

Hydrology Report – November 2023

Upper Basin Precipitation and Temperature

- In October, the upper basin received 92% of average precipitation.
- Temperatures in the upper basin for October were 1-4 degrees (F) warmer than average.

Upper Basin Snowpack and runoff

- October started the beginning of a new snow season. Current snowpack is 49% of the seasonal median.
- The Basin Forecast Center is forecasting the runoff this year at 90% of average.

Current reservoir status

- As of November 11, 2023, Lake Mead is at an elevation of 1,064.8 feet and has about 8.8 million acre-feet in storage (34% capacity).
- As of November 11, 2023, Lake Powell is at an elevation of 3,572.3 feet and has about 8.7 million acre-feet in storage (37% capacity).
- Total system storage for the upper and lower basin is around 24.9 million acre-feet (43% capacity).

2024 reservoir operations

- Lake Powell will be operated in the Mid-Elevation Release Tier with a release of 7.48 million acre-feet in water year 2024.
- Lake Mead will operate in a Level 1 Shortage Condition in calendar year 2024.
- Accordingly, in 2024, Nevada's consumptive use will be reduced by 13,000 acre-feet under the 2007 Interim Guidelines and Nevada will make a Drought Contingency Plan contribution of 8,000 acre-feet.
- Arizona and Mexico are also required to take shortage and make a water savings contribution in 2024. Those amounts are significantly larger than Nevada's obligations.
- The total combined volumes for Arizona, Nevada, and Mexico are 613,000 acre-feet in calendar year 2024, which will save the equivalent of about 8 feet in elevation in Lake Mead. The reductions and contributions for calendar year 2024 are highlighted in Figure 1.

Water Use in Southern Nevada

- Southern Nevada's consumptive use in January through September of 2023 was 157,498 acre-feet, which is a 17% decrease in water use compared to 2022.

Reclamation's Lake Mead Projection

- Reclamation uses computer models to forecast reservoir elevations based on planned water use and anticipated runoff. Figure 2 shows the October 24 Month Study is forecasting Lake Mead to be between 1,060.5 and 1,051.6 feet in elevation by the end of 2024.

Reclamation's Lake Powell Projection ²

- Reclamations October 24 Month Study is forecasting Lake Powell's elevation to be between 3,582.9 and 3,549.4 feet by the end of 2024 (Figure 3).



Colorado River Commission of Nevada

Hydrology and River Updates

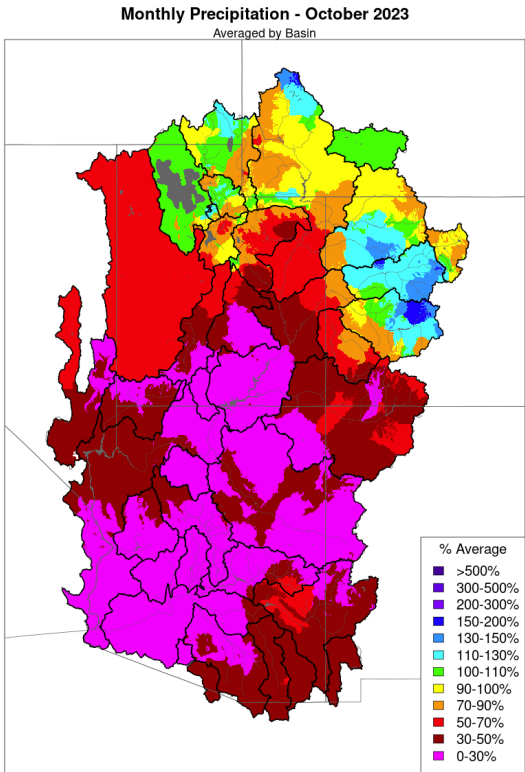
Warren Turkett

November 15, 2023

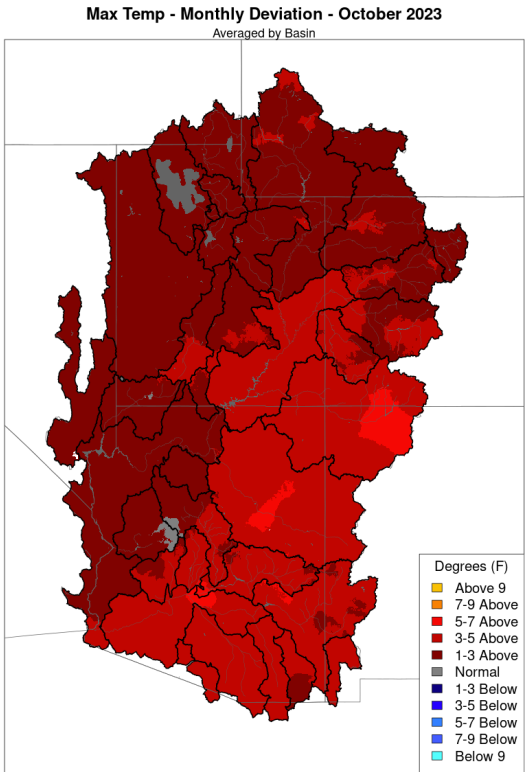




Precipitation and Temperature



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov



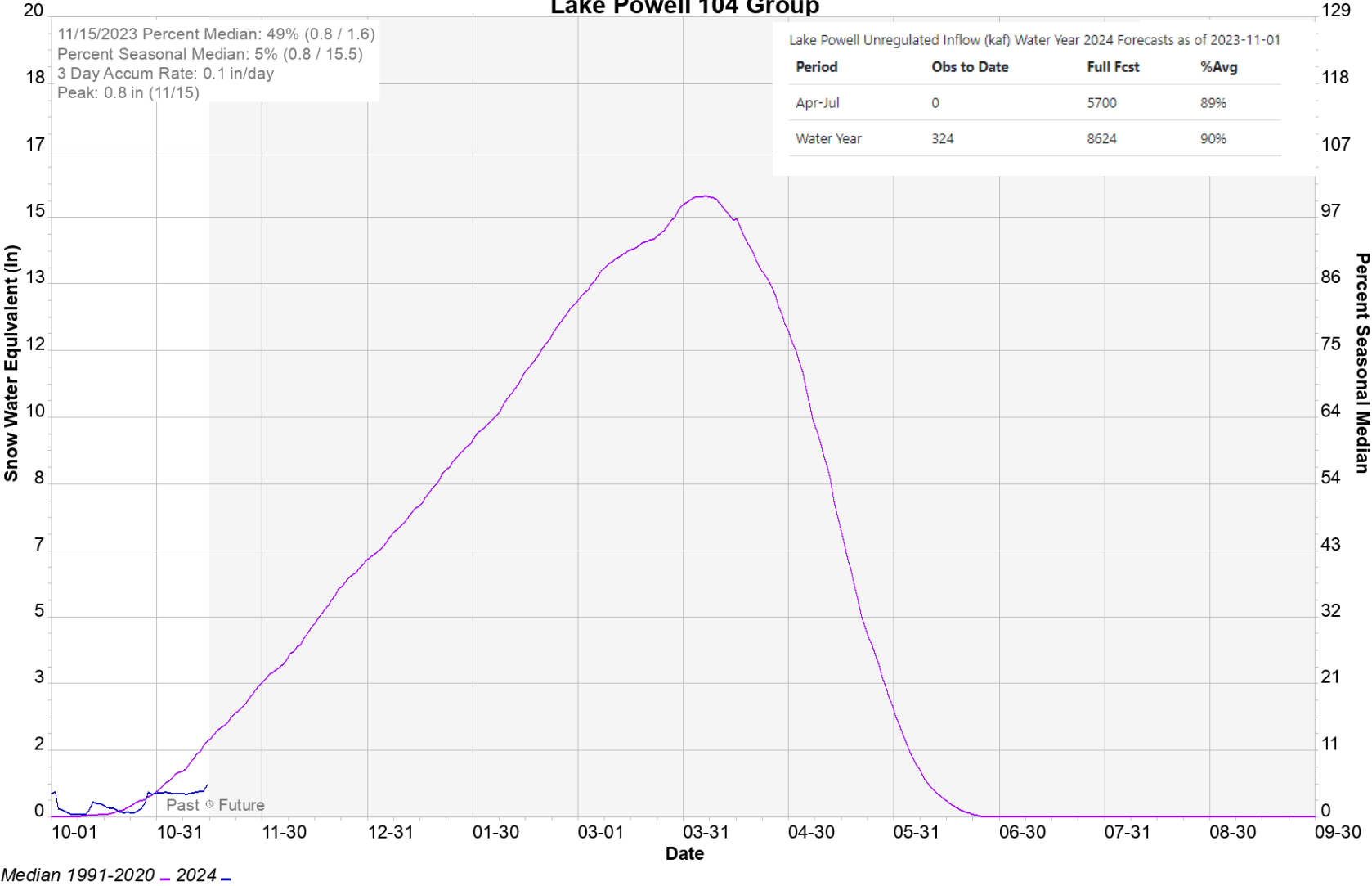
Prepared by NOAA, Colorado Basin River Forecast Center
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Lake Powell %Average Precipitation Water Year 2024

| Area | Oct | Water Year |
|-----------|-----|------------|
| UC-Powell | 92 | 92 |

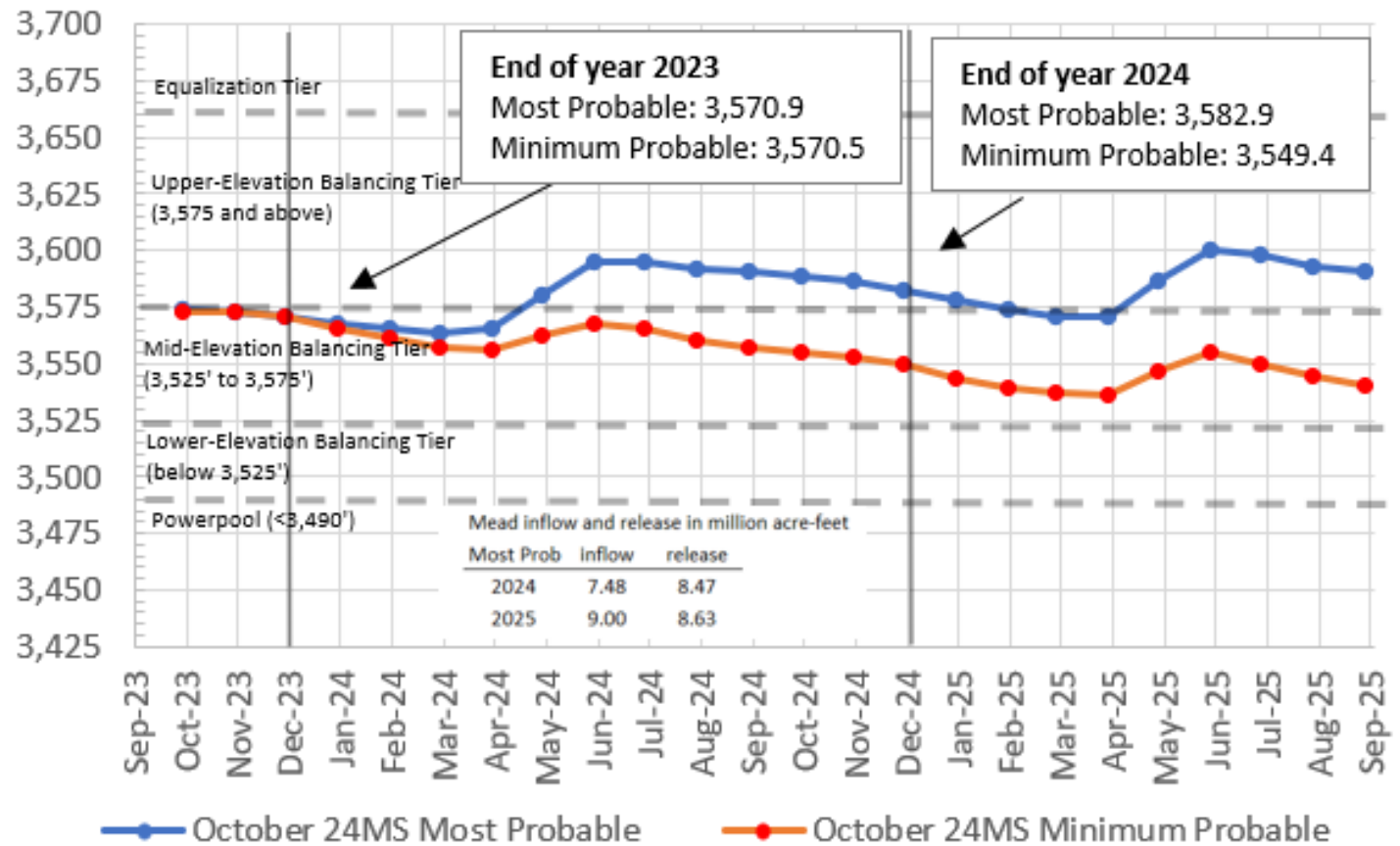


Colorado Basin River Forecast Center
Lake Powell 104 Group





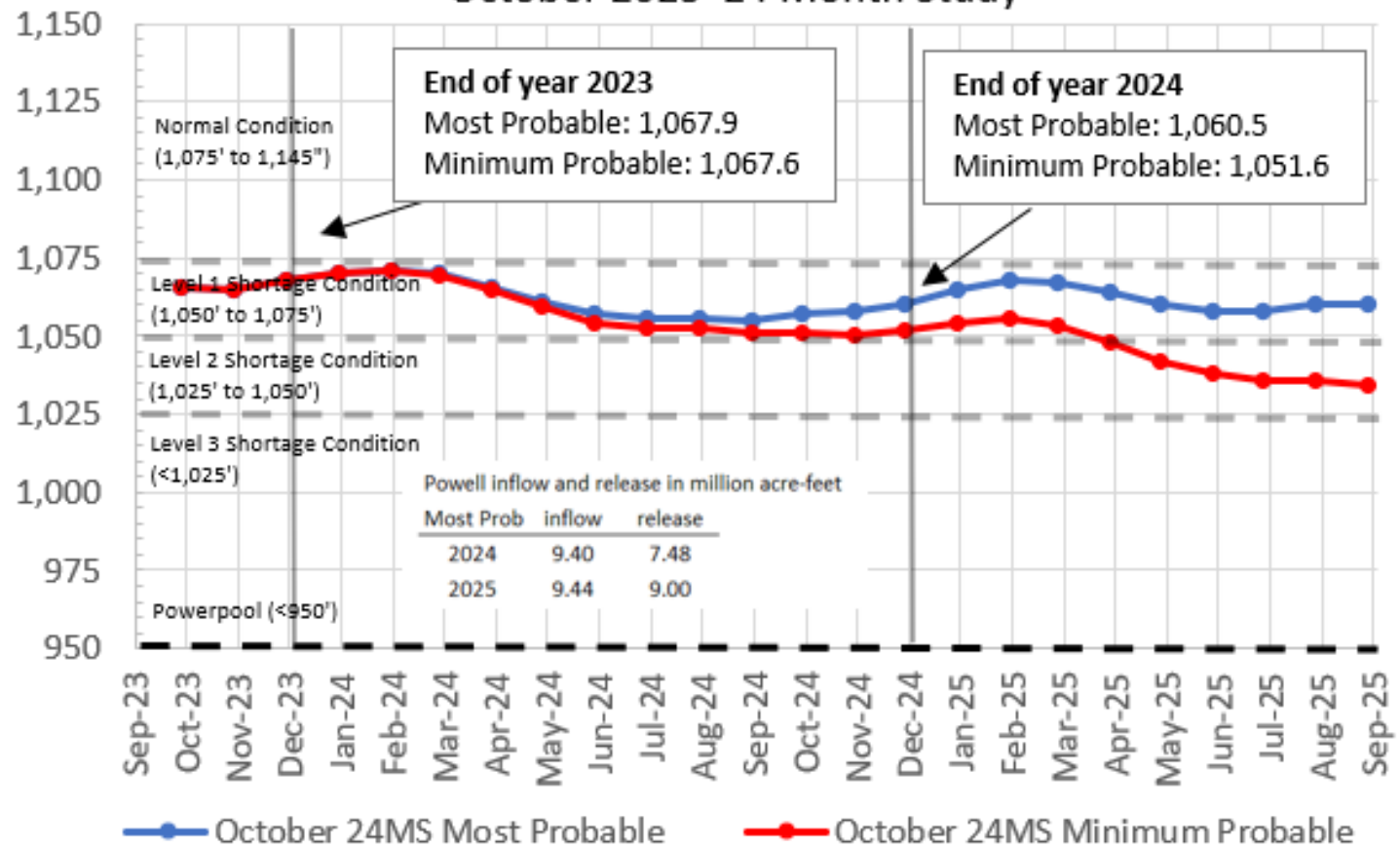
Lake Powell End-of-Month Elevations October 2023 24 Month Study





Lake Mead End-of-Month Elevations

October 2023 24 Month Study





Water Use In Southern Nevada

2023 January - August Southern Nevada Water Use¹

Acre-Feet

| | |
|--|------------------------------|
| Nevada Annual Allocation | 300,000 |
| Drought Contingency Plan contribution | -8,000 |
| Interim Guidelines Shortages | -17,000 |
| Diversions | 340,594 |
| Return Flow Credits | 183,096 |
| Consumptive Use | 157,498 |
| ¹ 2023 Consumptive use data is preliminary. | (-17% compared to last year) |