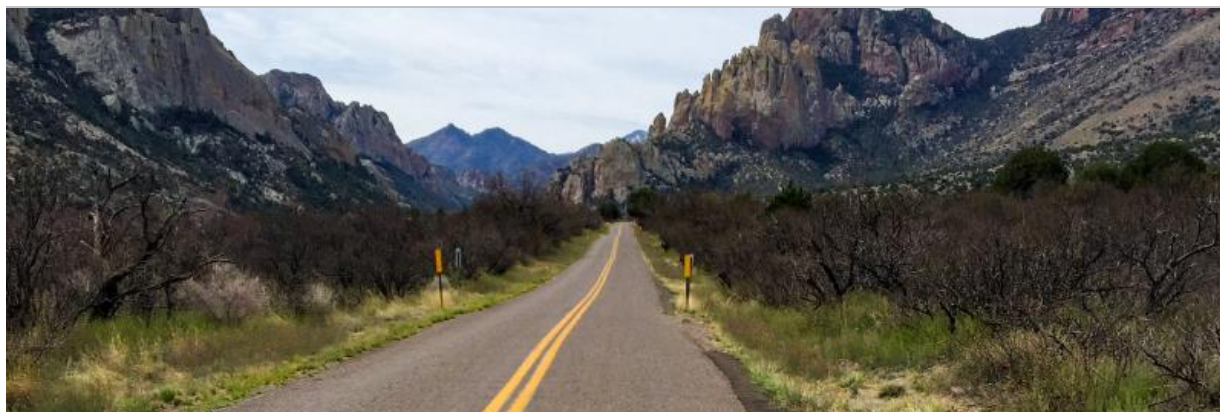




August 2025: Southwest Climate Outlook

Stacie Reece
September 3, 2025



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

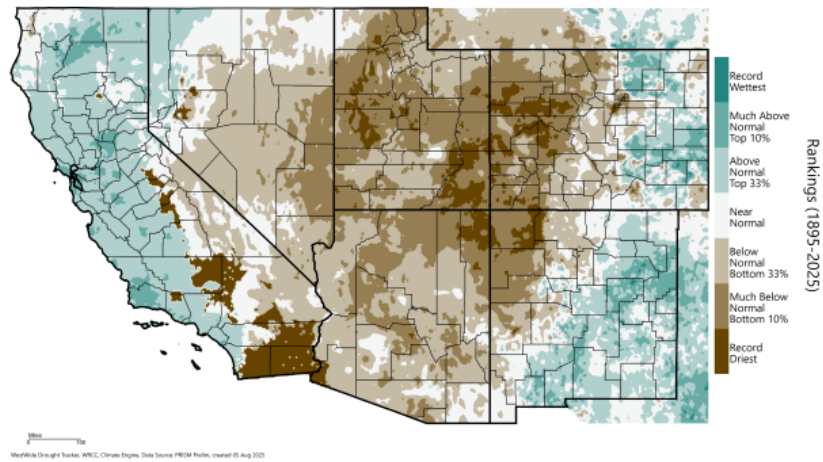
The Southwest Climate Outlook is published by the Climate Assessment for the Southwest (CLIMAS), with support from University of Arizona Cooperative Extension, and the New Mexico State Climate office.

Questions/Contact: Stacie Reece, sreece@arizona.edu

Precipitation and Temperature

Precipitation in July was below normal or much below normal across Arizona and northwestern New Mexico. Areas of the Colorado Plateau had the driest July on record. Precipitation was above normal in eastern New Mexico, and in parts of southern and central New Mexico.

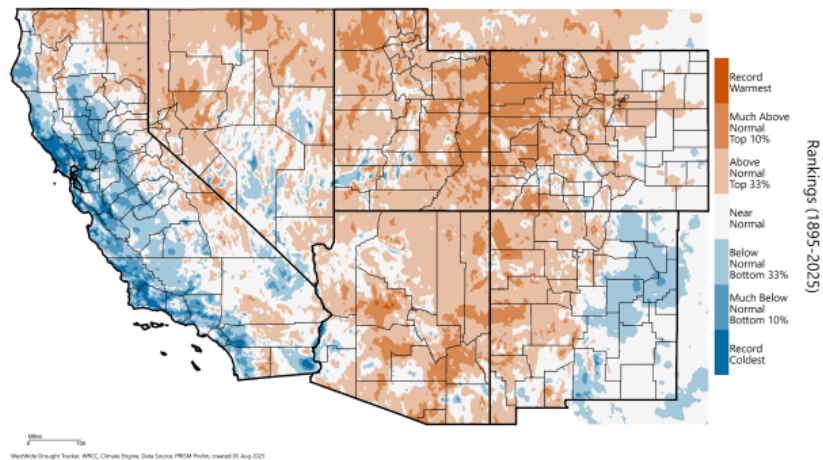
Southwest - Precipitation
July 2025, Percentile



Source: WestWide Drought Tracker

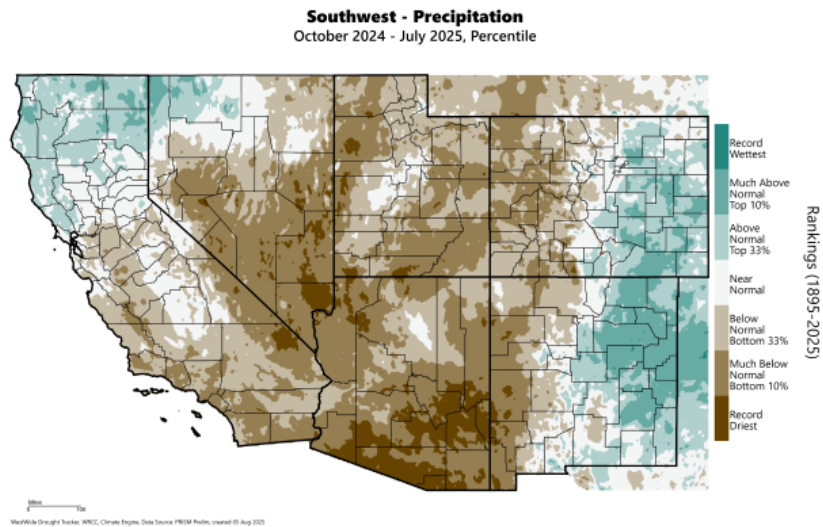
July temperatures were above average across Arizona and much of western New Mexico. Temperatures were near normal to below normal for eastern New Mexico and parts of southern New Mexico.

Southwest - Mean Temperature
July 2025, Percentile



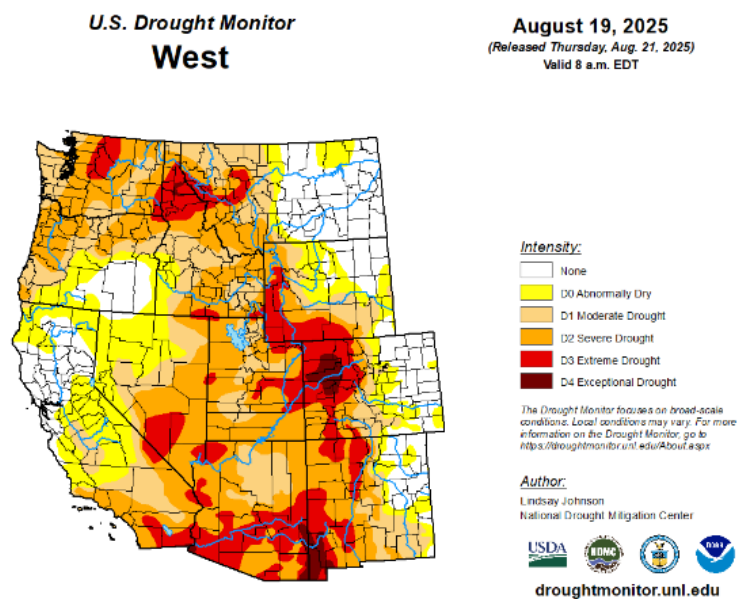
Source: WestWide Drought Tracker

Water year (October 2024–July 2025) precipitation was below normal or much below normal for Arizona and western New Mexico. It was the driest October–July season on record for much of southern Arizona. Water year precipitation was above normal for eastern New Mexico and parts of central New Mexico.



Drought

All of Arizona is in drought, along with the western half of New Mexico and much of southern New Mexico. Drought in extreme southwestern New Mexico is considered Exceptional (D4)—conditions which have historically occurred only once in 50 to 100 years. Extreme (D3) drought affects much of southern Arizona, southwest New Mexico, and parts of northern New Mexico. D3 drought refers to conditions which historically occur once in 20 to 50 years.



Source: [U.S. Drought Monitor](https://droughtmonitor.unl.edu)

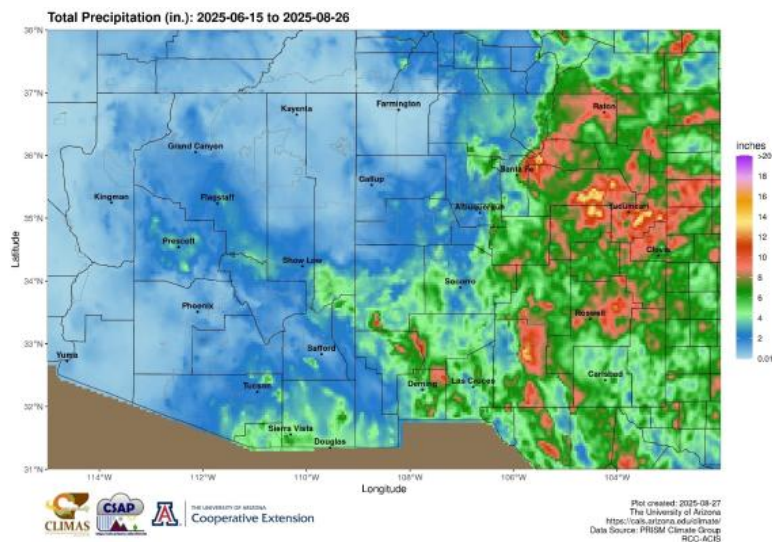
NIDIS Improved and Expanded State Pages on Drought.Gov

New Mexico

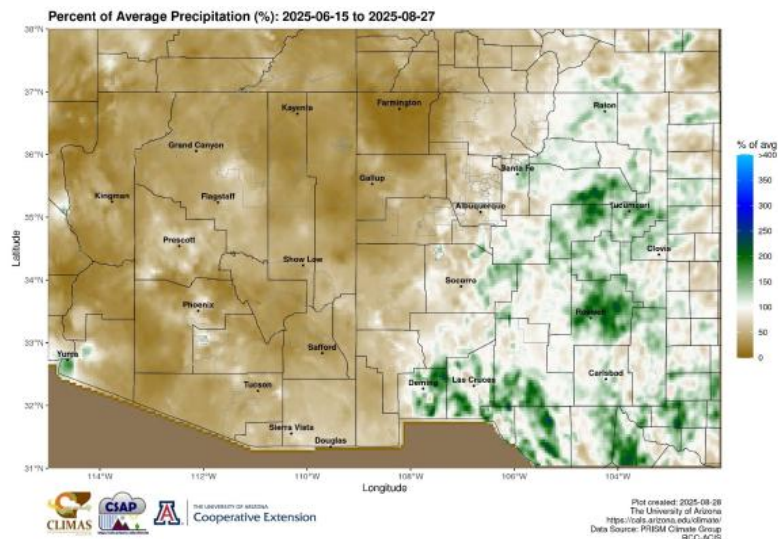
Arizona

Monsoon

Monsoon precipitation has been below normal nearly everywhere in Arizona and in much of western New Mexico. The monsoon has been near or above normal for eastern New Mexico and southern New Mexico, east of the continental divide.



Source: [University of Arizona Cooperative Extension - CSAP](https://uaz.arizona.edu/drought/)



Source: [University of Arizona Cooperative Extension - CSAP](https://climate.arizona.edu/climas)

Water Supply

Reservoir storage is varied across the Southwest—in Arizona, Salt-Verde system reservoirs are near long-term average levels, Lake Powell and Lake Mead are down compared to last year and much below long-term average levels. San Carlos reservoir, downstream of the extreme-to-exceptional drought in the upper Gila basin, is near empty. In New Mexico, reservoirs in the eastern part of the state are in good shape, at or above long-term average levels, but on the Rio Grande, Elephant Butte is at 3% of capacity, and Heron and El Vado are much below long-term average levels.

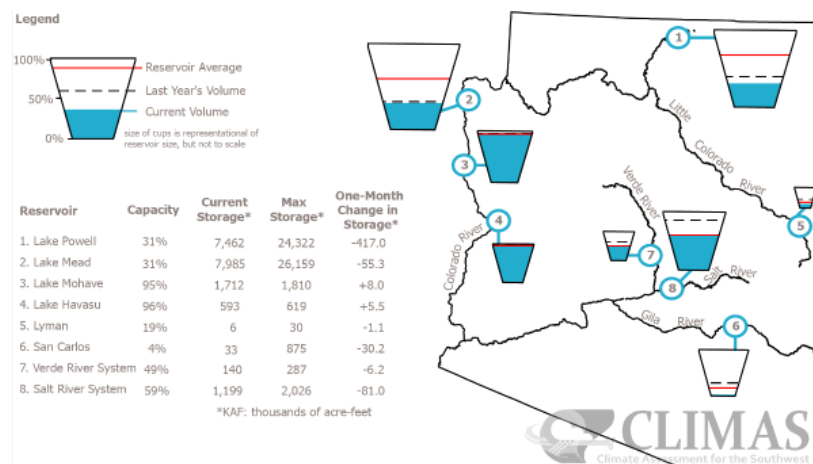
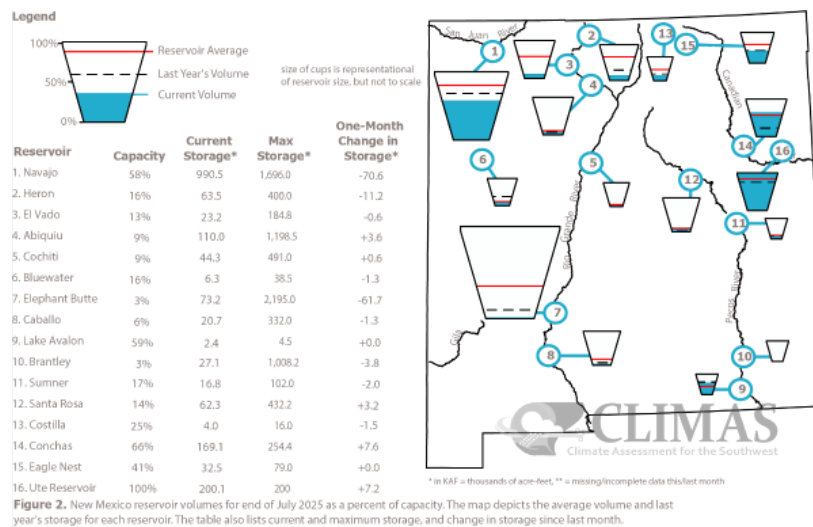


Figure 1. Arizona reservoir volumes for the end of July 2025 as a percent of capacity. The map depicts the average volume and last year's storage for each reservoir. The table also lists current and maximum storage, and change in storage since last month.



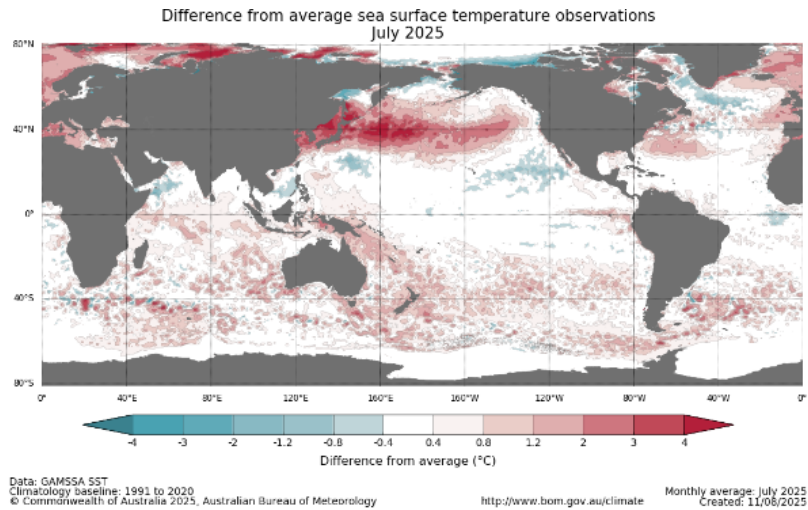
The map gives a representation of current storage for reservoirs in Arizona and New Mexico. Reservoir locations are numbered within the blue circles on the map, corresponding to the reservoirs listed in the table. The cup next to each reservoir shows the current storage (blue fill) as a percent of total 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

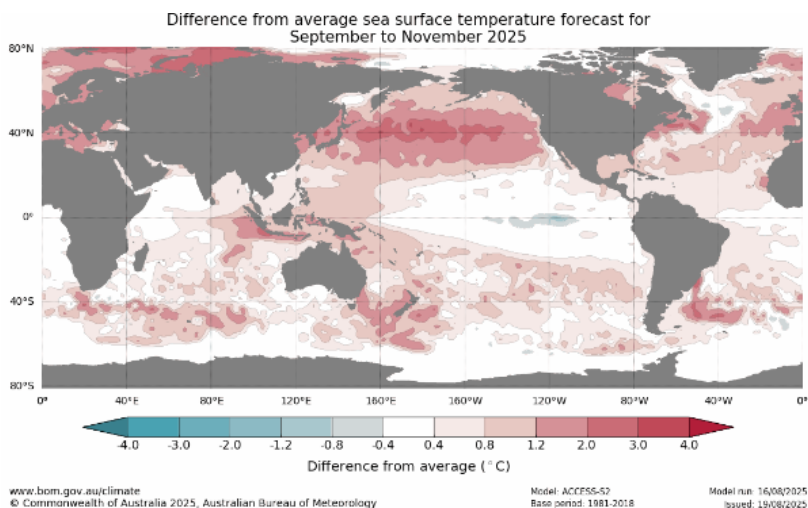
Pacific sea surface temperatures (SSTs) along the equator were near normal in July, reflecting ENSO-neutral conditions. SSTs in the northern part of the Pacific basin, around 40°N

latitude, have been much warmer than normal, but SSTs in that region do not play a role in the ENSO ocean-atmosphere coupled system.



Source: Australian Bureau of Meteorology

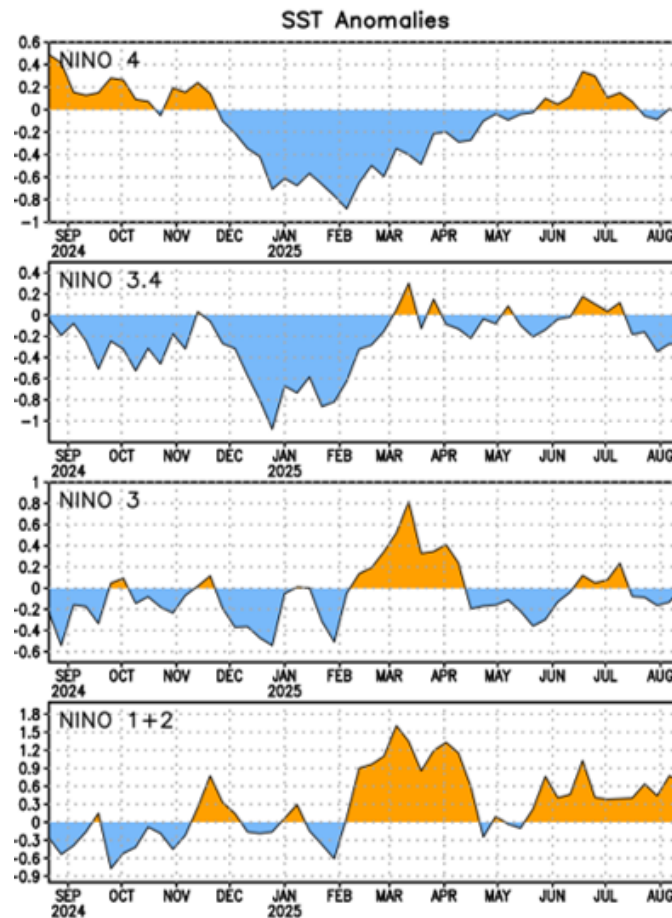
A September–November SST forecast shows a La Niña-like pattern of cooler-than-average SSTs in the east-central equatorial Pacific and warmer-than-average in the western margin of the equatorial Pacific, but the region of cooler SSTs is not cool enough or extensive enough to meet the criteria of La Niña, so this forecast pattern would be classified as ENSO-neutral.



Source: Australian Bureau of Meteorology

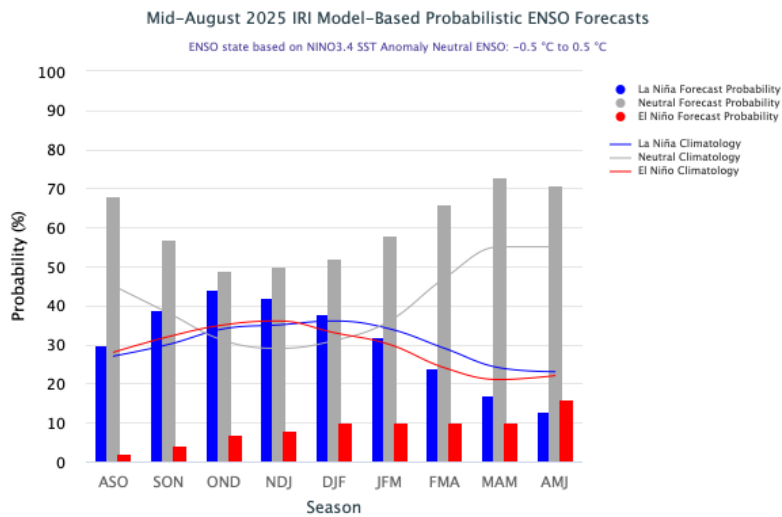
Weekly SST anomalies (difference from average) for the ENSO monitoring regions show that SSTs in the Niño 3.4 region, which determine official ENSO status, have remained in the

ENSO-neutral range (within 0.5°C of average) since last winter's La Niña conditions faded in February.



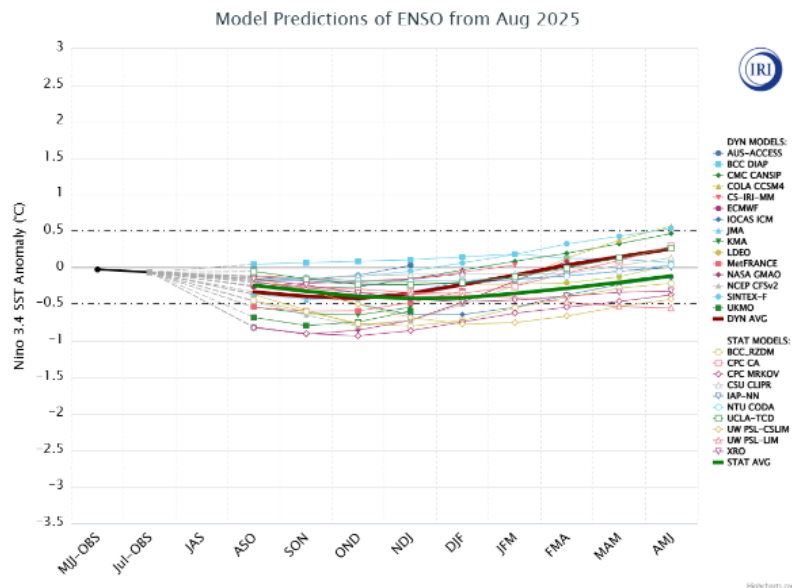
Source: [Climate Prediction Center \(NOAA\)](#)

The probabilistic summary of ENSO forecasts gives a slight edge to ENSO-neutral conditions for the fall and winter months when ENSO status is consequential for seasonal climate in the Southwest. La Niña conditions are also possible; over 40% of models predict La Niña during the October–December and November–January forecast windows. The likelihood of an El Niño is very low.



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

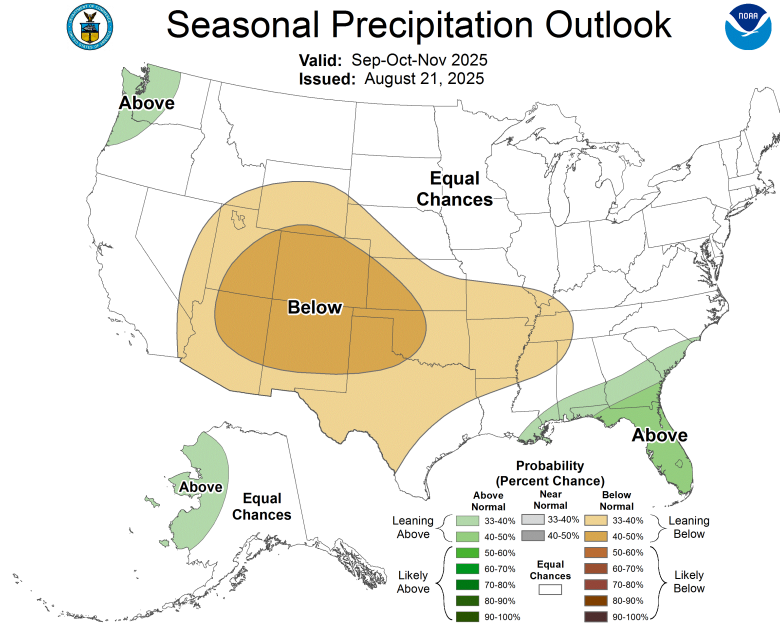
The spread of individual model ENSO forecasts has narrowed since we have passed the “spring predictability barrier” and models come into greater agreement about how conditions are likely to progress over the next several months. None of the models predict El Niño conditions; forecasts tend to fall near the La Niña threshold, predicting either ENSO-neutral or weak La Niña conditions.



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

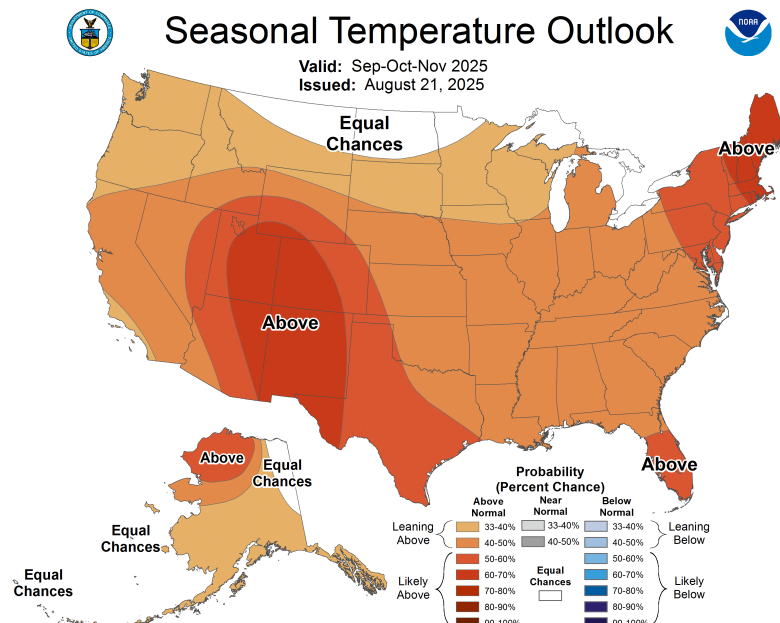
Seasonal Forecasts

The September–November seasonal precipitation forecast leans toward (33–50% probability) below normal precipitation for Arizona and New Mexico.



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

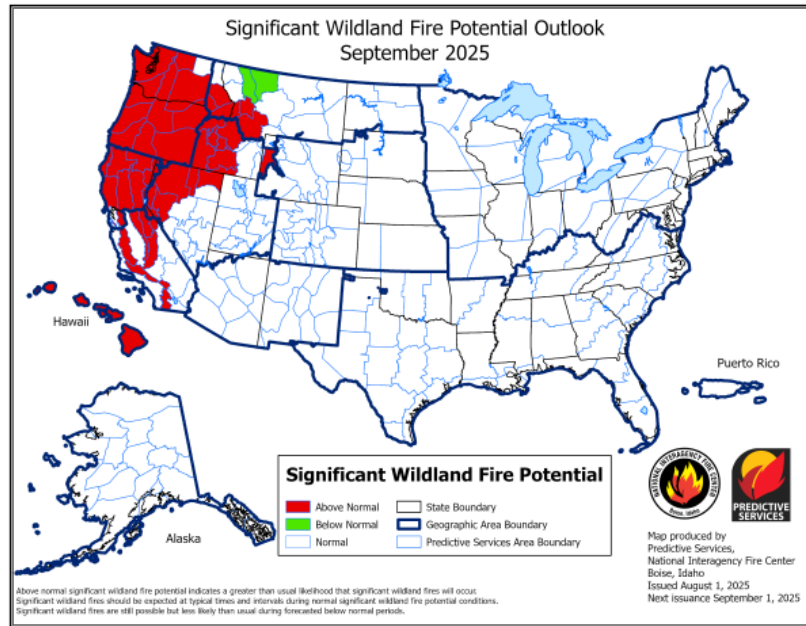
The September–November seasonal temperature forecast gives a likely chance (50–70% probability) of above normal temperatures for New Mexico and most of Arizona, and leans (40–50% probability) toward above normal temperatures for the remaining, southwestern, portion of Arizona.



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

Wildfire

Potential for significant wildland fire is expected to be normal in September across Arizona and New Mexico.



Source: [National Interagency Coordination Center](#)

Public Health Corner

Welcome to the Public Health Corner, a quarterly section in the Southwest Climate Outlook dedicated to exploring the intersection between climate change and public health in Arizona and New Mexico! In the Public Health Corner, we will dive into various ways in which climate influences our SW communities' health and explore strategies to mitigate and adapt to these challenges.

This summer 2025 is another record-breaking one: June ranked as the seventh-warmest on record for the contiguous United States, averaging nearly 2.8 °F above the 20th-century average, while nighttime lows across southern Arizona and New Mexico remained as high as 87–95 °F. With this

continuing intensification of extreme heat, this quarter we focus on its health impacts in Arizona and New Mexico, with a particular focus on rural and remote communities.

While only [10.7% of Arizonans](#) and [24.7% of New Mexicans](#) live outside metropolitan centers, rural and wilderness areas makes up more than 80% of the landmass in both states. These geographies present unique challenges for extreme heat resilience. Rural residents often contend with geographic isolation, and long travel times to healthcare or cooling infrastructure. Rural communities also have a higher prevalence of heat-sensitive conditions such as cardiovascular and respiratory disease, reflecting older populations and higher poverty rates; for example, in New Mexico, [nearly 19% of the rural population is over 65](#), compared to 15% nationwide. Housing conditions add another layer of vulnerability, as many residents live in older homes or mobile units that are poorly insulated and less likely to have adequate cooling.

Public health data confirms the weight of these risks. While absolute numbers of heat-related emergency visits cluster in Arizona's urban counties, [the highest rates per capita occur in La Paz, Mohave, and Yuma](#), which are counties with large rural populations. [The Arizona's 2024 Extreme Heat Preparedness Plan](#) acknowledged these inequities while also highlighting the difficulty of serving rural and Tribal contexts due to data gaps, logistical barriers, and limited institutional capacity. [The 2025 update](#) especially represents a step forward, emphasizing equity and institutional partnerships with rural health departments, Tribal authorities, and community organizations. New strategies include culturally tailored outreach campaigns, distribution of cooling supplies, and the deployment of mobile "Cooltainers" to expand access to air-conditioned spaces.

Our recent research adds further evidence for the urgency of a rural lens in extreme heat resilience planning. [An analysis of the National Emergency Medical Services Information System \(NEMSIS\) \(2021–2023\)](#) found that patients experiencing heat-related emergencies in rural areas had significantly worse outcomes than those in urban areas. Indeed, in the western U.S., the odds of a good outcome were

54% lower for rural patients (Ahn et al., 2025). A systematic review of 52 studies from the U.S., Canada, and Australia led by CLIMAS Post-Docs Ahn and Boyer shows that while extreme heat is increasingly recognized as a major health threat, rural heat resilience remains overlooked. Unlike in cities, where risks are amplified by the urban heat island effect, rural risks arise from those structural vulnerabilities and governance gaps. The most affected groups include the elderly, Indigenous peoples, tourists, and especially outdoor workers such as farmworkers. [This review](#) underscores the need for integrated, place-based governance frameworks that respond to the specific conditions of rural communities (Boyer et al., forthcoming). In parallel, [a national survey of heat practitioners](#) reinforces this conclusion. While staff capacity and risk perception were identified as barriers across contexts, practitioners consistently emphasized the importance of local-scale data, tailored communication of risks, and actionable tools. Respondents working in rural settings in particular stressed that generic information is insufficient and that resilience planning must be grounded in the realities of local health systems, housing conditions, and occupational patterns (Archie et al., 2025).

Together, these studies highlight a critical gap in current heat governance: while extreme heat disproportionately affects marginalized, low-income, and in rural settings, existing frameworks still fall short in addressing their distinct vulnerabilities. Building heat resilience in the Southwest will require not only better information, but also deliberate investment in capacity-building, inclusive governance, and strategies designed for rural and remote communities that have historically been left at the periphery of public policy efforts.

Southwest Climate Podcast

August 2025 SW Climate Podcast - At Wits End

Recorded 8/29/2025, Aired 9/2/2025

We are over two-thirds of the way through this year's monsoon and in this month's Southwest Climate Podcast hosts

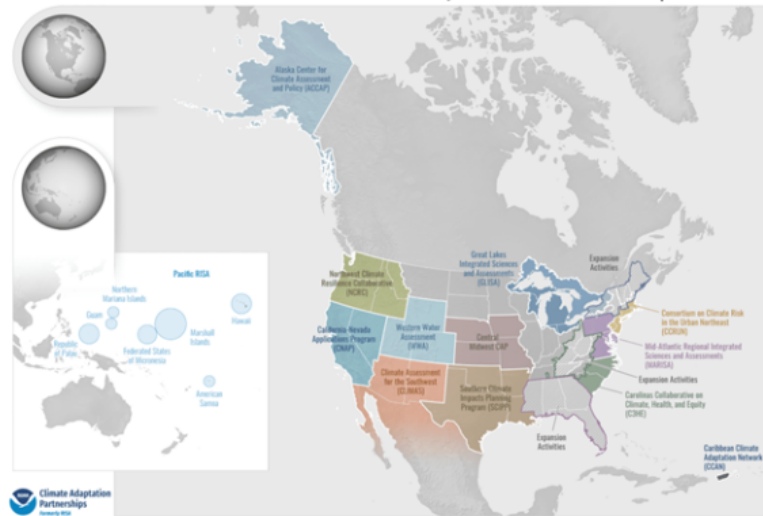


Zack Guido and Mike Crimmins have a bit of a therapy session. They do a round up of July and August which they call the most uninteresting monsoon. There is a deep dive on what is driving this picture of night and day between Arizona and New Mexico. They give a look towards September with all eyes on the eastern Pacific tropical activity as the wildcard. They eventually learn to appreciate the subtleties and accept their relationship with the Southwest Monsoon.

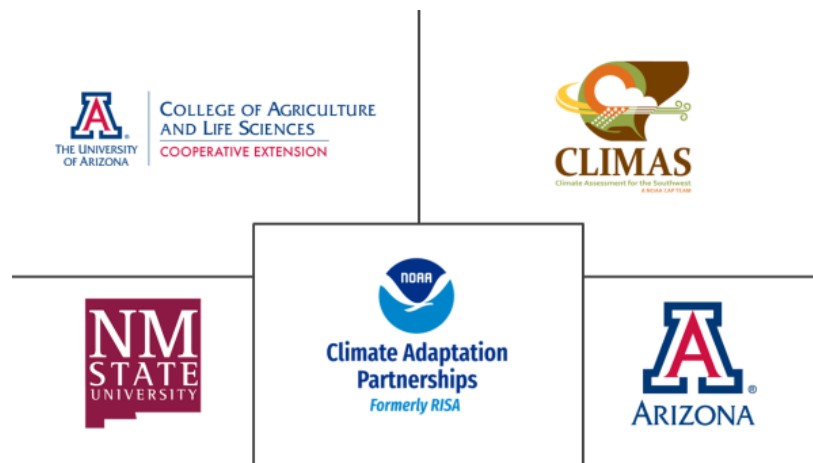
[Listen Here](#)

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](#)



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Southwest Climate
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