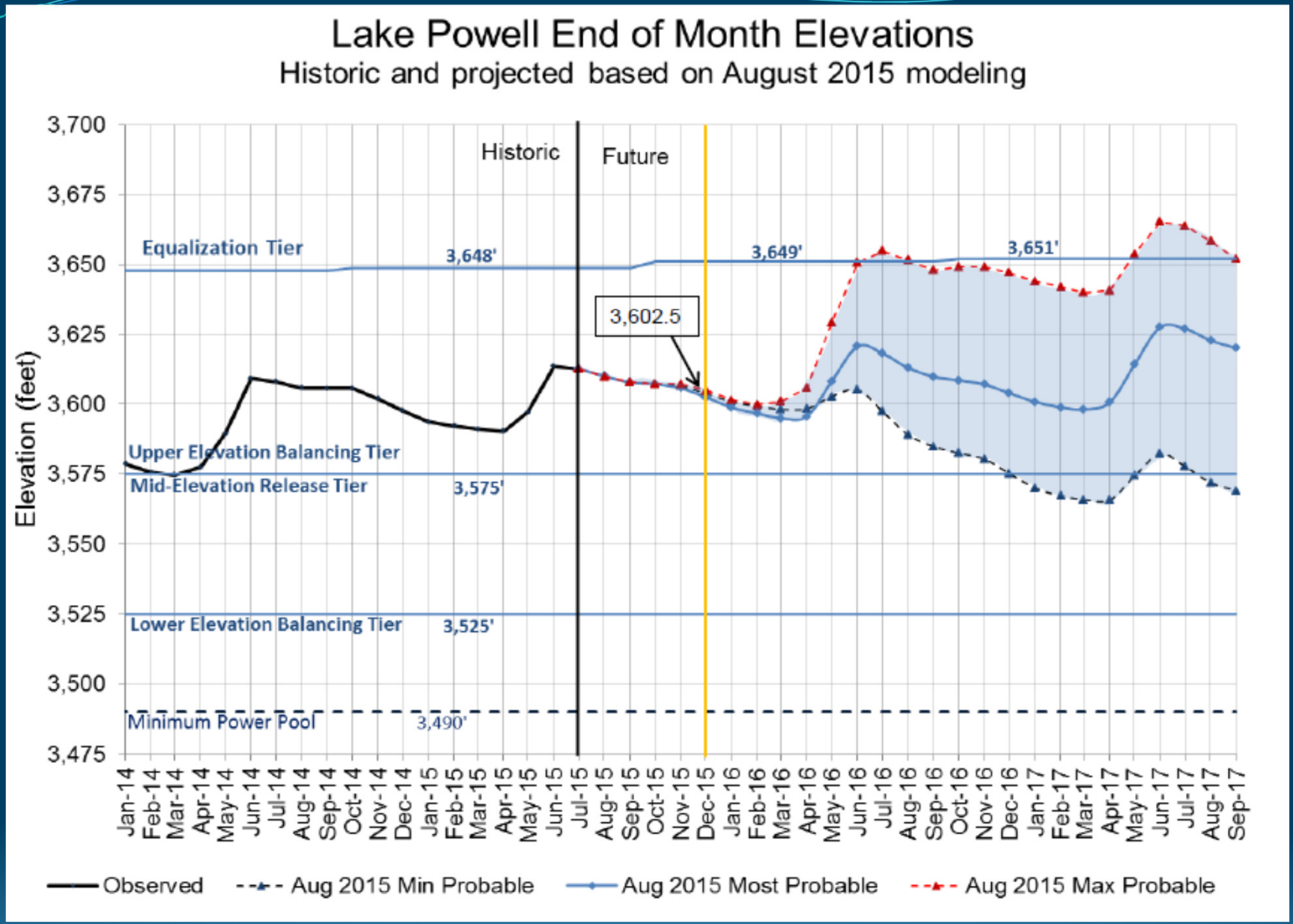
[7] Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico is likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

Source: United States Bureau of Reclamation

August 24-Month Study Results

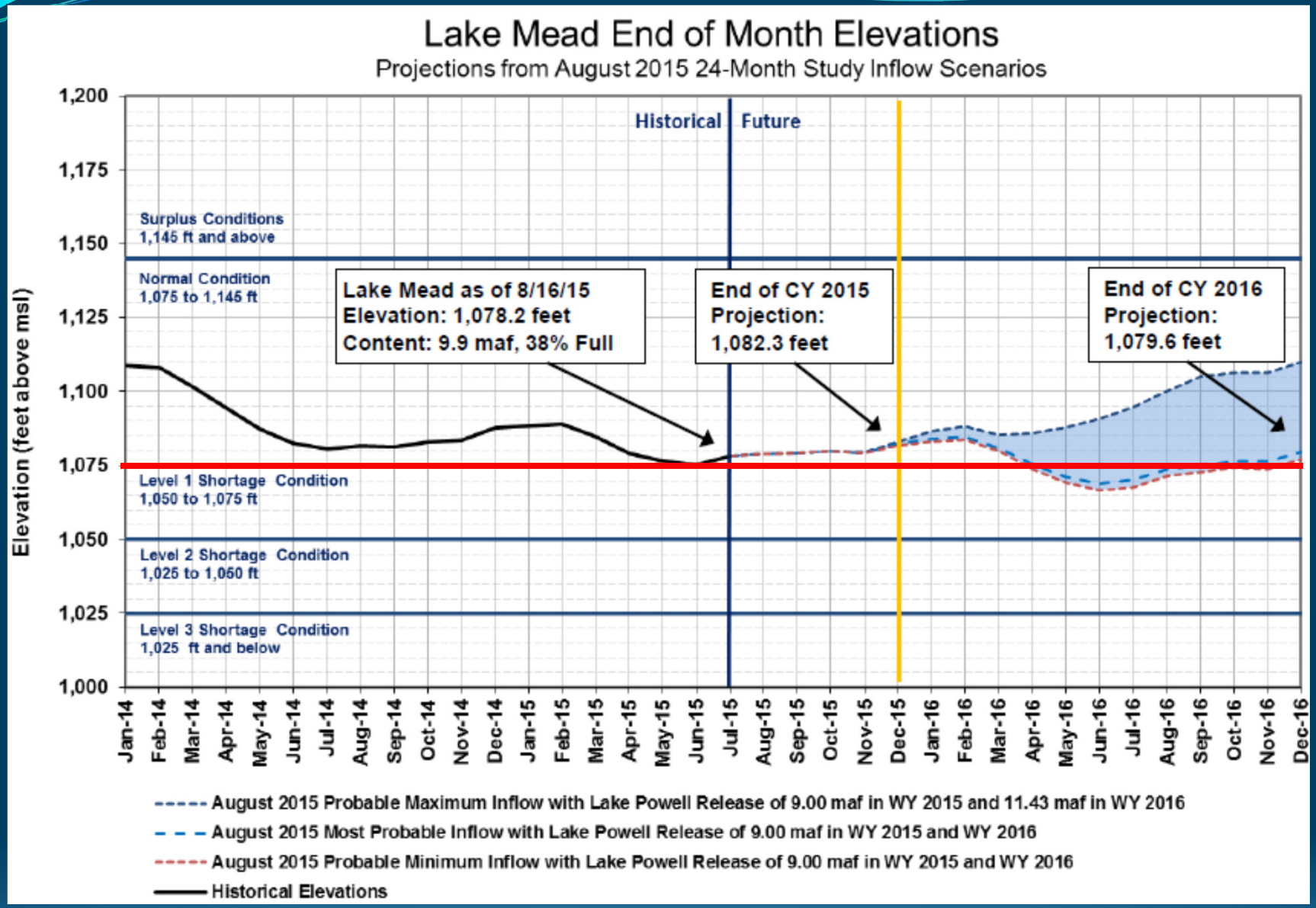
- The 24-Month Study also gives projections for the next 2 years
- The 2015 August 24-Month Study projects Lake Mead's elevation on January 1, 2017 to be 1,079.57 feet.
  - If this projection holds true for the next year, ***no shortage condition for 2017***
  - However, that is only a few feet above the shortage trigger elevation of 1,075 feet
  - Current modeling by Reclamation shows only a 18% probability of shortage in 2017 (down from 47% from Reclamation's June 2015 modeling)

August 24-Month Study: Projected Lake Powell Elevations



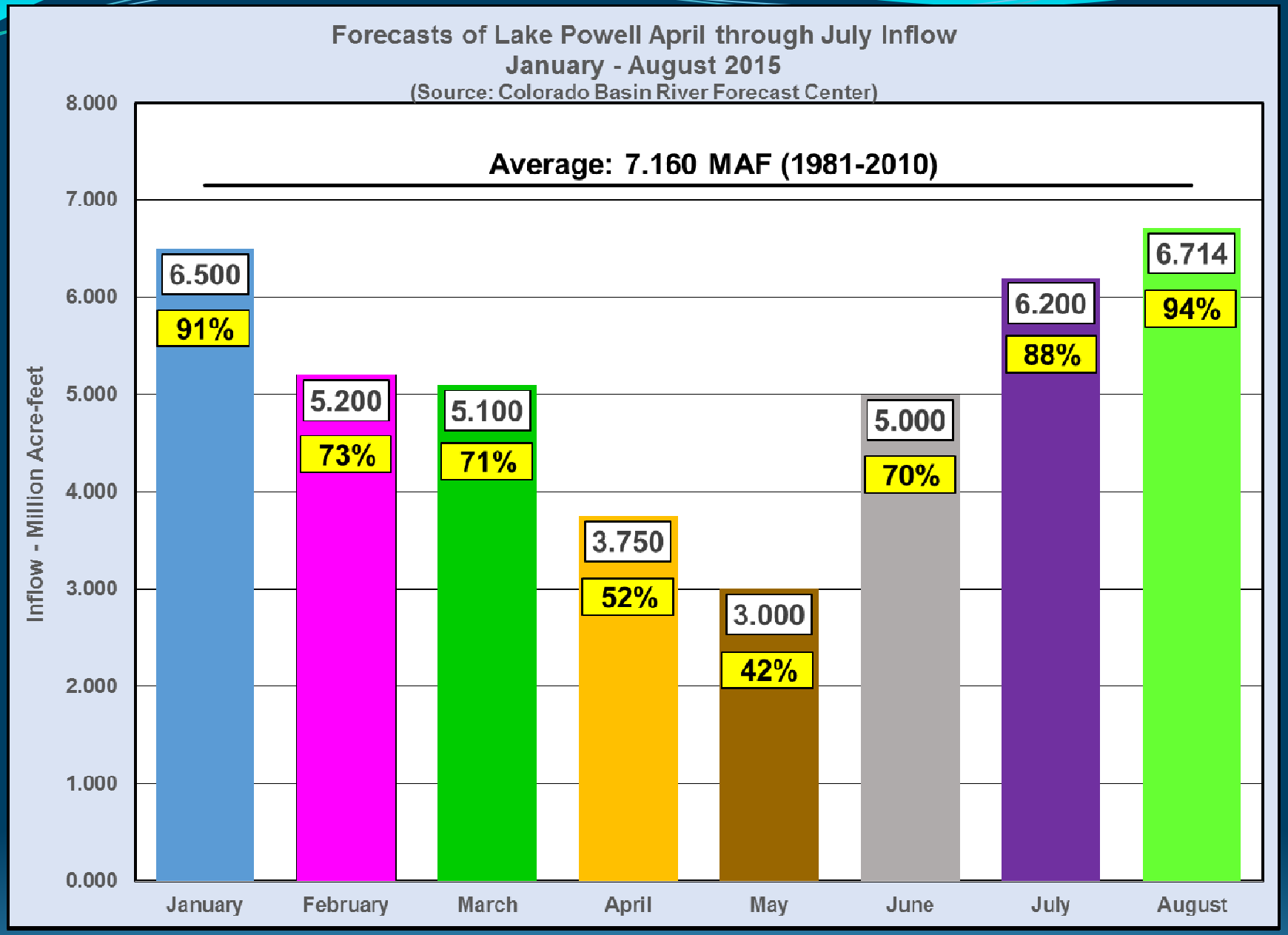
Source: United States Bureau of Reclamation

August 24-Month Study: Projected Lake Mead Elevations

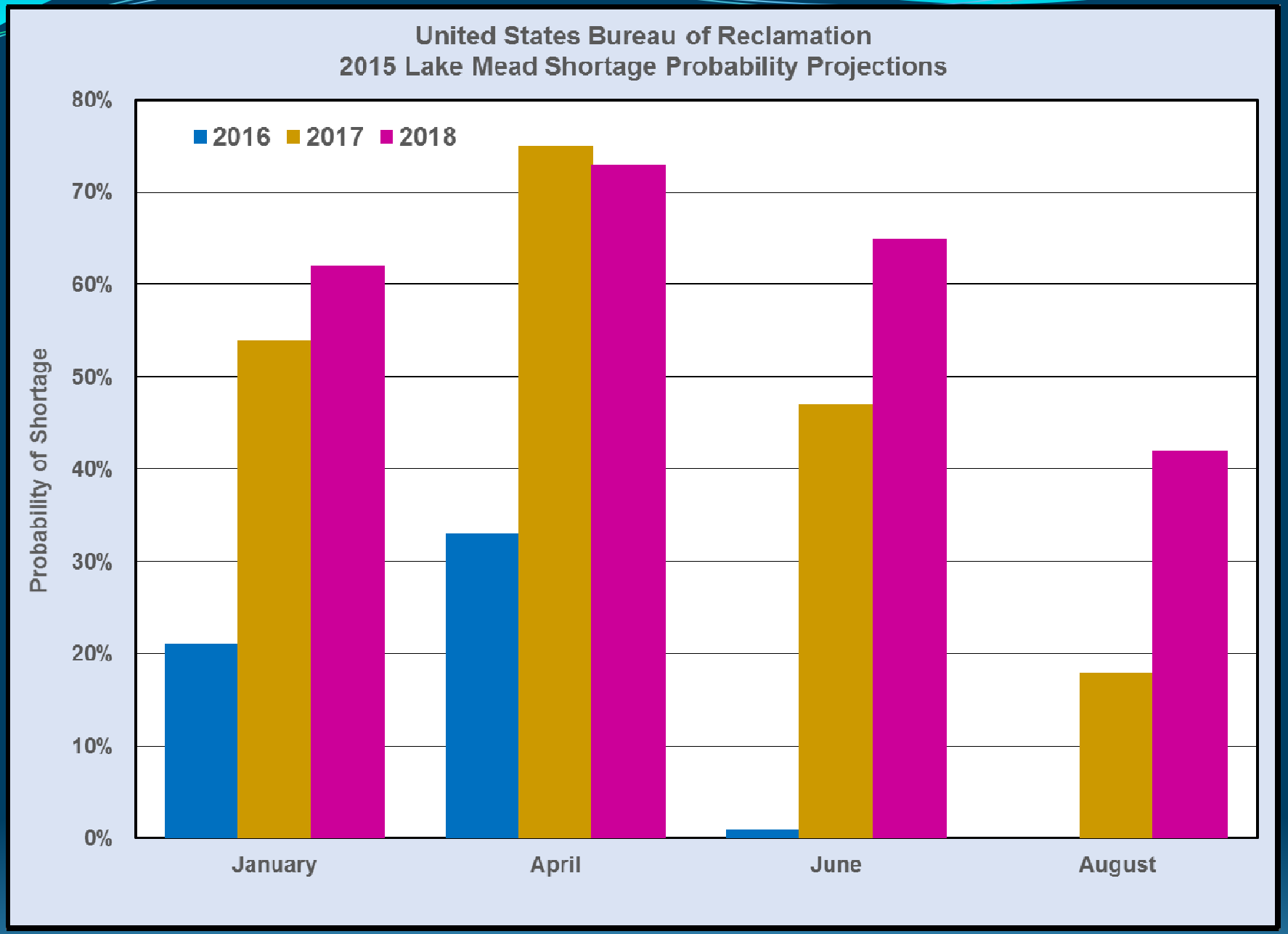


Source: United States Bureau of Reclamation

Lake Powell 2015 Inflow Forecasts



Lake Mead 2015 Shortage Projections



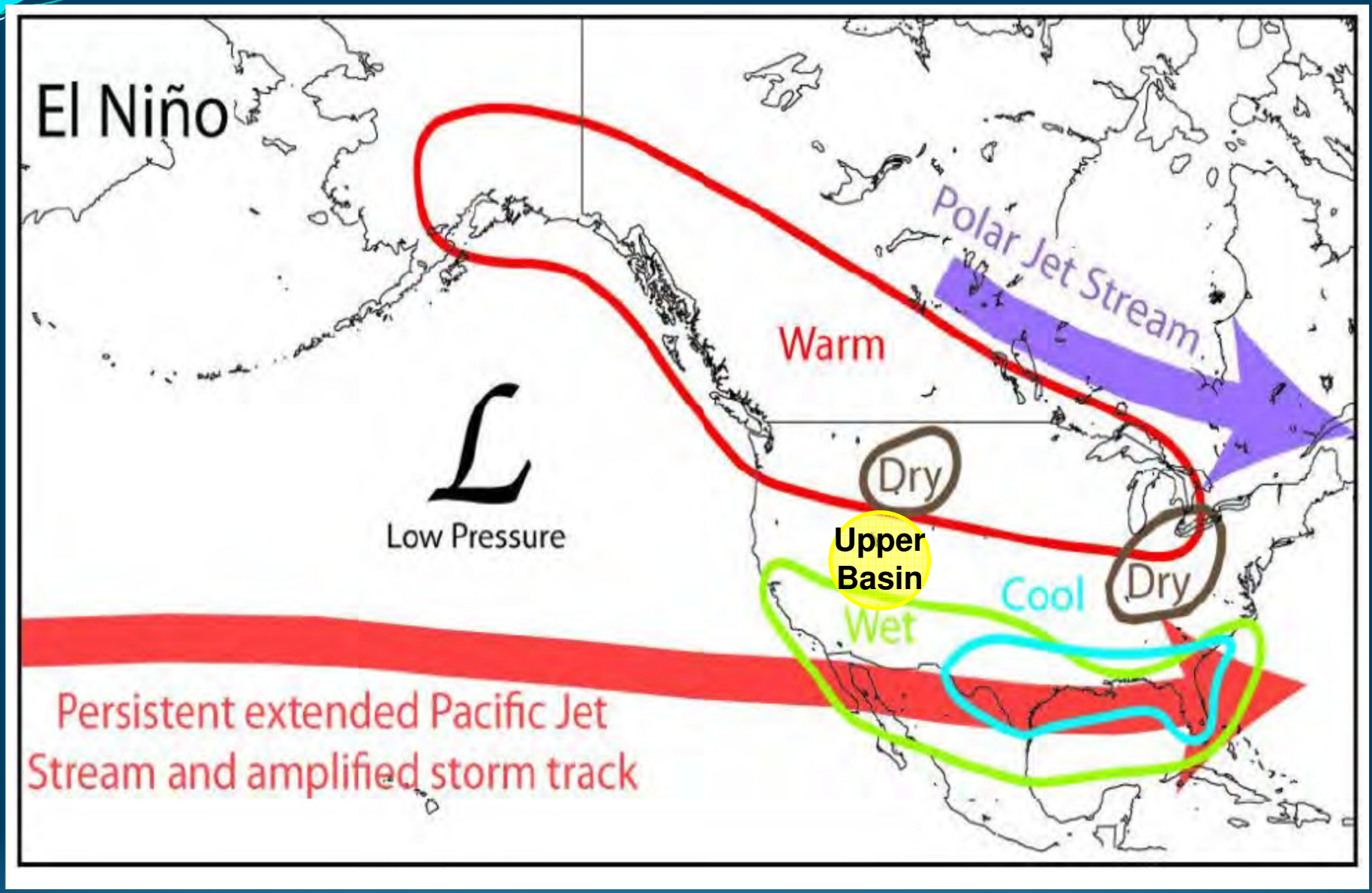
Probabilities of Shortage Based on United States Bureau of Reclamation CRSS Model Run – August 2015

	2016	2017	2018	2019	2020
Probability of any level of shortage (Mead ≤ 1,075 feet)	**0**	**18**	**52**	**65**	**59**
1st level shortage (Mead ≤ 1,075 and ≥1,050 feet)	0	18	42	47	35
2nd level shortage (Mead <1,050 and ≥1,025 feet)	0	0	10	14	18
3rd level shortage (Mead <1,025 feet)	0	0	0	4	7

- The April – July unregulated inflow into Lake Powell improved significantly over the projections made in the early summer, bringing the probabilities of shortage down considerably from the projections made in June.
- The Lake Powell April through July inflow forecast in early June was 5.0 MAF, or 70% of average.
- Current observed April through July inflow is 6.7 MAF, or 94% of average.

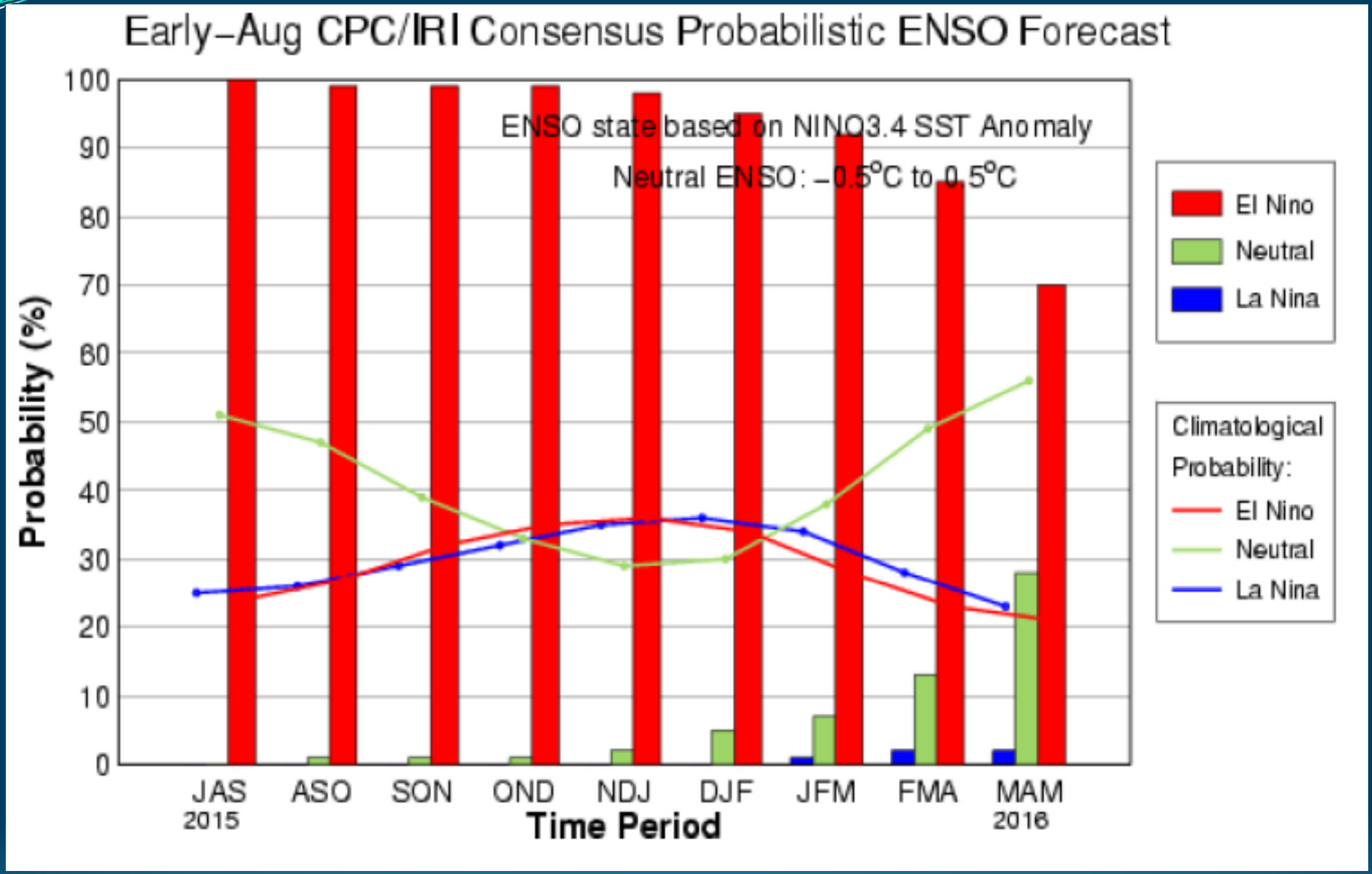
Source: United States Bureau of Reclamation – August 2015 CRSS Model Run

Generalized El Nino Weather Pattern



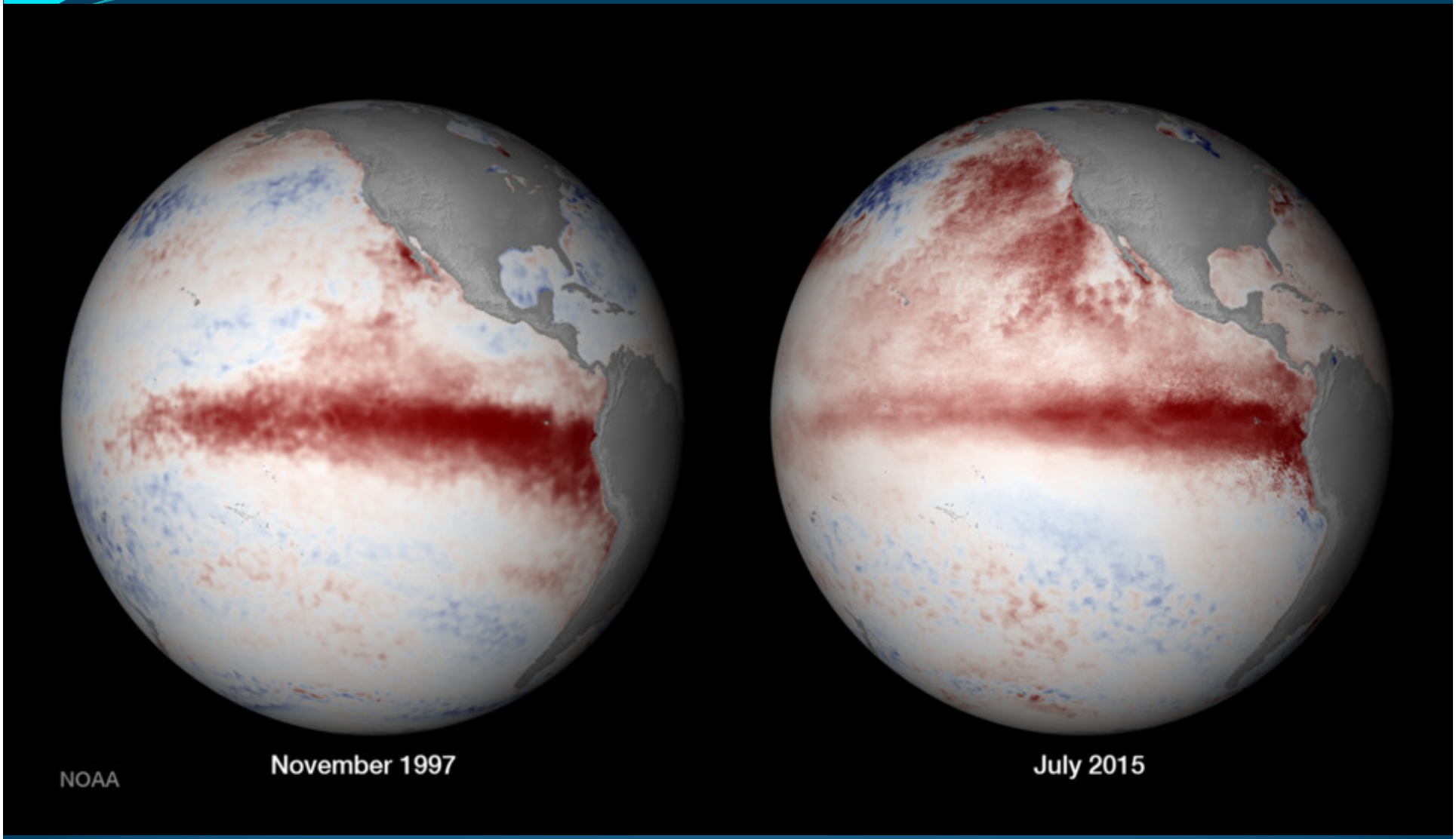
Source: National Oceanic and Atmospheric Administration – Climate Prediction Center

El Nino Forecast



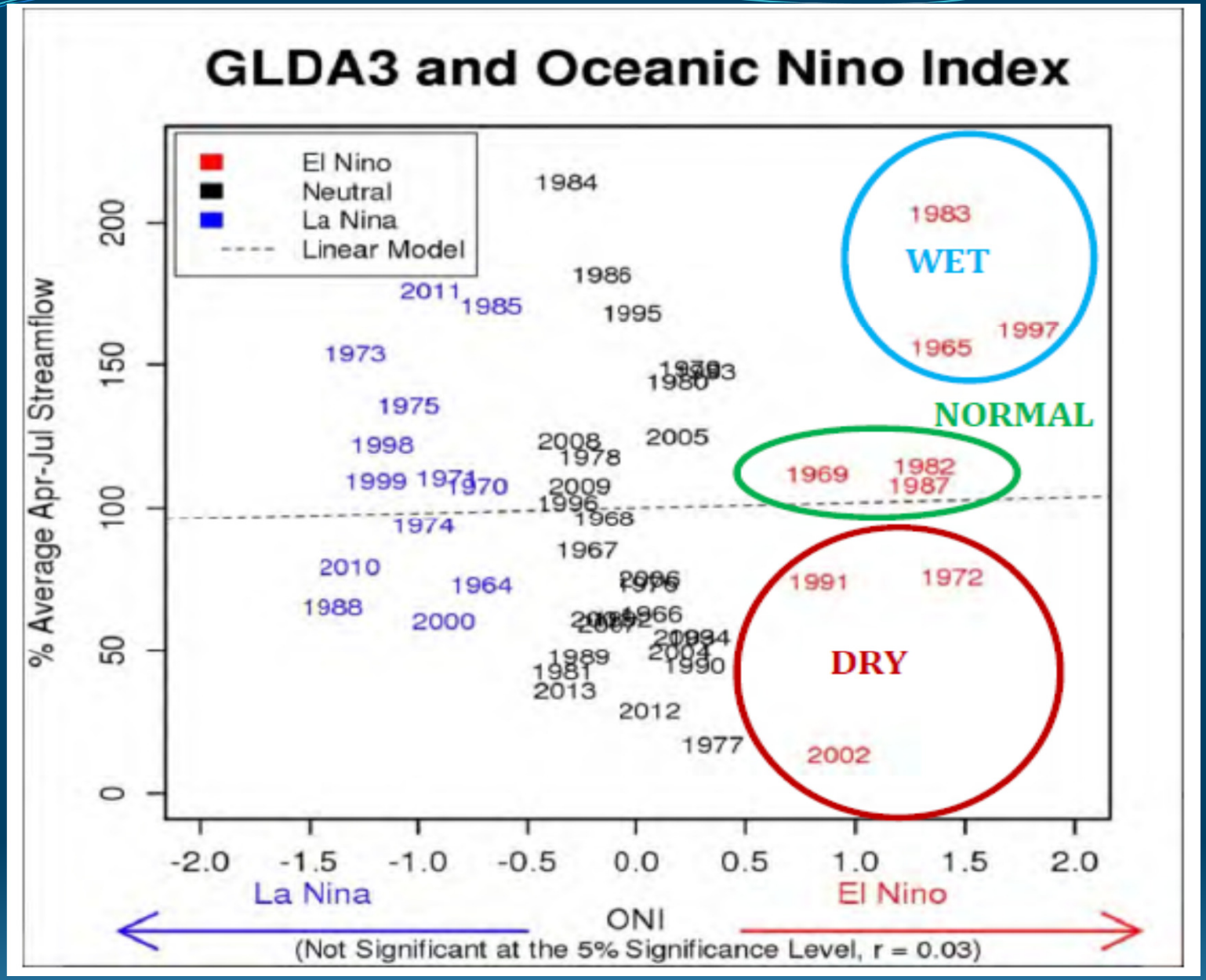
Source: National Oceanic and Atmospheric Administration – Climate Prediction Center

El Nino: Comparison to 1997



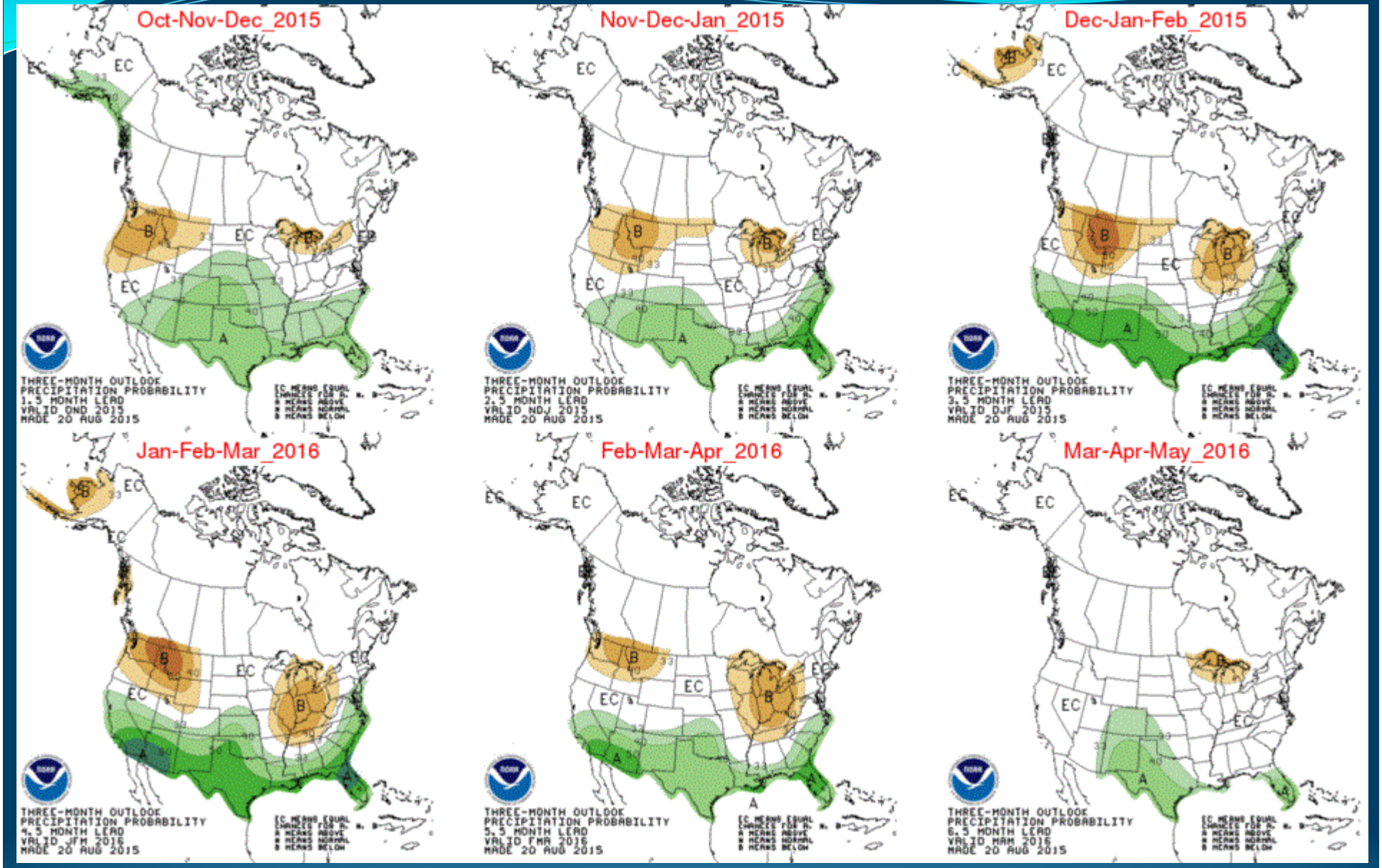
Source: National Oceanic and Atmospheric Administration – Climate Prediction Center

Lake Powell Inflow and El Nino



(Source: Colorado River Basin Forecast Center)

Precipitation Outlook: Through May 2016



Source: National Oceanic and Atmospheric Administration – Climate Prediction Center