

Weather and Climate Summary and Forecast

September 2026 Report

Gregory V. Jones, Ph.D.
September 4, 2026

Summary:

- Warmer than average¹ for most of California, the Southwest, and the Great Basin, with closer to average temperatures for the PNW and the northern tier of states during August.
- Precipitation amounts over the West during August were largely derived from a robust monsoon flow that brought rain to the Great Basin, Southwest, and portions of the Rockies.
- Even with some substantial rain from the monsoon flow, over 93% of the western US remains in some level of drought. Heading into fall, the outlook favors wetter conditions in the Northwest, the Southwest, Four Corners, Great Basin, and southern Rockies, while the interior PNW and Northern Rockies are forecast to remain dry.
- Spring came a month early; has fall come a month early? Unseasonably cool from Canada to central California over the next ten days or so. Rains along the West Coast with monsoon flow continuing in the Southwest.
- Near normal to slightly below normal temperatures forecast for the western US for the first half of September, then warmer for the second half. Better chances of precipitation in the first half of the month, less so in the second half of the month. Possible tropical storm influences in California and Oregon?
- The seasonal forecast for the western US heading into fall continues to call for warmer than average temperatures through November. Pacific Ocean SST and atmospheric observations pointing to a strong El Niño are likely to keep the West warmer than normal. Depending on how the subtropical jet responds, we could see a wetter start to winter for California and a drier PNW. Pretty much a classic El Niño forecast.

Past Month and Year to Date:

Record breaking wildfire season in the interior PNW due to extremely dry conditions, while southern California has been very hot and humid. August saw temperatures closer to average for the PNW, while inland areas and most of the southern portions of the West were very warm (Figure 1). The developing El Niño has a hand in this via extremely warm ocean temperatures bringing higher humidity, strengthening the subtropical jet, and bringing a robust monsoon flow. Temperatures were 4-8 degrees above average in the Southwest, while the PNW saw temperatures 1-3 degrees above average (Figure 1). The majority of the rest of the country was warmer than average in August, with the warmest area being the Southern Plains and Texas, with many areas seeing temperatures 8-10 degrees above average. Slightly cooler than average conditions were experienced across the Northern Plains and upper Great Lakes region (not shown).

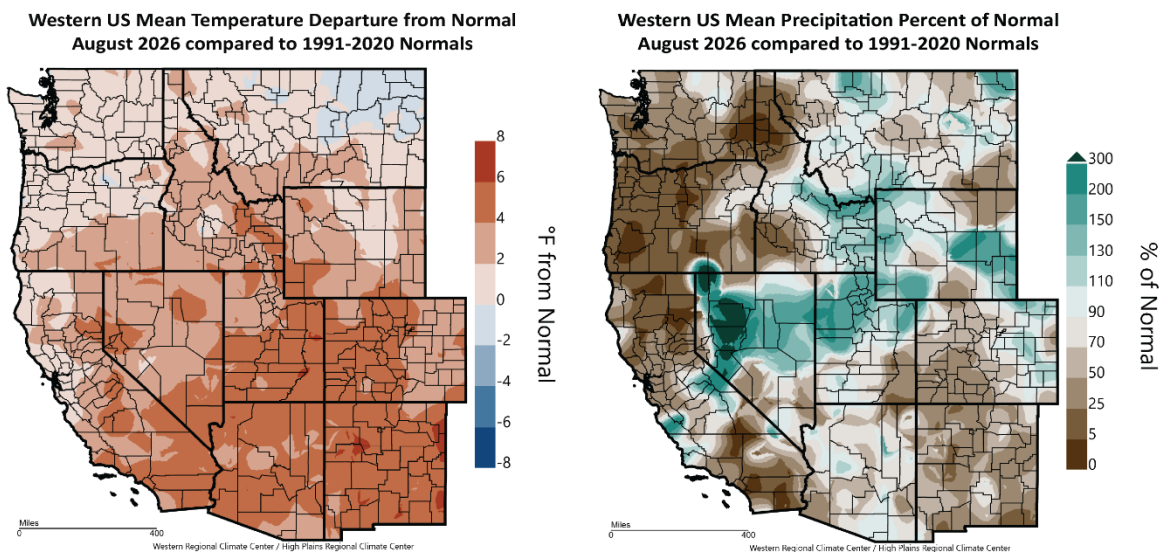


Figure 1 – Western US August 2026 temperature departure from normal (left) and percent of normal precipitation (right; images from Western Regional Climate Center and High Plains Regional Climate Center, 2026)

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.

Precipitation during August was dominated by monsoon flow that brought 110-300 or more percent of normal for the month over much of the Southwest, Great Basin, and Rockies (Figure 1). Much of the monsoon rains were isolated, with some portions of Nevada seeing over 300% of normal, while nearby locations received nothing. Nearly all of the PNW was dry during August. For the rest of the country, a dominant storm track developed during the month, with severe weather and heavy rains from the Northern Plains, across the Corn Belt, into the Ohio River valley, and mid-Atlantic regions. These regions saw 150-300% of average precipitation for the month, while Texas, the Southern Plains, Southeast, and New England were very dry or close to normal (not shown).

The year-to-date temperature pattern (Figure 2) is similar to what we saw in July (Figure 1), with warmer than average conditions over the West. The warmest regions remain the southwest, portions of the Great Basin, and most of the Rockies, with temperatures 4-8 degrees warmer than average. California has been warm as well, especially in the southern half of the state, with temperatures 2-4 degrees above average and much higher humidity than normal, while western Oregon and Washington have experienced closer to normal year-to-date, with temperatures closer to 0.5-2 degrees above average. Most of the rest of the country has seen warmer-than-average temperatures since the first of the year, running 2-4 degrees above average from Texas and the Mississippi River Valley to the Great Lakes. At the same time, the Southeast and eastern seaboard have experienced closer to average or some isolated areas seeing slightly cooler year to date conditions (not shown).

From January through August, precipitation amounts over the western US have been mostly drier than normal (Figure 2), although isolated areas in northwestern Nevada and southcentral Oregon, the northern Rockies, southern Arizona, and New Mexico have been wetter than normal, most of which is due to an active monsoon flow this summer. The January through August period has also seen drier than average conditions in the central to northern Plains, the Southeast, and Florida (not shown), while portions of Texas, the Gulf Coast, the Ohio River valley, and the Great Lakes have experienced roughly 150-300% of average precipitation.

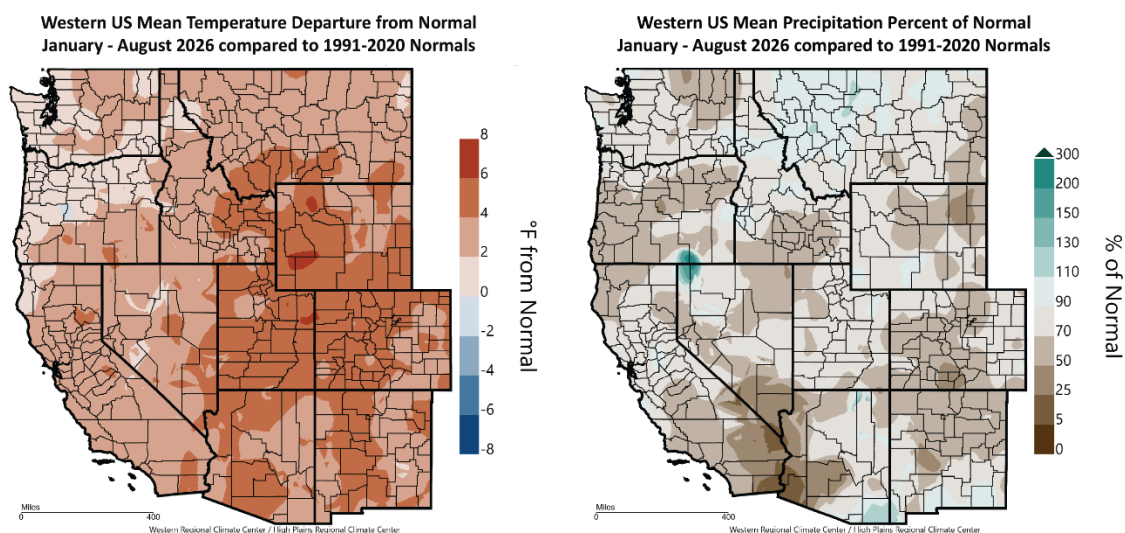


Figure 2 – Western US year-to-date (January 1 through August 31, 2026) temperature departure from normal (left) and percent of normal precipitation (right; images from Western Regional Climate Center and High Plains Regional Climate Center, 2026).

Heat Accumulation:

As we head into the homestretch of the vintage, cooler conditions have slowed heat accumulation somewhat; however, growing degree-days (GDDs) over the western US continue to show above average amounts (Figure 3). The warmest areas continue to be much of California and the Southwest, where GDD is 300-600 units above average, while portions of the PNW are running 100-300 GDD above average. Isolated areas along the entire West Coast, at higher elevations, and some inland zones are closer to average or just slightly below average. In the warmer areas, GDD accumulation is running ahead of 1991-2020 normals, with 10-20 days ahead in most of the PNW and as much as 30 days ahead of normal in California and the Southwest (not shown).

Heat accumulation in the Willamette Valley, Umpqua Valley, Rogue Valley, and Walla Walla Valley continues to show above average GDD values at the end of August 2026. With not much time left in the vintage, the four locations are currently at 12-29% and 2-16% above average compared to the 1981-2010 and 1991-2020 climate normals, respectively.

Lower maximum temperatures but slightly elevated minimum temperatures have contributed to the vintage GDD with locations running 3-5% higher than the average over the last 20 years. Compared to 2025, each location is now very close to or slightly below GDD values last vintage (-5% Medford; -8% Roseburg; -3% Milton-Freewater; -1% McMinnville).

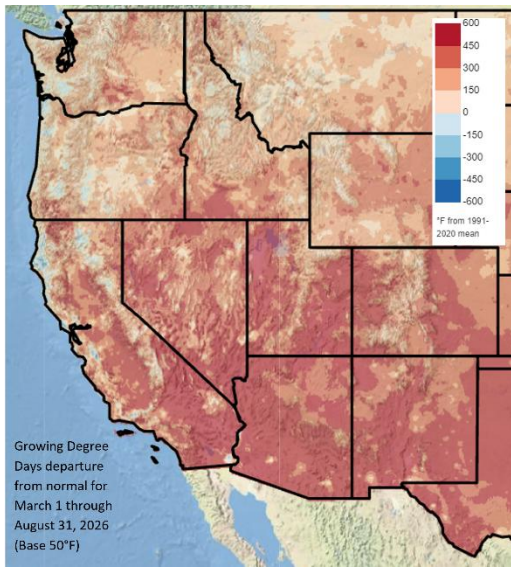


Figure 3 – Western US March through August 2026 growing degree-days (image from Climate Impacts Research Consortium, University of Idaho).

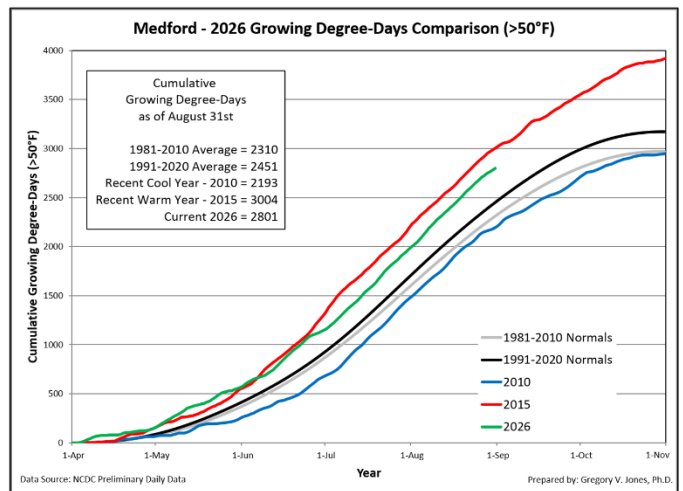
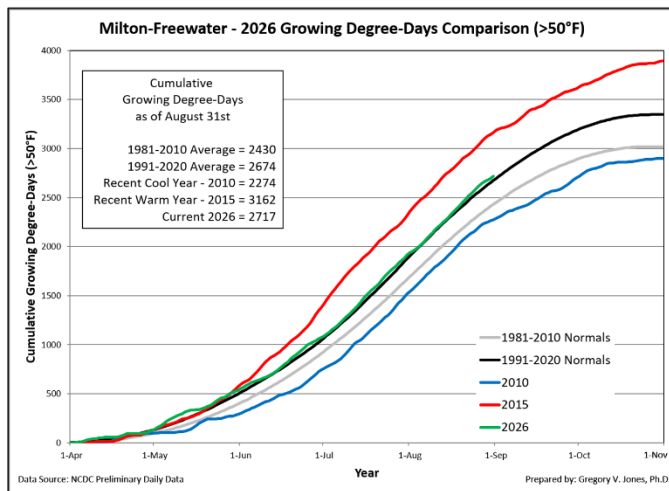
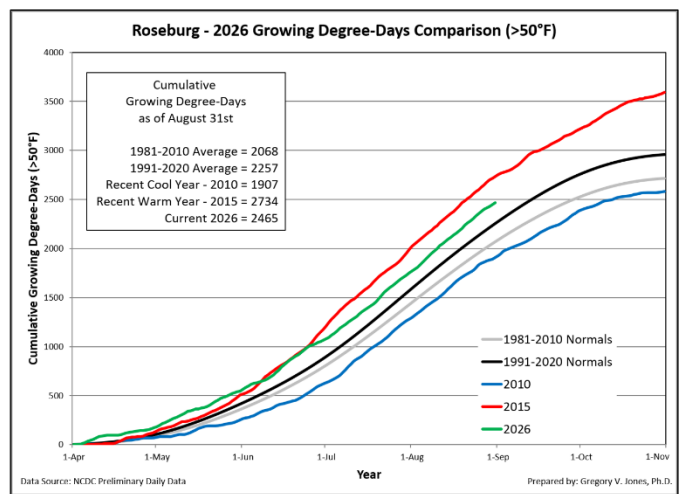
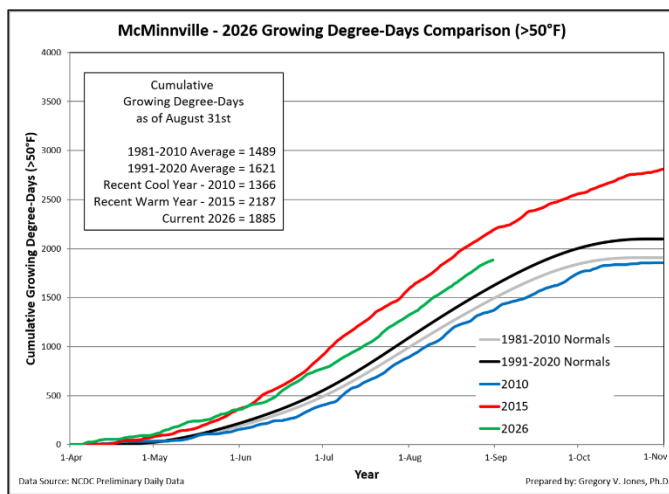


Figure 4 – Cumulative growing degree-days (base 50°F, no upper cut-off) for McMinnville, Roseburg, Milton-Freewater, and Medford, Oregon. Comparisons between the current year (2026) and a recent cool year (2010), a recent warm year (2015), and both the 1981-2010 and 1991-2020 climate normals are shown (NCDC preliminary daily data).

Drought Watch:

Continued large footprint of drought across the US with little relief except for monsoon flow in the Southwest (Figure 5). Across the contiguous 48 states, the overall drought footprint rose nearly 10% to 79% today, with the most extreme drought categories also increasing to just over 32%. Warm and dry conditions over much of the western US during August increased the drought footprint to nearly 93%, with the most extreme categories remaining at 48% of the west. August was mostly dry across California, leaving the drought footprint at just over 65%, with roughly 1% of the state in the more extreme categories of drought. Oregon was mostly dry across the state in August, keeping its drought footprint close to 99% of the state, with the extreme drought categories (severe, extreme, and exceptional) rising 10% to nearly 68% now. Drought area also increased in Washington in August, rising to nearly 94% in drought, with the most extreme categories of drought jumping to 25%. Portions of Idaho and Montana received some welcome monsoon rains during the month but were mostly isolated and did not change the overall drought concerns much. Montana's overall drought footprint rose to nearly 93%, with the extreme categories rising slightly to just over 17% of the state. Idaho's overall drought footprint increased to nearly 97%, while the most extreme drought categories climbed to over 57% of the state (Figure 5).

The forecast heading into fall has a pattern in the seasonal drought outlook that looks very similar to last month (Figure 5; right panel). One of the differences is for the PNW, where the drought conditions are anticipated to improve or be removed altogether. Similar influences are seen from monsoon flow and likely continued subtropical jet stream support for precipitation in the Southwest, which is likely to improve or remove drought declarations in the Southwest, Four Corners, and portions of the Great Basin. Wetter conditions along the Gulf Coast states, the Southeast, and into eastern US have lowered drought concerns there. However, much of the Northern Plains across to the western Great Lakes states and south into the Southern Plains and Texas are forecast to remain in drought or see drought develop further (Figure 5; right panel).

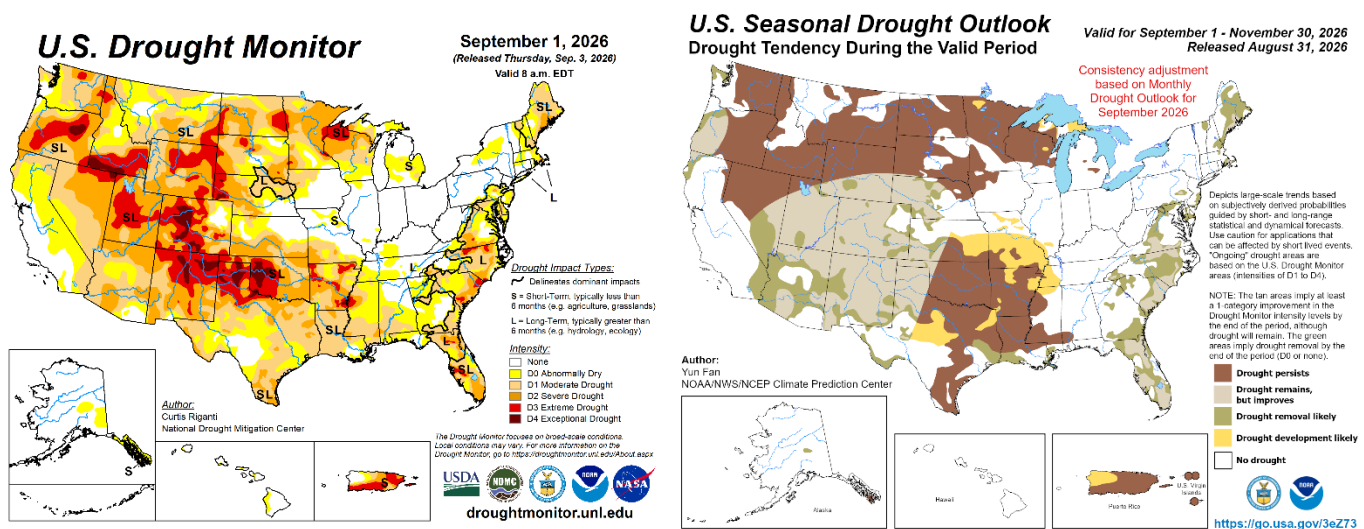


Figure 5 – Current US Drought Monitor and seasonal drought outlook.

ENSO Watch:

Strengthening El Niño conditions continue in the tropical Pacific, with sea surface temperature (SST) significantly above average across the east-central and eastern Pacific Ocean (Figure 6). Atmospheric conditions across the Tropical Pacific also continue to be consistent with El Niño. The Climate Prediction Center official ENSO Outlook, which draws on multiple forecast models from North America and other Pacific Rim countries, indicates that El Niño is likely to continue strengthening through the end of the year. For the October–December 2026 season, the outlook shows a 69% chance that the event will reach historic strength, exceeding all El Niño events observed since 1950. An event of this magnitude would increase the likelihood of El Niño-related impacts, although those impacts are not guaranteed. A stronger subtropical jet stream is one of the more likely effects, which in turn would support a more active monsoon, as the seasonal outlooks keep leaning toward in the 90 day forecast.

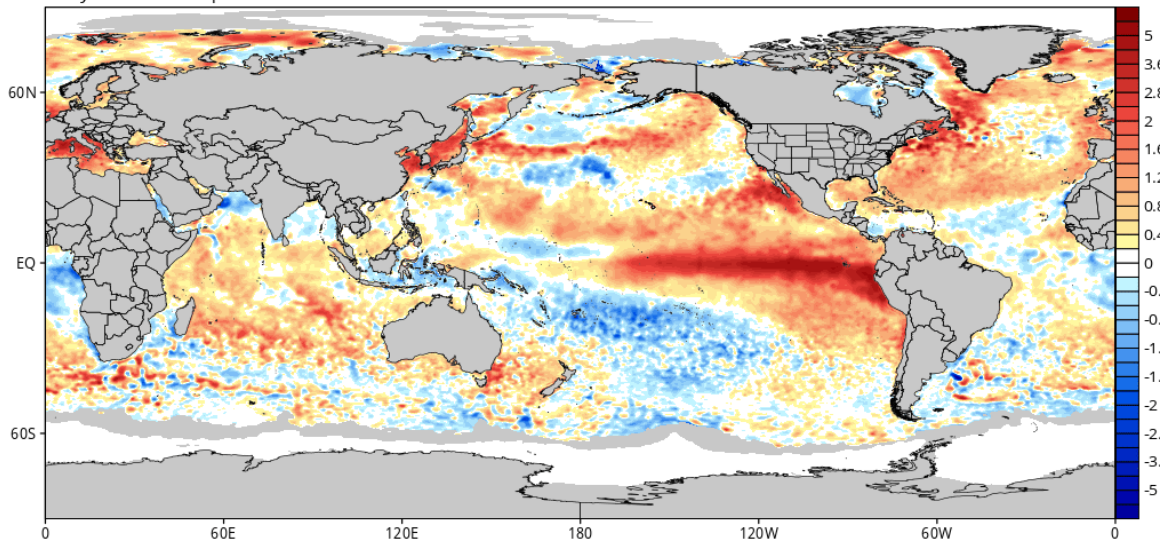


Figure 6 – Global sea surface temperatures (°C) for the period ending September 1, 2026 (image from Tropicaltidbits.com).

North Pacific Watch:

Some cooling in the central North Pacific and warming in the Gulf of Alaska, while the rest of the basin remains warmer than average. The area that contributes most to the Pacific Decadal Oscillation, the horseshoe-shaped area of cooler SSTs from the Gulf of Alaska along the coast of western North America and southward to Hawaii, has continued to warm (Figure 6). While the North Pacific remains in the negative phase of the Pacific Decadal Oscillation, additional warming is likely to bring the North and Tropical Pacific more 'in phase', ultimately bringing more likely impacts over North America from a split jet stream bringing drier and warmer conditions to the PNW and wetter and warmer conditions across California and the southern tier of states.

Forecast Periods:

Next 5 Days: A shift in the Pacific High to the west and the Continental High to the east has allowed low pressure systems to slide down the West Coast, bringing October conditions to much of the West. Unseasonably cool with the potential for precipitation for most of the West Coast, while monsoon flow will continue in the Southwest. A long-duration heat wave over the eastern half of the country with much above normal temperatures likely.

6-10 Day (valid September 8-12): Circulation pattern continues to allow cooler air and precipitation chances over most of the West. Temperatures will rise to be closer to normal, with a few warm days interspersed during the forecast period. Precipitation chances are greatest in the monsoon region of the Southwest and Great Basin, although onshore flow could bring some rain to the PNW. Long-duration heat wave continues in the eastern half of the country with significantly warmer than average temperatures and near normal to below normal precipitation.

8-14 Day (valid September 10-16): The western US is likely to see near normal to slightly warmer than normal conditions into mid-month. Precipitation over the West will likely be mostly from continued monsoon flow in the Southwest but onshore flow continues in the PNW, increasing the chances of rain. The heat wave continues in the east, shifting slightly to the Southeast with significantly warmer than average temperatures, while precipitation is likely to be near normal to moderately below normal in the East.

30 Day (valid September 1-30): The cool start to September will likely keep the month cooler than average to near normal for most of the western US (Figure 7). A warmer than average month is forecast for Southern California, the Southwest, and the vast majority of the rest of the country. The highest forecast confidence for above-normal temperatures is given for the central Plains. Equal chances of below, near, or above-normal temperatures are forecast for New England, where a more variable temperature pattern is expected in September. The September precipitation outlook has much of the central to eastern portion of the country with equal chances of seeing above, average, or below normal amounts (Figure 7). The western US is forecast to see above normal precipitation in September, with a significant portion of Oregon having the greatest chance of a wetter than average month (Figure 7).

90 Day (valid September-October-November): Heading into fall, the forecast models continue to be driven by the anticipated effects from El Niño, especially regarding precipitation, where a dry PNW and wetter Southwest is forecast (Figure 7). The highest forecast confidence for above-normal temperatures over the next three months is centered over the PNW and across into the Northern Plains, with decent chances of warmer than average temperatures across the West, South, and Eastern Seaboard. Equal chances of below, near, or above-normal temperatures are forecast for the Midwest and Ohio River Valley, where a more variable temperature pattern is expected over the next 90 days. The 90 day precipitation forecast is largely pointing to equal chances of below average, near, or above average over most of the US; however, there is high confidence in below average amounts likely in northern Washington, the Great Lakes, and New England, while the subtropical jet stream is forecast to bring higher than average precipitation amounts to the Southwest (Figure 7).

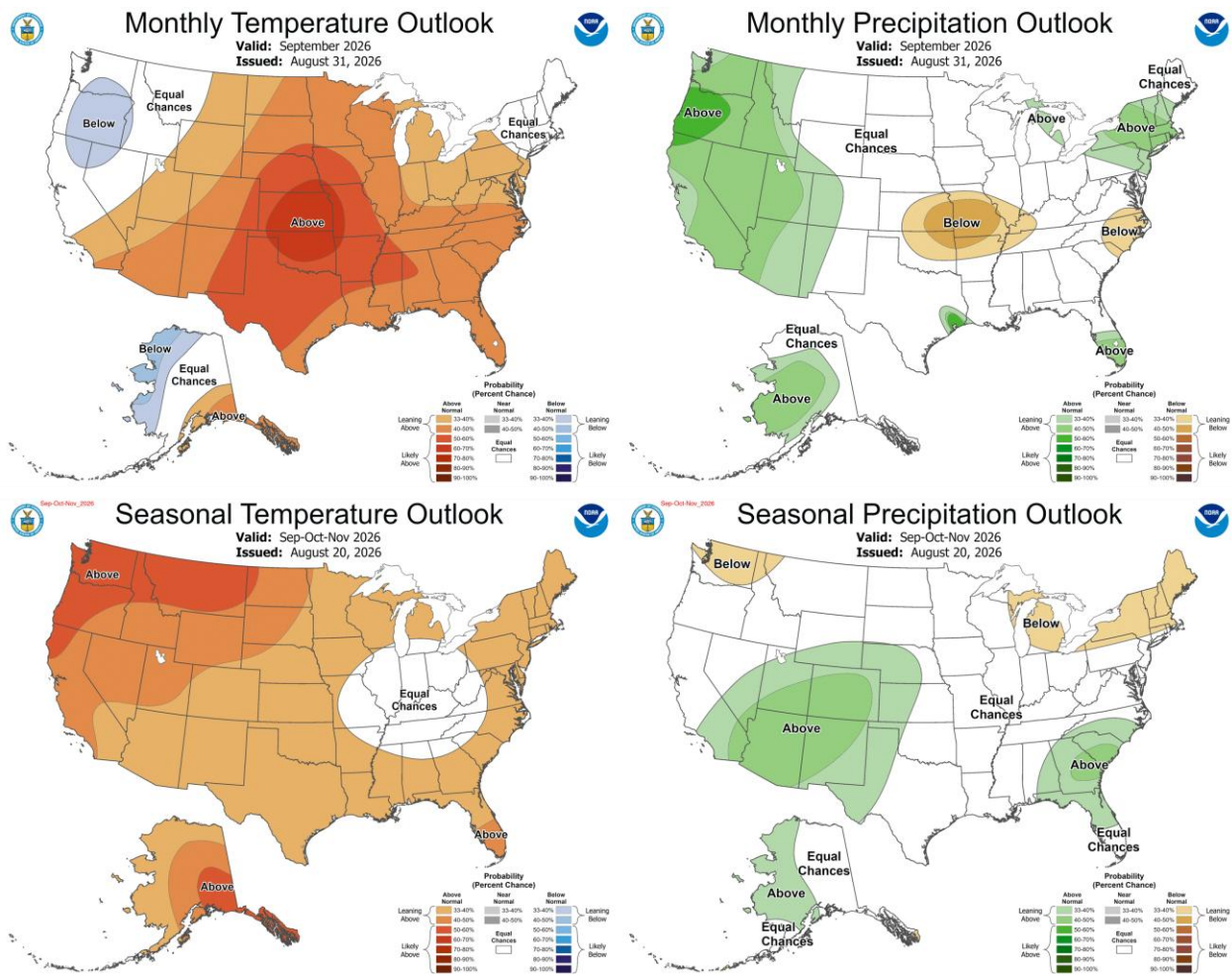


Figure 7 – Temperature (left panel) and precipitation (right panel) outlooks for the month of August (top panel) and August, September, and October (bottom panel) (Climate Prediction Center, climate.gov).

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

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