



June 2024: Southwest Climate Outlook

Stacie Reece
July 1, 2024



<https://climas.arizona.edu/>

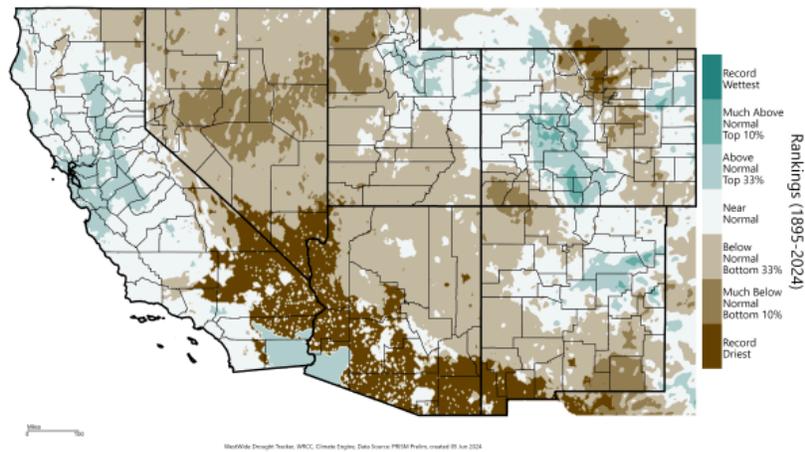
The Southwest Climate Outlook is published by the Climate Assessment for the Southwest (CLIMAS), with support from University of Arizona Cooperative Extension, and the New Mexico State Climate office.

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Precipitation and Temperature

May precipitation was below normal to record-driest across much of Arizona and New Mexico. Some parts of northern and eastern New Mexico received near normal to above normal precipitation.

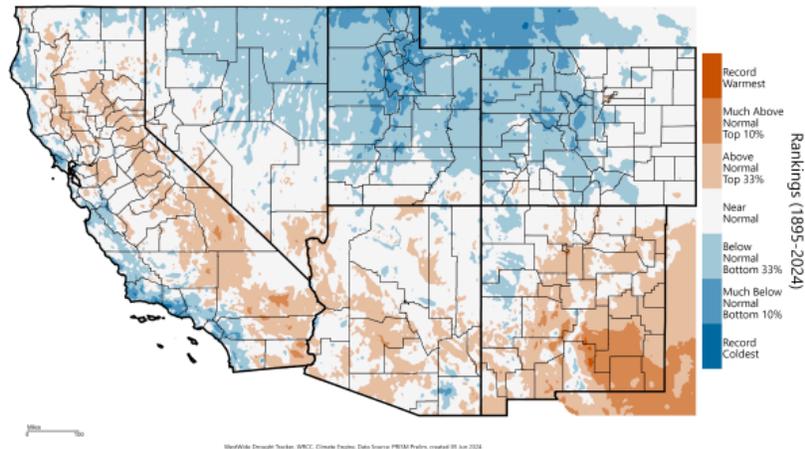
Southwest - Precipitation
May 2024, Percentile



Source: [WestWide Drought Tracker](#)

May temperatures were near normal to above normal for much of Arizona and New Mexico, and much-above normal in southeastern New Mexico.

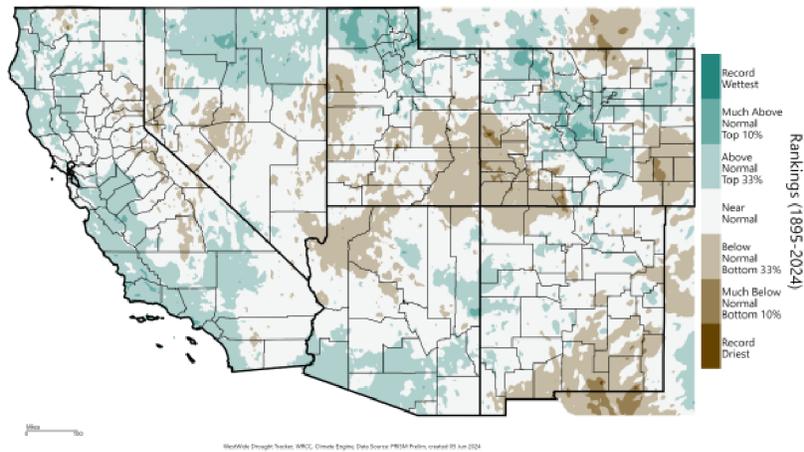
Southwest - Mean Temperature
May 2024, Percentile



Source: [WestWide Drought Tracker](#)

Water year (October 2023 – May 2024) precipitation has been near normal across much of Arizona and New Mexico, ranging into above normal totals for parts of southern and eastern Arizona and western New Mexico, and into below normal totals for parts of southern New Mexico, northwestern Arizona, and some areas of the Colorado Plateau.

Southwest - Precipitation
October 2023 - May 2024, Percentile



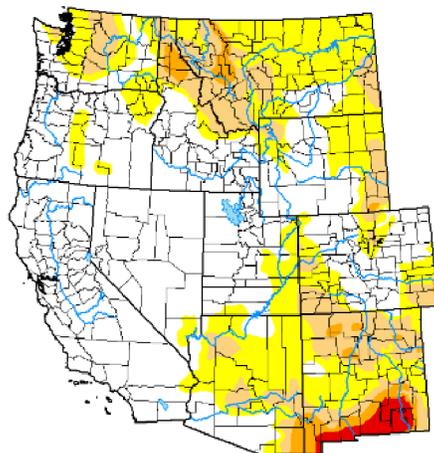
Source: [WestWide Drought Tracker](#)

Drought

About 71% of Arizona and 98% of New Mexico is abnormally dry or in drought, with the most acute drought conditions found in southern New Mexico, where severe (D2) to exceptional (D4) conditions are affecting about a quarter of the state's area. Severe drought conditions are also found in adjacent areas of southeastern Arizona. Much of northern New Mexico is also classified under moderate (D1) drought conditions.

U.S. Drought Monitor
West

June 18, 2024
(Released Thursday, Jun. 20, 2024)
Valid 8 a.m. EDT



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

Source: [U.S. Drought Monitor](#)

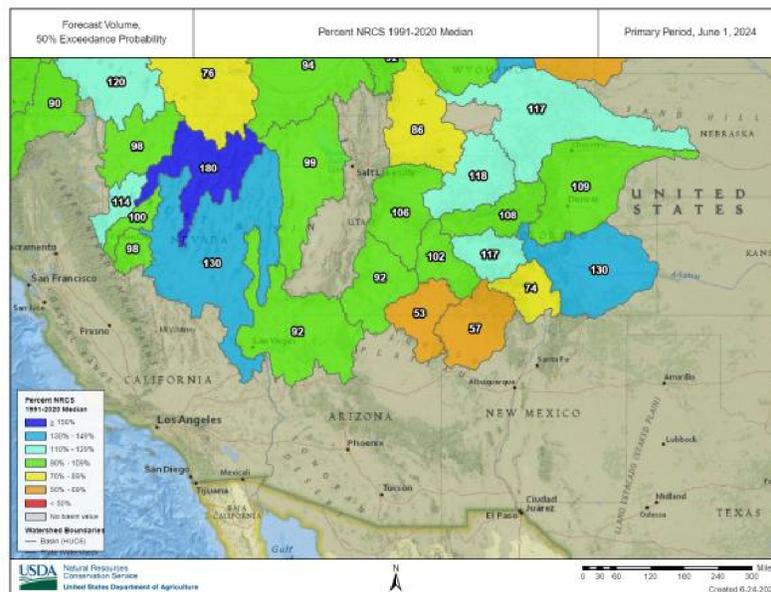
NIDIS Improved and Expanded State Pages on Drought.Gov

Arizona

New Mexico

Snowpack & Streamflow

Streamflow forecasts predict near normal flow for most Colorado River tributary basins, except for the San Juan River basin where flows are predicted to be much below normal. Flow in the Rio Grande headwaters basin is also predicted to be below normal.



[USDA-NRCS: National Water and Climate Center](#)

Water Supply

Water levels in Lake Mead and Lake Powell are slightly higher than they were last year but also well below the long-term average. Levels in other major Arizona reservoirs are near or above the long-term average, but in many cases below last

year's levels. New Mexico reservoir levels are broadly below the long-term average, and near or below last year's levels.

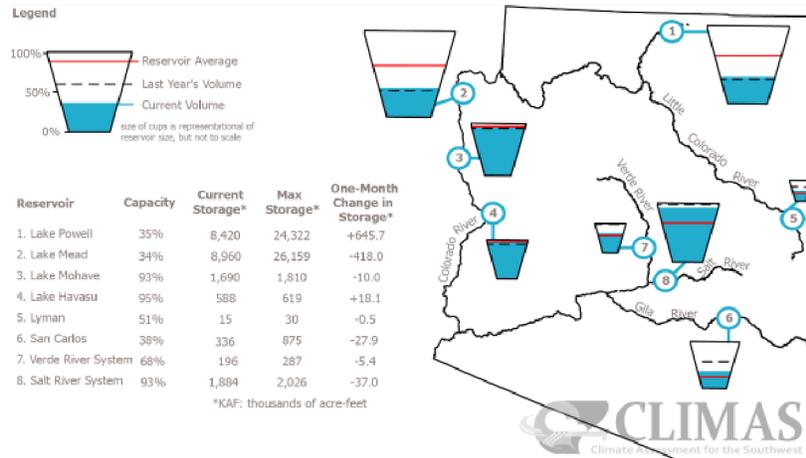


Figure 1. Arizona reservoir volumes for the end of May 2024 as a percent of capacity. The map depicts the average volume and last year's storage for each reservoir. The table also lists current and maximum storage, and change in storage since last month.

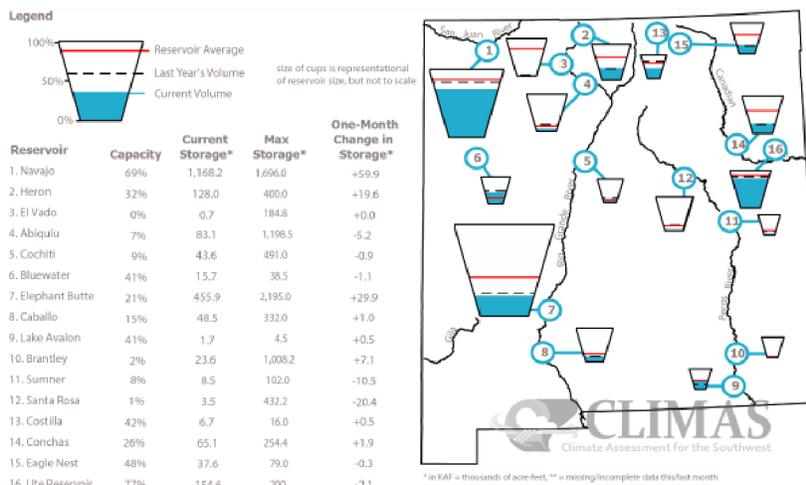


Figure 2. New Mexico reservoir volumes for end of May 2024 as a percent of capacity. The map depicts the average volume and last year's storage for each reservoir. The table also lists current and maximum storage, and change in storage since last month.

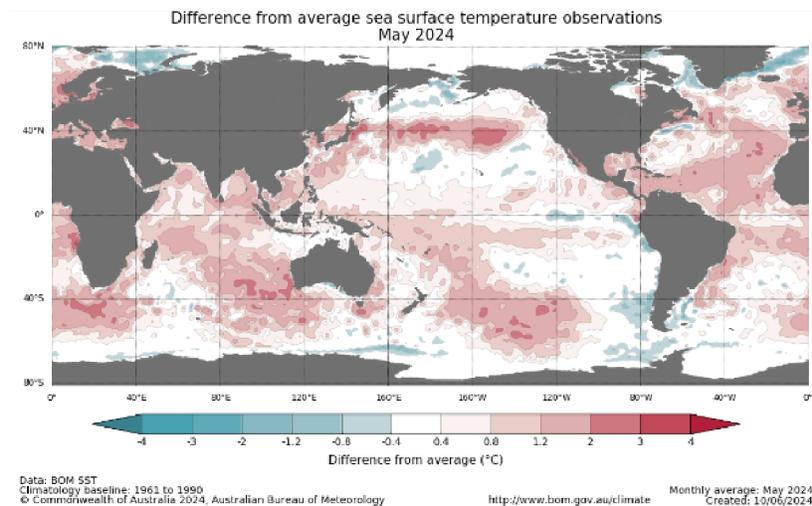
The map gives a representation of current storage for reservoirs in Arizona and New Mexico. Reservoir locations are numbered within the blue circles on the map, corresponding to the reservoirs listed in the table. The cup next to each reservoir shows the current storage (blue fill) as a percent of total capacity. Note that while the size of each cup varies with the size of the reservoir, these are representational and not to scale. Each cup also represents last year's storage (dotted line) and the 1991–2020 reservoir average (red line). The table details more exactly the current capacity (listed as a percent of maximum storage). Current and maximum storage are given in thousands of acre-feet for each reservoir. One acre-foot is the volume of water sufficient to cover an acre of land to a depth of 1 foot (approximately 325,851 gallons). On average, 1 acre-foot of water is enough to meet the demands of four people for a year. The last column of the table lists an

increase or decrease in storage since last month. A line indicates no change.
These data are based on reservoir reports updated monthly by the [Natural Resources Conservation Service - National Water and Climate Center \(USDA\)](#)

BOR: New Mexico Dashboard

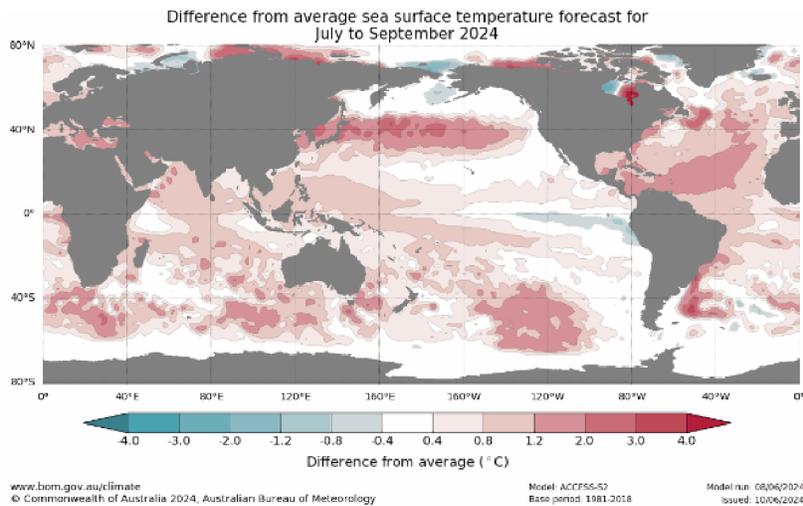
ENSO Tracker

The expected and ongoing transition toward La Niña conditions in the Pacific is evident in the pattern of equatorial Pacific sea surface temperatures (SSTs), with cool anomalies (departure from average) found in the east, and warm anomalies in the west.



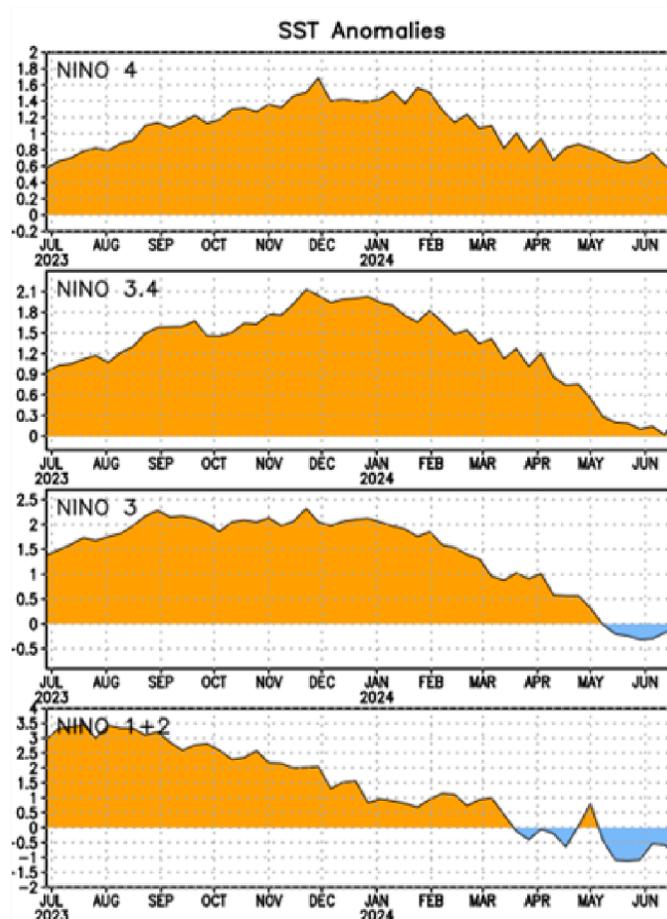
Source: [Australian Bureau of Meteorology](#)

The July – September season SST forecast shows a continuation of the La Niña-like pattern along the equator, but with a more spatially-coherent cool-anomaly area in the east, and a more extensive warm-anomaly area in the west.



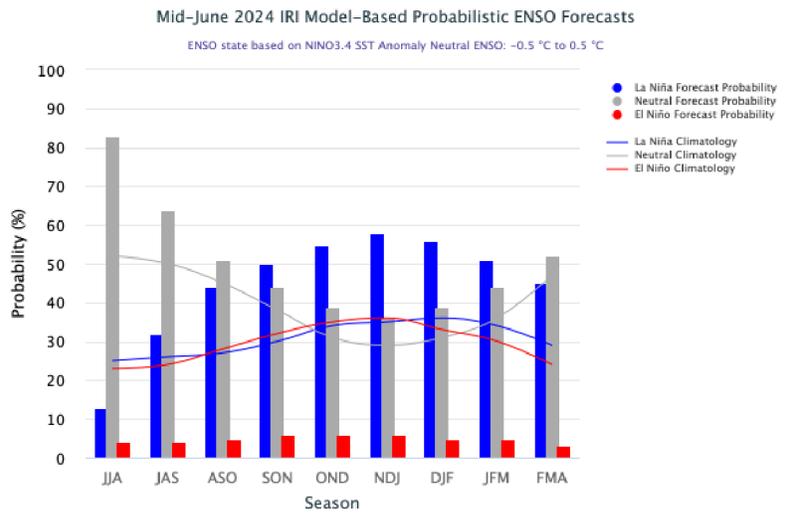
Source: Australian Bureau of Meteorology

Weekly SST anomalies (SSTAs) have been negative in the east equatorial Pacific (Nino 3) since May, and in the coastal-east tropical Pacific (Nino 1+2) since March. In the east-central equatorial Pacific (Nino 3.4), the monitoring region used to classify ENSO events, SSTs fell below the El Niño threshold (SSTA = +0.5°C) in May.



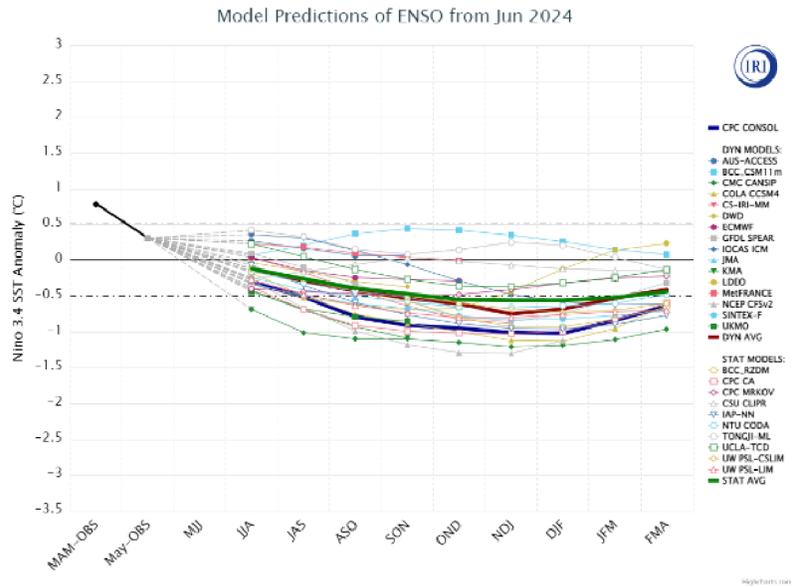
Source: Climate Prediction Center (NOAA)

ENSO forecast models favor a predicted state meeting La Niña criteria this fall with a probability of 50% – 60%, leaving a greater than 1-in-3 chance of ENSO-neutral conditions instead.



Source: [The International Research Institute for Climate and Society, Columbia University Climate School](#)

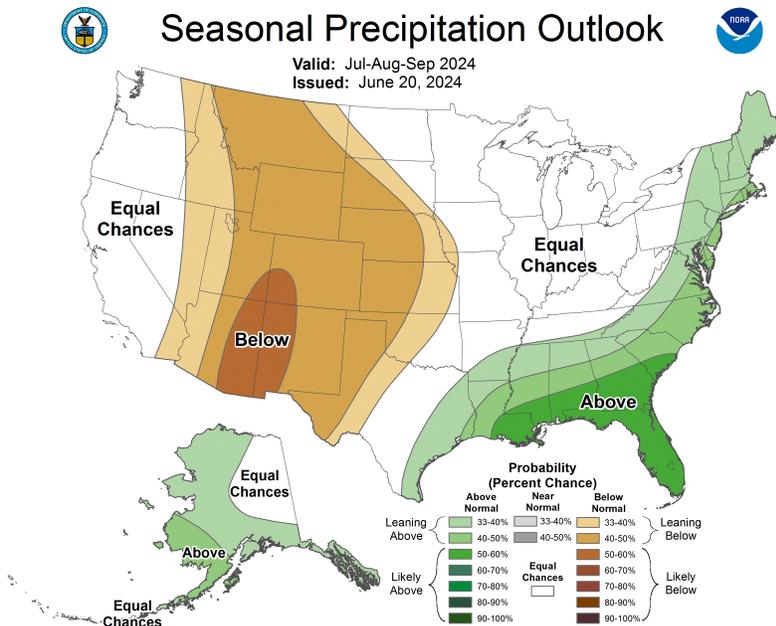
In past months the probabilistic forecast for a fall-winter La Niña had been a little more bullish, and this month’s plume of individual model predictions gives some indication of why—although there is reduced spread among models as compared to past months’ forecasts, that spread still includes a good number of models that remain ENSO-neutral. Only a few models are now predicting peak (negative) anomalies $<1^{\circ}\text{C}$, while in past months there were some models that predicted a much stronger event, and yet several models still predict SSTs in line with ENSO-neutral conditions. La Niña is the most likely state for this fall-winter, but it is for now unlikely to be a “strong” event.



Source: The International Research Institute for Climate and Society, Columbia University Climate School

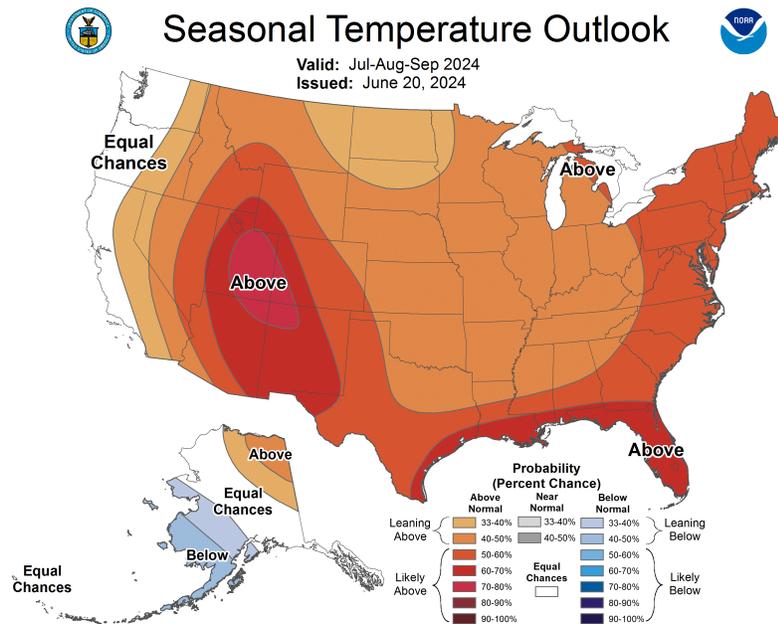
Seasonal Forecasts

The July – September seasonal precipitation forecast favors a likely chance (50-60%) of below normal precipitation for a region including eastern Arizona and western New Mexico, and leans toward (33-50% chance) below normal precipitation for the rest of Arizona and New Mexico.



Source: Climate Prediction Center (NOAA)

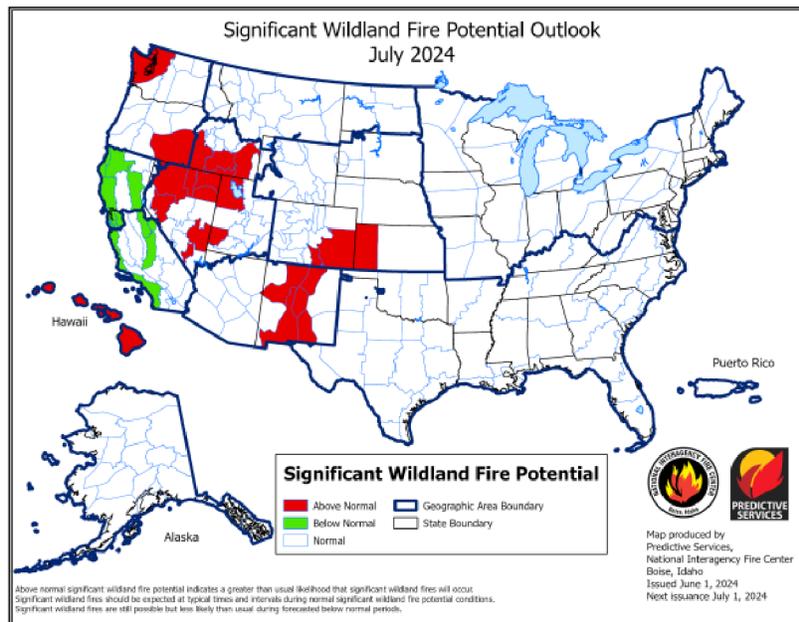
The July – September seasonal temperature forecast favors a likely chance (50-70%) chance of above normal temperatures for a region that includes New Mexico and most of Arizona, and leans toward above normal temperatures for a larger area that includes the remainder of Arizona. The highest confidence in likely above normal temperatures is for an area that includes the Four Corners region.



Source: [Climate Prediction Center \(NOAA\)](#)

Wildfire

The National Interagency Fire Center expects above normal potential for significant wildland fire in regions across New Mexico in July. In Arizona, significant wildland fire potential is expected to be normal.



Source: [National Interagency Coordination Center](#)

Monsoon Fantasy Forecasts

Welcome (or welcome back) to the Southwest Monsoon Fantasy Forecasts!

Are you ready to channel your inner forecaster and predict the monsoon season's rainfall?

Players will estimate the total monthly precipitation for July, August, and September in cities across the Southwest, including Tucson, Phoenix, Flagstaff, Albuquerque, and El Paso. Earn points based on the accuracy and boldness of your predictions! Compete against fellow weather enthusiasts and aim for the top of the leaderboard.

New this year: players can add some friendly competition to the game by forming their own groups, inviting friends to join, and competing for bragging rights. Join the fun to prove you've got what it takes to predict the unpredictable!

Although the deadline for forecasts for July has already passed, you can still sign up for the remainder of the game for August & September.

Sign Up To Play Today!



Southwest Climate Podcast

June 2024 SW Climate Podcast - So you're telling me there's a chance?



It's June - which means in this month's Southwest Climate Podcast, hosts Zack Guido and Mike Crimmins can officially talk about the monsoon. Before they deep dive into the 2024 monsoon season, they cover recent conditions from last month, the fire risk and its relationship to the monsoon, and then get right down to business. The stakes are high with a beer going to which host betters the other in v.4 of the Monsoon Fantasy

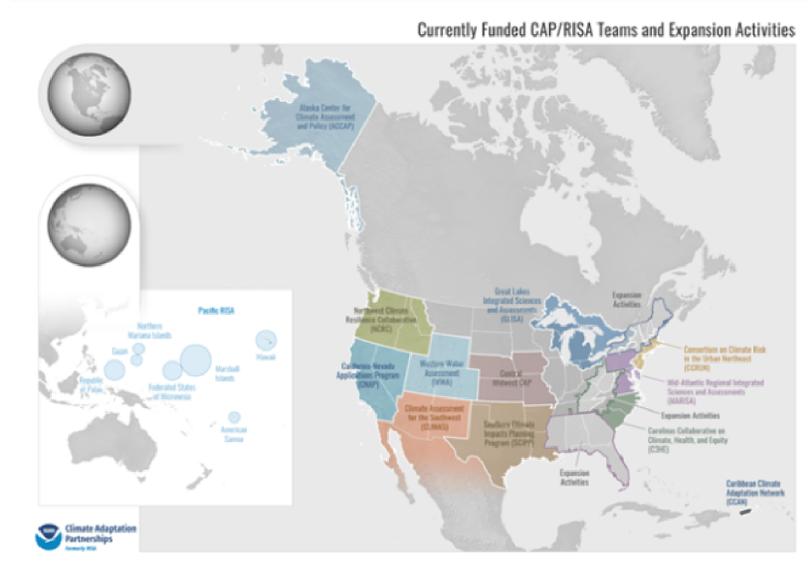
Forecast game this year.

[Listen Here](#)

About CLIMAS

The Climate Assessment for the Southwest (CLIMAS) program was established in 1998 as part of the National Oceanic and Atmospheric Administration's Climate Adaptation Partnerships (CAP) Program (formerly known as Regional Integrated Sciences and Assessments, or RISA). CLIMAS—housed at the University of Arizona's Institute of the Environment—is a collaboration between the University of Arizona and New Mexico State University. The CLIMAS team is

made up of experts from a variety of social, physical, and natural sciences who work with partners across the Southwest to develop sustainable answers to regional climate challenges.



[Learn more about the NOAA CAP program here](#)



Disclaimer

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