**Weather and Climate Summary and Forecast**
**August 2025 Report**

Gregory V. Jones, Ph.D.
**August 6, 2025**

Summary:

- July was cooler than average[1] in California, especially along the coast, and warmer than average in the PNW.
- A drier than average July with 25% or less than normal for much of the west. The exception was in Northern California, eastern Oregon, and western Idaho, where thunderstorms were prevalent during the month.
- Drought has expanded to cover much of the West, and the seasonal drought outlook indicates that most of the region will experience dryness persisting into the fall.
- No precipitation is on the forecast horizon for the month over most of the western US, with the exception being potential thunderstorms over the Sierra Nevada mountains, Cascades, and in the southwest.
- The overall August forecast is for warmer-than-normal temperatures and seasonally dry conditions across the entire western US, although cooler coastal zones are likely to continue experiencing these conditions.
- The 90-day forecast is also pointing to a strong probability of a warmer and drier western US heading into our ripening and harvest months. Models are hinting at least a few periods of prolonged heat along with extremely dry conditions, which increase fire risk.

**Past Month and Year to Date:**

The western US experienced a mixed July temperature pattern with the PNW and Rockies seeing warmer than average temperatures and California and the Basin seeing cooler than average temperatures (Figure 1). For California, the summer has brought very cool, windy, and persistent marine layer clouds. These conditions have resulted from a region of anomalous and persistent high pressure west of the state that has generated the NNW wind field and upwelling of cooler water. Temperatures were 1-5°F below average for much of California, with the greatest departures right along the coast. In the PNW, a much warmer July was experienced due to more continental high pressure affecting the region. Washington and Oregon saw July temperatures from 1-5°F above average. For the rest of the country, the Plains from the Canadian border to south Texas were slightly cooler in July (0.5-1.0°F) while the rest of the eastern half of the country was much warmer than average (1-5°F; not shown).

In terms of precipitation, typically dry summer conditions prevailed for most areas of the western US in July (Figure 1). The exception was portions of northern California, eastern Oregon, and southwestern Idaho, which saw significant

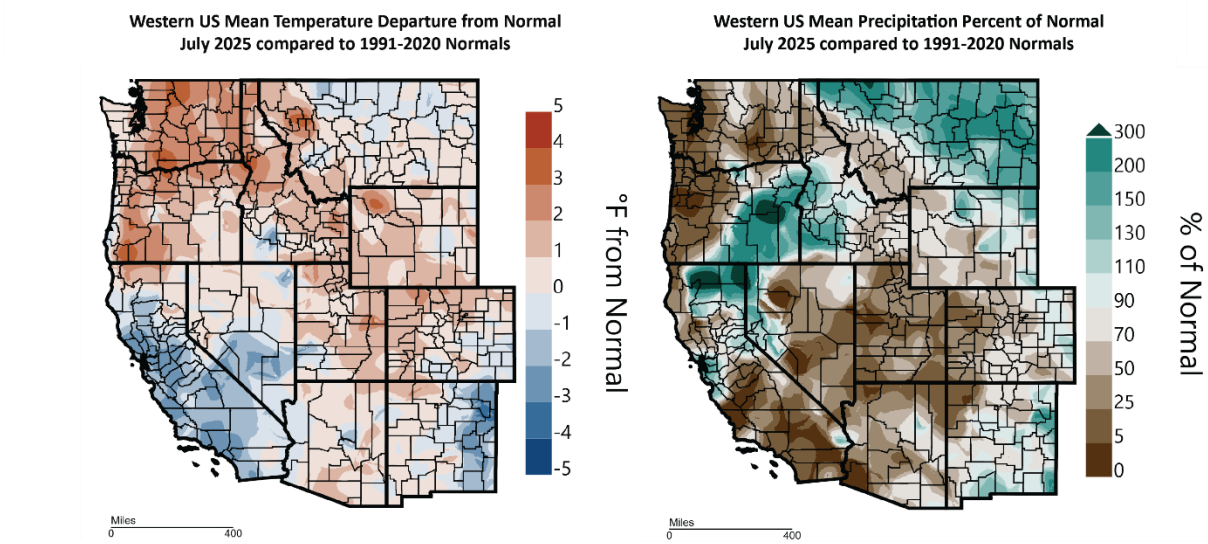


**Figure 1** – Western US July 2025 temperature departure from normal (left) and percent of normal precipitation (right; images from Western Regional Climate Center and High Plains Regional Climate Center, 2025)

[1] Note that all references to normal or averages in this report are to the 1991-2020 climate normal for each weather/climate parameter unless stated otherwise. See this website (https://www.climateofwine.com/climate-normals) for more information on climate normal.

thunderstorms during the month. For the rest of the country, the Plains eastward were largely wetter than average during July, except the mid-south and portions of New England, which remained dry (not shown).

Even with a quite cool July in California, the year to date temperatures in the western US remain largely warmer than average (Figure 2). Coastal zones in California, some localized areas of Oregon, northwestern Washington, and central Idaho have been 0.5-2.0 degrees cooler than average, while interior California, the Great Basin, much of the Four Corners, and central and southern Rockies have been 0.5-3.5 degrees warmer than average. Most of the rest of the country continues to experience largely warmer than average temperatures since the first of the year, running 1-3 degrees above average from Texas and the Mississippi River valley eastward to the Atlantic coast and New England. The northern to central Plains have seen closer to average or slightly cooler year to date conditions (not shown).

The relatively dry July over most of the west continues the year to date dry conditions (Figure 2). The exceptions are areas from northern California into southern and central Oregon, continuing eastward to the northern Rockies, which have seen a wetter than average first seven months of the year. The rest of the western US has remained dry, with Washington moderately drier than average, and central to southern California, the southwest, Four Corners currently running 5-70% of normal. This is reflected in the increased drought coverage for the west (see below). July precipitation has brought year to date conditions over the eastern two thirds of the country to near average to moderately above average, although drier conditions remain in Florida and New England (not shown).

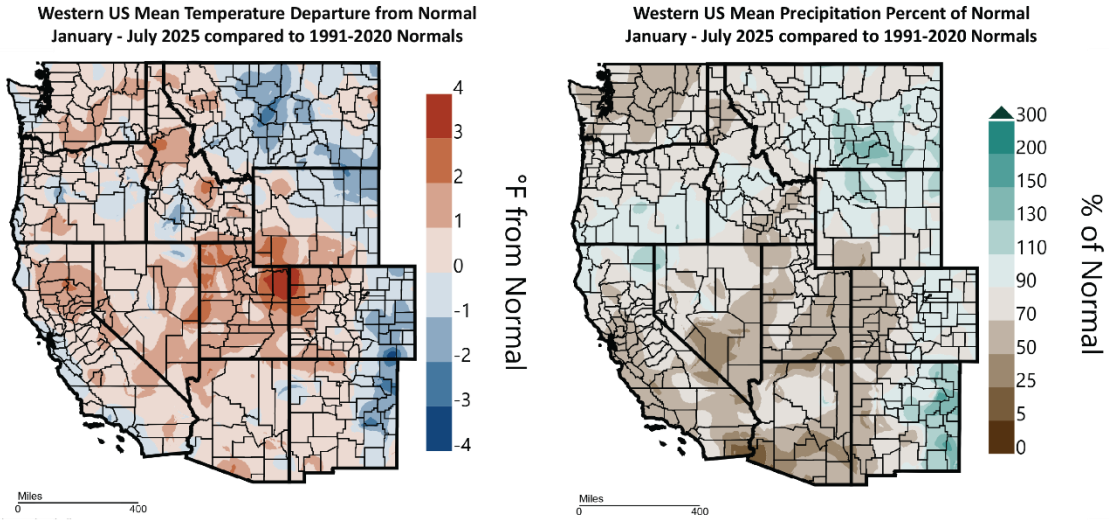


**Figure 2** – Western US Year-to-Date (January 1 through July 31, 2025) temperature departure from normal (left) and percent of normal precipitation (right; images from Western Regional Climate Center and High Plains Regional Climate Center, 2025).

**Heat Accumulation:**

Cooler coastal zones in California continue to show a slower growing degree-day (GDD) accumulation, while most inland areas of the western US are above average for this time of year. GDD values for March through July 2025 across inland regions in California, western and eastern valleys in the PNW, the Great Basin, Idaho, and Montana are mostly 100-400 GDD above the 1991-2020 climate normals (Figure 3) while coastal zones in California, portions of the southwest, and mountain locations scattered across the west are currently running near average up to 400 GDD below average. The current vintage has warmer areas running 5-20 days ahead normal growing degree-day accumulation, while the coolest regions are running up to 20 days behind normal accumulation for this point in the vintage (not shown).

July across Oregon was 1.5-3.5 degrees warmer than average resulting in heat accumulation (GDD) amounts that are currently 17-31% above the 1981-2010 climate normals, and 4-23% above the 1991-2020 climate normals for the Rogue Valley, Umpqua Valley, Walla Walla Valley, and Willamette Valley (Figure 4). All of the stations are tracking below the GDD observed during the 2015 vintage and above those during the 2010 vintage, the warmest and coolest vintages in Oregon in the last 25 years, respectively. Compared to the 2024 vintage, Roseburg is running 4% above, Medford 2% above, Milton-Freewater 9% above, and McMinnville 1% below the same point last year.

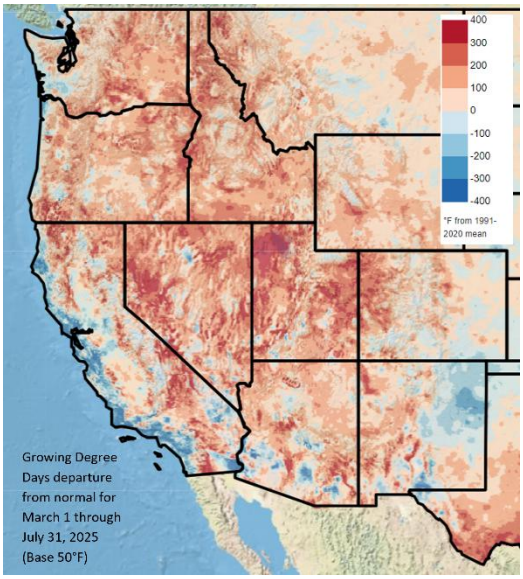


**Figure 3** – Western US March through July 2025 growing degree-days (image from Climate Impacts Research Consortium, University of Idaho).

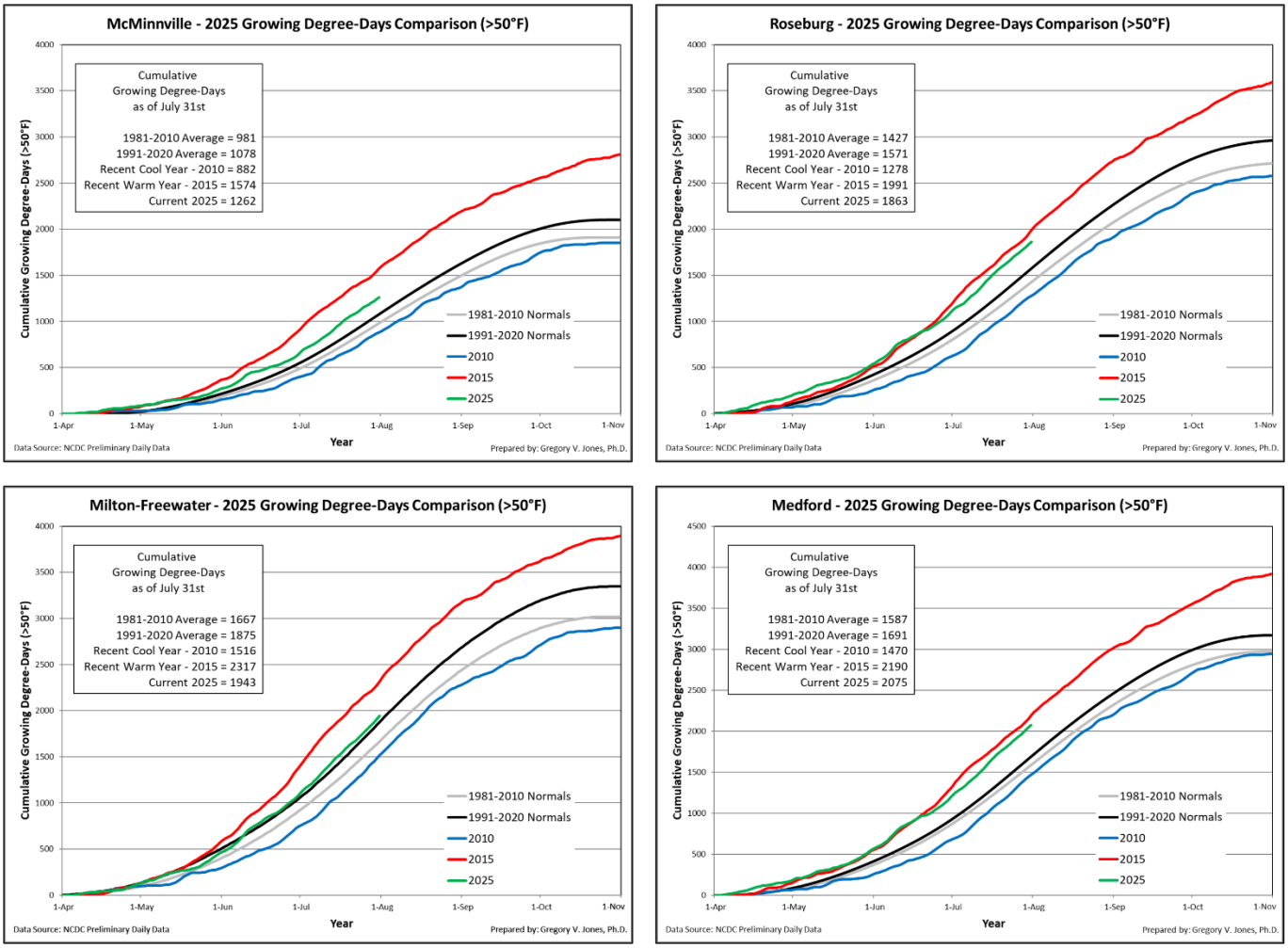


**Figure 4** – Cumulative growing degree-days (base 50°F, no upper cut-off) for McMinnville, Roseburg, Milton-Freewater, and Medford, Oregon. Comparisons between the current year (2025) and a recent cool year (2010), a recent warm year (2015), and both the 1981-2010 and 1991-2020 climate normals are shown (NCDC preliminary daily data).

**Drought Watch** – Precipitation over the eastern half of the country in July helped move most of the area out of drought while the western half of the country remained dry (Figure 1) with elevated fire conditions (Figure 5). The overall drought footprint over the continental US did not change much in July, dropping slightly to 45%, with the west gaining

area while the east lost area. The most extreme categories of drought rose slightly to just over 18%, almost all in the western US. The seasonally dry summer in the western US increased drought concerns in some regions, with the area from southern California, across much of the southwest, and into the Rockies continuing to have the most prolonged and severe drought situation in the west (Figure 5). The overall drought footprint in the west increased slightly from last month to just over 87%, with the most extreme categories rising to just over 42% of the western states. Washington's overall drought footprint moved to 100% of the state in some level of drought, with the most extreme categories of drought jumping to just over 60%. Oregon also moved to 100% of the state in some level of drought, with 32% now in the extreme drought categories. Montana's overall drought footprint remained at just over 76% of the state, with the extreme categories staying close to 30% of the state. Idaho saw its overall drought footprint remain at 100% and increased the most extreme drought categories to just over 48% of the state. California saw a slight increase in the overall area in drought in July to just over 76% of the state, while the more extreme drought categories remained close to 23% of the state now enduring more severe drought (Figure 5).

Not much change to the seasonal drought outlook, especially in the western US (Figure 5; right panel). Large areas of southern California, the southwest, the Rocky Mountains, and the northern to central Plains are likely to see drought conditions persist or develop further. Even the anticipated monsoon rain does not appear to have much impact on lowering drought in the southwest. For the West Coast states, drought concerns heading into summer have risen for central to southern California, most of Oregon, Idaho, and Washington, along with significant portions of Montana, where drought will likely persist or develop further. Much of the eastern half of the country is now forecast to stay out of drought for the rest of the summer (Figure 5; right panel).

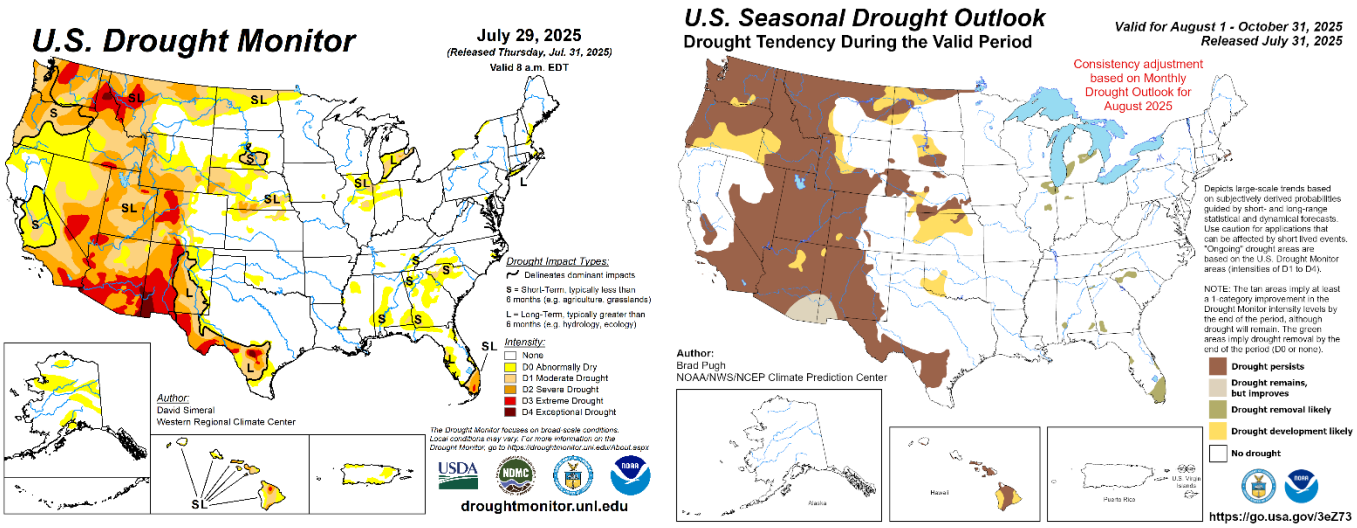


**Figure 5** – Current US Drought Monitor and seasonal drought outlook.

**ENSO Watch** – The Tropical Pacific Ocean basin continues in an ENSO-neutral status, and the ENSO Alert System remains inactive at this time. Equatorial sea surface temperatures (SSTs) are near average across most of the Pacific Ocean (Figure 6). The Climate Prediction Center (CPC) and other monitoring agencies around the Pacific Ocean also continue to show atmospheric conditions that are consistent with ENSO-neutral at this time. CPC modeling also continues to show a trajectory of outcomes that have SSTs remaining near average over the next few months. As such, ENSO-neutral is most likely to continue through the late summer in the Northern Hemisphere (56% chance in August-October). After the transition into fall, the chances of La Niña returning become more likely but remain comparable to ENSO-neutral chances (close to 50/50 at this time). ENSO's effect on weather during the late summer is typically quite low, with other Northern Hemisphere ocean and atmosphere dynamics playing larger roles. However, an unexpected quick transition into La Niña in the fall could bring about increased precipitation and cooler temperatures north and further dry conditions south.

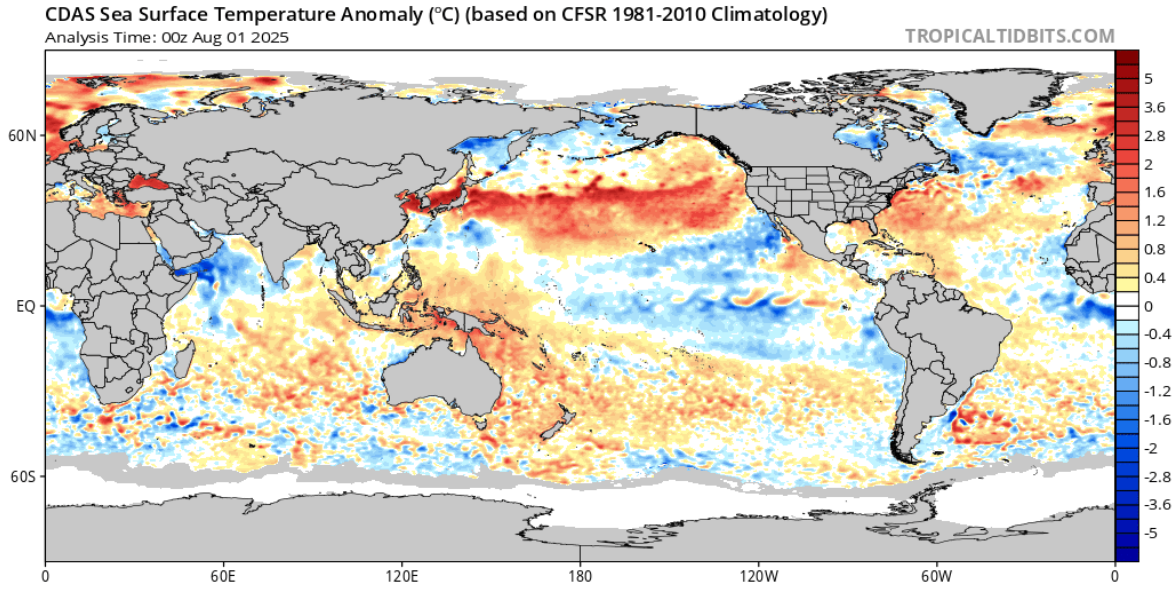


**Figure 6** – Global sea surface temperatures (°C) for the period ending August 1, 2025 (image from Tropicaltibits.com).

**North Pacific Watch** – After moving closer to neutral over the last few months, the Pacific Decadal Oscillation (PDO) index shifted back to a strong negative value in July. SSTs over the North Pacific show a pattern of very warm temperature anomalies covering nearly the entire basin from the Sea of Japan across to the west coast of North America (Figure 6). Cooler than average SSTs still remain along the western North American coast, especially in California, but the spatial extent has narrowed over the last month. Cooler SSTs expand to cover a greater area west of Baja California, extending southwest toward Hawaii (Figure 6). Similar to ENSO, the PDO's effects on North American summer weather are less than what we observe in the winter. However, the biggest effect so far this summer is the strong NNW wind field off the west coast, which produces enhanced upwelling of cooler water to the surface that ultimately has tamped down coastal zone temperatures. I would expect this effect to remain but lessen as we move into the fall.

**Forecast Periods:**

**Next 5 Days:** The start of the month was dominated by warmer than average conditions south due to a ridge of high pressure and cooler than average conditions north due to a set of low pressure areas coming into the PNW from the Gulf of Alaska. Light to scattered precipitation is likely in western Washington, and thunderstorms in eastern Washington and eastern Oregon. A high pressure ridge builds over the next few days, ushering a warmer than average and dry period for pretty much the entire western US.

**6-10 Day (valid August 11-15):** The high pressure ridge dominates this forecast period with a high probability of warmer than average temperatures over the vast majority of the western US. Most of the west is likely to stay dry with the exception of the northern Rockies along the Canadian border and a slightly elevated monsoon flow into Arizona. For the rest of the country, this forecast period is calling for above average temperatures, especially in New England, and wetter than average conditions to near normal precipitation amounts over most of the east.

**8-14 Day (valid August 13-19):** After a warm start over the west, broader onshore flow appears to take over during this forecast period with near normal to slightly above normal temperatures forecasted. Onshore flow also brings a slightly elevated chance for showers from northwestern Oregon into Washington, while California and much of the basin stays dry. Monsoon flow is likely to continue in the southwest. Very warm temperatures are likely in the eastern 2/3 of the country, while precipitation is forecast to be near normal to slightly above normal in the east.

**30 Day (valid August 1-31):** The general outlook for the month of August is pointing to the west likely seeing above average temperatures with the greatest chance in the southwest, Four Corners, and southern Rockies (Figure 7). The only exception is along the California coast, where cooler conditions along the coastal zone are forecast to keep temperatures likely closer to average. The precipitation forecast for August is fairly uneven, with the bulk of the county having equal chances of above to normal to below amounts during the month. For the western US, August is usually one

of our drier months, and it appears to be so for this month, especially the Four Corners region of the southwestern US. Tropical storm potential has the southeast and Florida likely seeing a wetter than average month of August.

**90 Day (valid August-September-October):** As we head into harvest, the seasonal outlook for August through October has the bulk of the country likely experiencing a warmer than average three-month period (Figure 7). The Four Corners, Great Basin, New England, and Florida have the greatest chances of seeing a warmer than average end of summer. Precipitation during this three month period is currently forecast to be below average across the northern Plains and western Great Lakes. Wetter than average conditions are forecast for the Gulf Coast, southeast, and eastern seaboard (Figure 7), the result of the tropical storm season forecast for the Atlantic and Gulf. The rest of the country, from California to Texas and up into the Great Lakes, has equal chances of being above to normal to below average precipitation for this three month period.

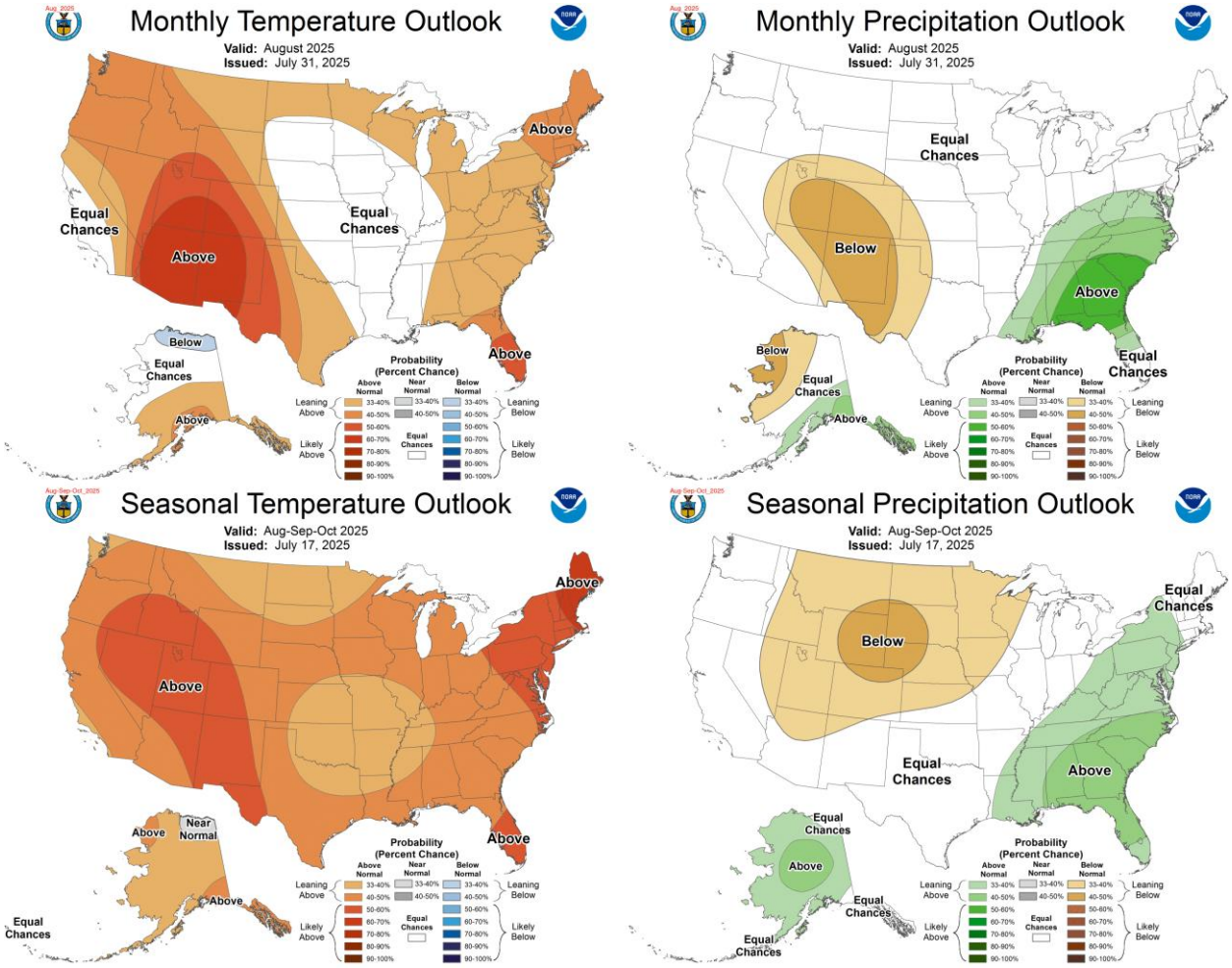


**Figure 7** – Temperature (left panel) and precipitation (right panel) outlooks for the month of August (top panel) and August, September, and October (bottom panel) (Climate Prediction Center, climate.gov).

Gregory V. Jones, Ph.D.
CEO, Abacela Vineyards and Winery
TEL: 541-324-9269
EMAIL: greg@abacela.com

Abacela®
AN ICON OF INNOVATION EST. 1995