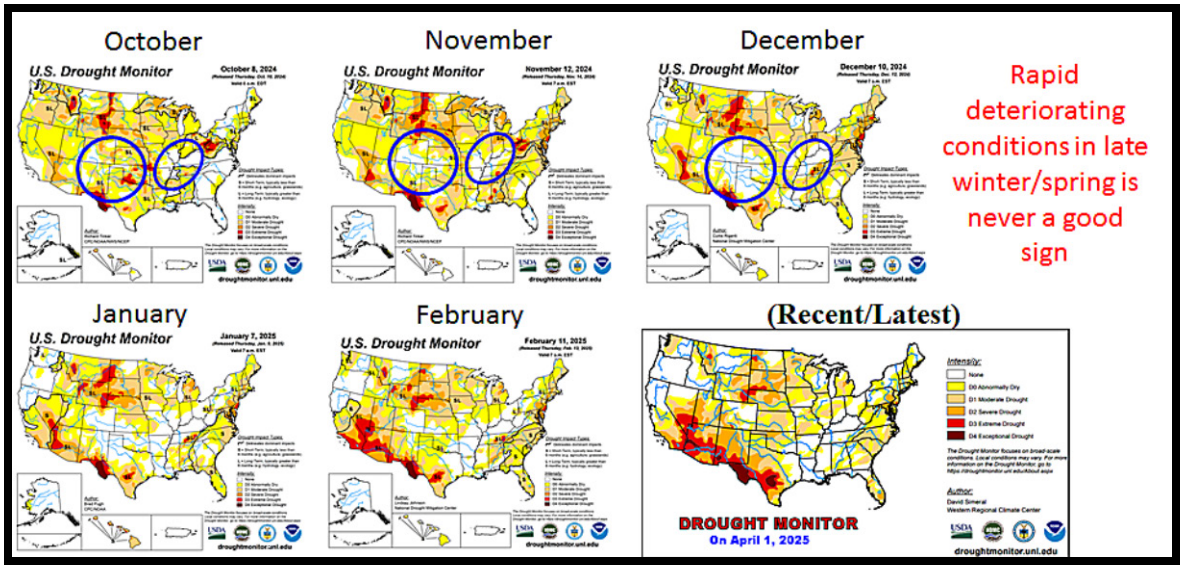
Central, SW U.S. Dryness May Prevail Into July

By Drew Lerner

Kansas City, April 4 (World Weather Inc.) – "***Portions" of the central and southwestern United States have been struggling with below normal precipitation since the latter half of summer 2024 with the exception of November. World Weather, Inc. believes a part of this dryness will likely prevail through the balance of spring and into early summer.*** In the meantime, ***a wetter bias is expected at times in the eastern Midwest and a part of the Delta and a change toward wetter conditions should evolve in the far northern Plains and upper Midwest late this spring followed by a drier bias in July***. The southeastern states will experience less than usual rain during the spring and then greater rain during the summer. Temperatures should be most anomalously warm in the central states and a part of the Rocky Mountain region until July.

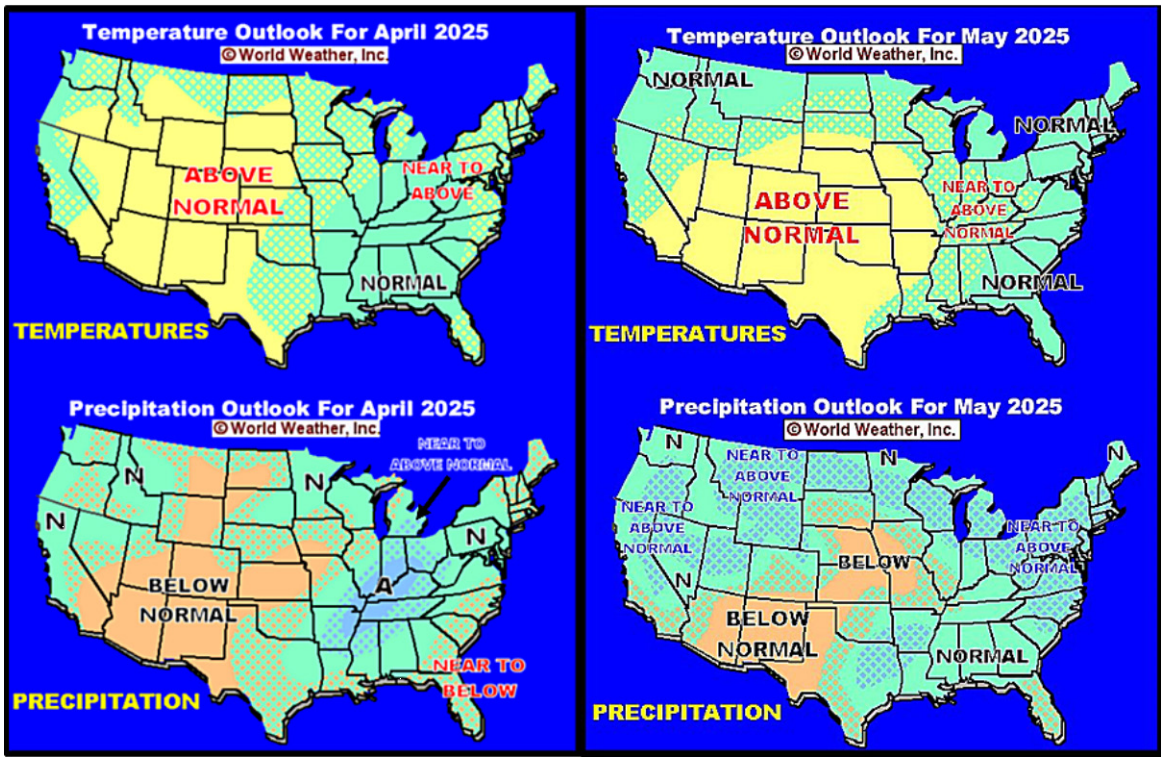


Expanding drought in February and March is never a good sign. Late winter and spring is normally a period in which drought is reduced due to active precipitation patterns resulting from strongly contrasting winter/spring air masses. ***Some of the driest growing seasons on record often began the dry bias when late winter and early spring moisture was restricted. Drought has certainly expanded across the central and southwestern parts of the nation in recent weeks and months.***

Part of the dryness in the central and southwestern parts of the United States and northern Mexico came out of the weak La Nina weather pattern that evolved in late autumn and prevailed into winter. However, it was not all about La Nina. Help also came from the negative phase of Pacific Decadal Oscillation (PDO) and the lunar cycle. Evidence of the influence from these other patterns was made more clear when the La Nina influence dissipated in recent weeks and yet the weather trend failed to change.

The lunar (18-year) cycle has dictated the alternating pattern of two short term weather patterns that have dominated the late autumn, winter and early season season. ***This pattern has very little potential for change through the end of April and into early May and the end result will be the continued lack of rain in some central and southwestern portions of the United States and northern Mexcio.*** The pattern will also continue to

promote periodic bouts of significant rain from eastern Texas through the Delta to the lower and eastern Midwest; including a part of the Tennessee River Basin. Precipitation in this pattern also is limited from the central and southwestern parts of Canada's Prairies into a part of the northern U.S. Plains while the Pacific Northwest gets periodic rainfall and the southeastern states are a little drier biased.



The upper air windflow pattern (jet stream) shows no sign of changing at least not before the heart of May at which time seasonal changes will begin to promote high pressure ridge building in the middle of the United States. High pressure ridges are normal during the late spring and summer over portions of central North America. When this year's ridge of high prssure begins to build it may do so faster than usual and have greater amplitude than in years past. The primary reason for these changes is the lack of moisture already present in the central and southwestern states.

Dryness in the central states will promote periods of warmer than usual temperatures and the heat occurring over dry soil will not likely do much more than intensify the pattern that generated the heat in the first place. The combined impact of an unchanging 18-year (lunar) cycle pattern and ridge buidling will likely maintain a poor rain distribution from the central U.S. Plains and neighboring areas of the western Corn and Soybean Belt into the southwestern desert region; including a part of the central and southern Rocky Mountains.

As the ridge of high pressure builds into the central states during May, the jet stream will be shifted to the north bringing showers and thunderstorms to the northern Plains, southern Canada's Prairies and the northern and eastern Midwest. ***The rapid development of high pressur in the central states will most likely leave parts of Iowa, Nebraska, Kansas and northern Missouri out of the active weather pattern.*** ***That leaves the next few weeks***

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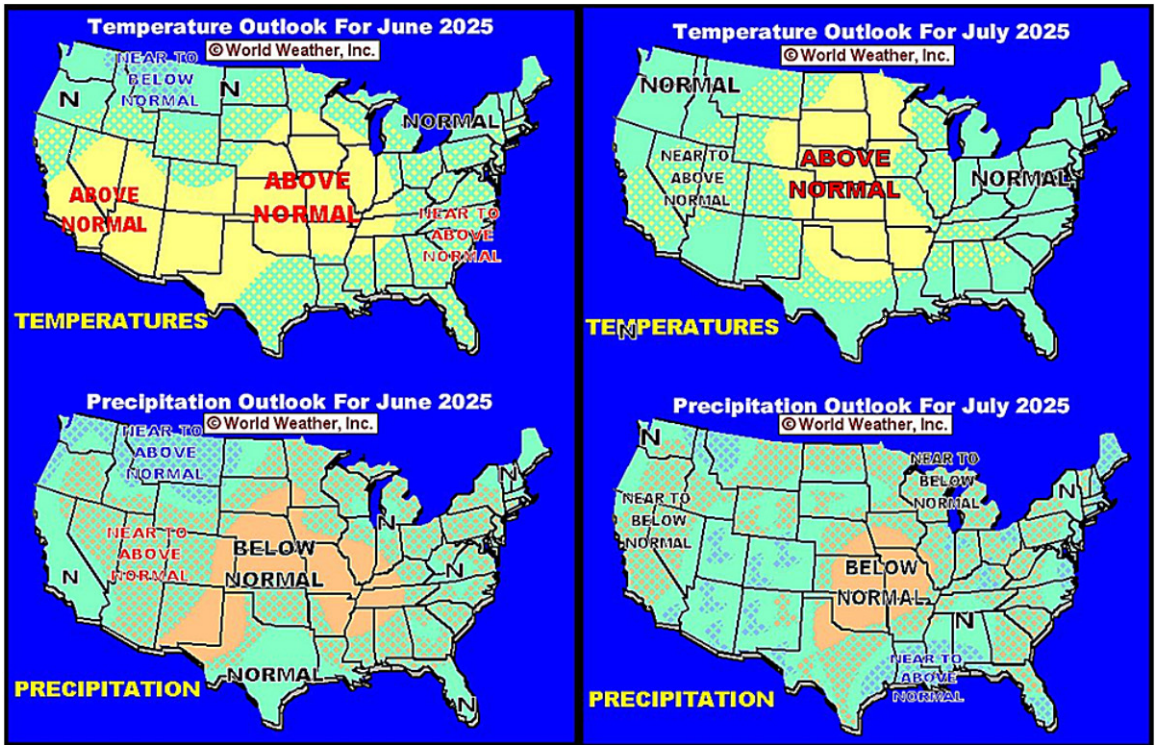
as being the best opportunity for rain to fall in these states and the first half to two-thirds of April are not offering much rain to the central or southwestern Plains. That leaves late April and early May as the best time for rain of significance to fall in Iowa, Nebraska, Kansas and Missouri. That period of time may be too short for long term moisture deficits to be fixed and the odds are relatively high that these areas will keep their below normal precipitation bias through the month of May.

In the meantime, in late April and May monsoon moisture should begin flowing northward from southern Mexico. ***World Weather, Inc. still believes the failed monsoon patterns in South America in 2022-23 and 2023-24 and the failed monsoon patterns of 2023 and 2024 in the United States are related to the Hunga Tonga volcano eruption in January of 2022. This year's return of monsoonal rainfall in Brazil provides some hope that the North American monsoon will resume this year as well. If that assumption is made then drought in northern Mexico should begin to wane in June and July.***



If the U.S. monson is going to be revitalized in 2025, that should be the ideal time to see some relief to persistent drought in both the southwestern desert region and northern Mexico. If the U.S. ridge of high pressure in May forms over the dry areas in the central and southwestern U.S. Plains there will be added incentive for the monsoon pattern to begin normally and spring rain through the Rocky Mountain region in July and August. The monsoon moisture would then move around the center of high pressure over the central and southwestern Plains eventually bringing rain to the northern U.S. Plains and southern Canada's Prairies where some timely is expected to evolve in May as the high pressure ridge evolves.

There is some evidence that rainfall in the northern U.S. Plains and southern Canada Prairies will be lighter than usual during July. If that is the case the central U.S. Plains may get some of the monsoon moisture or the monsoon moisture will flow far to the north in

Idaho, Wyoming and Montana only to be carried into Canada by frontal systems moving into the Pacific Northwest.

In the meantime, ***the lunar cycle will have shifted the old winter precipitation bias pattern northward so that the U.S. northwestern states and especially the northwestern U.S. Plains and southwestern Canada are receiving gerater rain in June.*** The wetter bias in those areas should shift farther to the north in July which is why the northern U.S. Plains become a littler drier biased at that time.

As the monsoon moisture becomes more routine from Mexico into the U.S. Rocky Mountain region there will be some benefit for the northern and west-central high Plains as well as aeras in the northwestern Midwest. In the meantime, the old winter lunar cycle pattern will also be perpetuating a northwesterly wind flow aloft over eastern North America. That means shots of cool air will move southeast from Canada through the Great Lakes region to the northern and middle U.S. Atlantic Coast States and Ontario and Quebec, Canada. Precipitation in eastern North Americ will help maintain timely rainfall for the northern and eastern Midwest and the middle Atlantic Coast States. ***Even though precipitation will be lighter than usual at times in the eastern Midwest and Atlantic Coast States there will be some timeliness to the rain resulting in more favorable support for summer crop development.***

The southeastern U.S. should trend wetter than usual late this summer while changes in most other areas will be slight. World Weather, Inc. believes A tropical weather system may bring some significant rain to Texas and/or the Delta in June and others will bring abundant moisture to the lower Delta and/or the southeastern states during July and August making those areas wetter biased. However, ***very little change is likely in the central U.S. where some dryness may prevail especially in Missouri, Oklahoma, Kansas, Nebraska and parts of Iowa.***

Temperatures should be warmer than usual in many crop areas during the summer 2025 and if dryness gets to intense some of the heat could become excdssive.

MARKET IMPACT OF WEATHER OUTLOOK

Despite the below normal precipitation bias that will be prevalent in many key U.S. crop areas in the Great Plains and southwestern Midwest this growing season, there will be a degree of timeliness in what precipitation does fall and that will help curb the production cuts especially in the far northern Plains, northern and eastern Midwest and the southeastern states. The most persistent dryness is expected to be in the central and southwestern parts of the U.S. during the balance of spring and mostly in the central part of the United States during summer.

Planting should go swiftly in the Midwest except in the lower Midwest where flooding rains are occurring now. Those areas will be planted later than usual and a close watch on that region will be warranted since additional rain is likely before the region completely dries out.

Natioinwide corn and soybean yields may be down a bit this year, although a crisis is not anticipated. One of the reasons why precipitation is expected to be a little more timely in portions of the Midwest this summer is due to the solar cycle. This is the summer following the solar maximum and that usually results in a little more precipitation in those summers. In this case, precipitation in 2025 is already dictated to be lighter than usual in the central

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United States and the negative phase of Pacific Decadal Oscillation may also help ensure the dryness prevails in those areas. The combined impact of each of these weather influences along with the lunar cycle brings the conclusion for the growing season to be a little stressful at times in the Plains and soutwhestern Corn and Soybean production region where some yield potentials will fall while the eastern and northern Midwest experience the best weather and the greatest potential yields which may not be perfect, though better than southwestern corn and soybea production areas. Planting delays in the lower Midwest and northern Delta could prove to have some negative impact on yields, although the influence may be small.
