

2024 Summer Weather Outlook (June-September)

Overview

Last summer was the second hottest on record for the state of Texas – behind only 2011. Six of the 10 hottest summers on record since 1895 have occurred since 2010 (2010, 2011, 2018, 2019, 2022, and 2023). 2007 was the last summer to be recorded in the coolest half of all historical summers in Texas.

A La Niña pattern began during the summer of 2020, continuing until a brief El Niño impacted the global climate between Spring 2023 and Spring 2024. The Pacific Ocean has been more supportive of La Niña in recent years. As a result, expect La Niña to return this summer and continue through the remainder of 2024. For Texas, this commonly supports drought within the state.

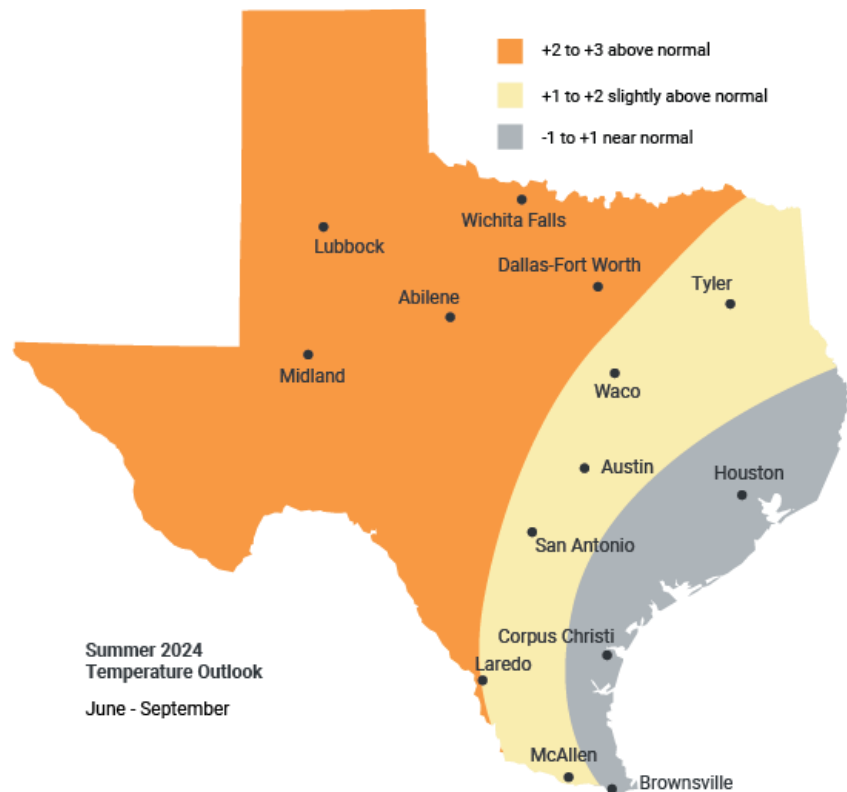
It's also important to note, the average temperature of the ocean surfaces across the globe is currently the warmest ever recorded. Last year, this resulted in not only the warmest year on record for the state of Texas but also averaged across the planet.

Summer Temperature Outlook

Taking all these trends into account, it will be very challenging for Texas not to experience another very hot summer, in the top 20 to possibly top 10 hottest range. The best hope for the summer to trend less hot would require a wet summer, which is not easily accomplished in Texas. The tropics, however, could have a say.

Of greatest interest is whether this summer can rival the summer of 2023 or 2011. As of today, that possibility cannot be dismissed. Many of the same factors from last summer are still in place. In fact, this spring is running considerably warmer than last spring across Texas. Probability the summer of 2024 approaches or exceeds 2023: 25% chance.

The ERCOT summer temperature outlook suggests the greater likelihood that the summer of 2024 will not approach the extremes of 2023 but may still be a top 10-20 hottest summer. For this



scenario to happen, it will likely require fewer days under the influence of the heat dome building from Northern Mexico into Texas than what was experienced last summer. Probability the summer of 2024 is top 20 hottest but not top 2: 60% chance.

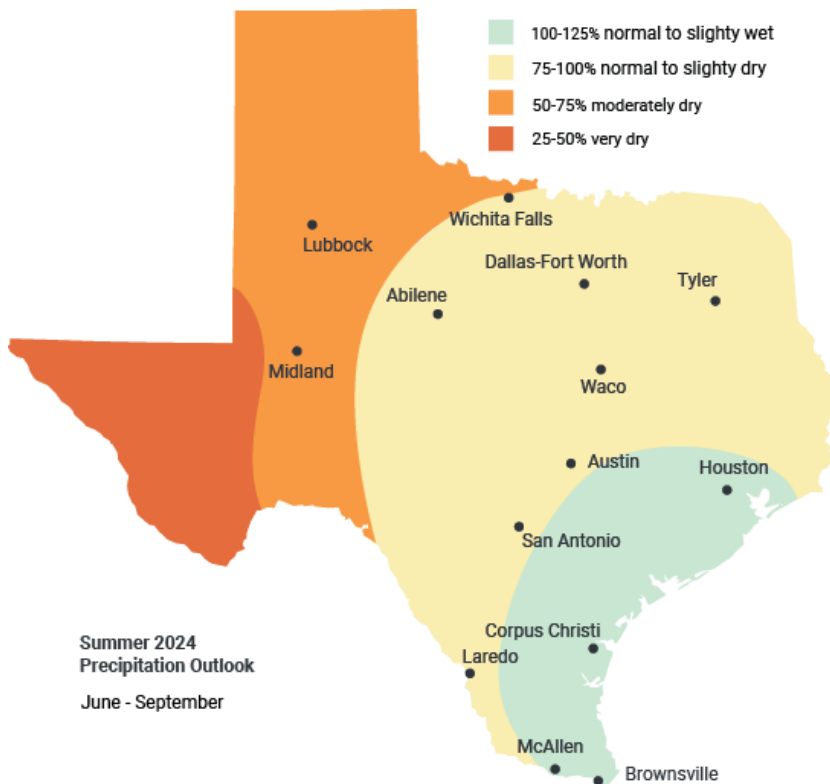
For the upcoming summer to not rank in the 20 hottest since 1895 would likely require a relatively wet summer. This could come from active tropics (potential tropical cyclone impacts), an active Southwest monsoon bringing rain to West Texas, or even a more active sea breeze than observed last summer. Probability the summer of 2024 is milder than most recent summers: 15% chance.

The best opportunity for an above-normal, hot summer will be over West Texas. The western half of Texas has experienced a relatively dry spring, which should act to assist the hot extremes over that part of the state this summer.

The best opportunity for a near-normal summer will be in the vicinity of the Gulf Coast, suggesting more impacts from the Bermuda high than the high-pressure dome building north from Mexico.

Summer Precipitation Outlook

There are some very sharp contrasts of wet areas to regions impacted by drought across the state heading into the summer season. Precipitation has benefited roughly the northeastern third of Texas in recent months. Most of West and South Texas have trended significantly drier than the rest of the state.



The summer precipitation forecast suggests a lean toward a relatively dry summer. The best chance for a relatively wet summer will be in the Coast and eastern South zones. The best chance for a dry summer will be over Far West Texas.

The summer precipitation forecast predicts increasing drought over the western third to half of the state. If the transition to La Niña happens in the first half of the summer, that could lead to even more expansive drought.

It should be noted that the forecast does not consider tropical cyclone landfalls and impacts, which could significantly alter rainfall totals in regions impacted.

In general, the precipitation forecast is more of a wildcard than the temperature forecast, with a greater range of potential outcomes.

Hurricane Season Outlook

All signs point to a very active hurricane season.

Seven of the 8 most active hurricane seasons in the Atlantic Basin have occurred since 2005, based on total number of named storms. Last year saw 20 named tropical cyclones, which ranked as the fourth most in a single year, since 1851; however, most of the hurricanes and tropical storms in 2023 curved out to sea rather than making landfall. Regardless, 20 named storms occurred during a year with El Niño, which is typically less conducive to active seasons. The very warm sea surface temperature anomalies appear to have been the main driver for tropical development – and those abnormally warm ocean temperatures continue to trend warmer. Add in the trend toward a more favorable La Niña cycle, and the key ingredients are in place for an active season.

The forecast calls for 18 to 22 or more named tropical cyclones in the Atlantic Basin this year (Atlantic, Caribbean, and Gulf of Mexico). Seven to 12 of those named storms are predicted to develop into hurricanes, and 3 to 6 of those hurricanes are expected to intensify to major hurricanes (Category 3 or greater).

This year should also bring more activity to the Gulf of Mexico than last year. Four to 6+ named storms within the Gulf is the forecast. While predicting landfalls for storms is without skill months in advance, this year does show higher-than-average potential for a landfall (or more than one) in Texas.