USDA Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

Midwest Ag-Focus Climate Outlook

May 1, 2025

Main Points

- Spring rains alleviated some drought conditions, but moderate drought persists across the Plains.
- Temperatures over the past month were near to above-normal for most locations, expected to remain above normal.
- Corn and soy planting progress is picking up across the region.
- April brought record rainfall and flooding to the Ohio River Valley .

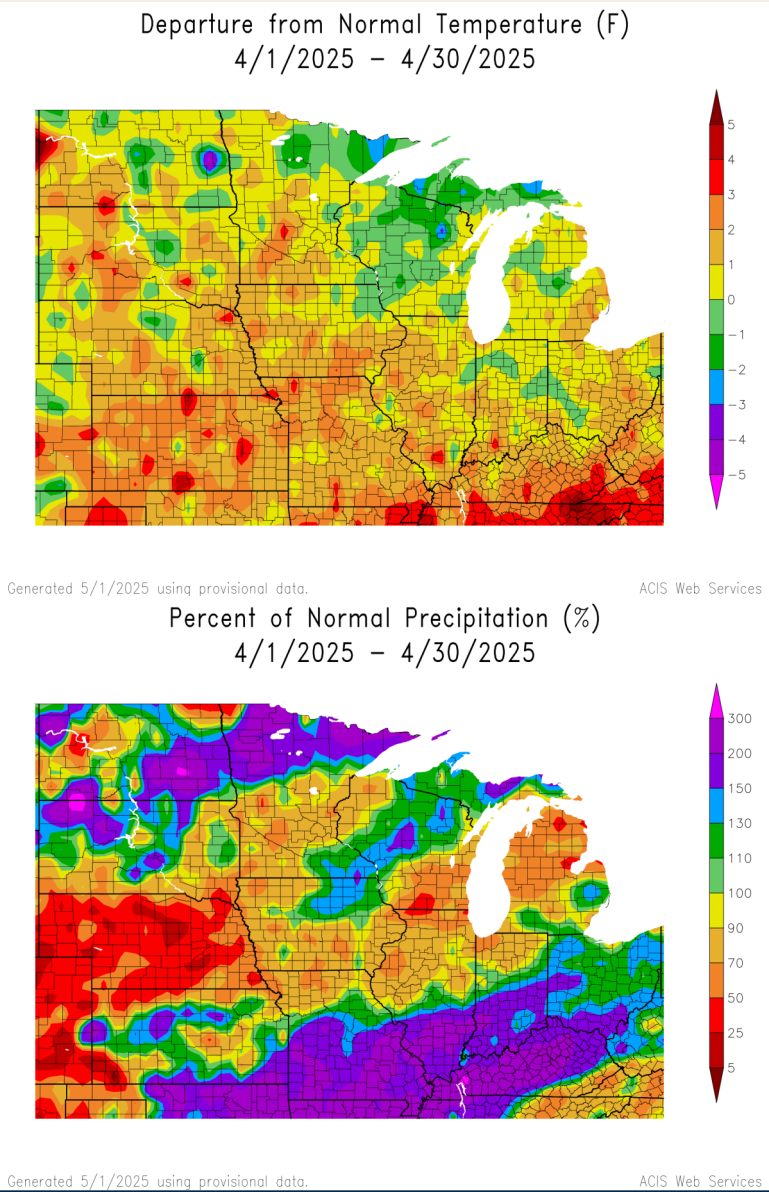
Current Conditions

Over the past month, several systems have brought much-needed rain to parts of the region. Pockets of Iowa, Minnesota, Wisconsin, South Dakota, and Kansas have received more than 4 inches of precipitation in the past 30 days, 150% of normal precipitation in some locations. Southern Missouri, though southern Indiana and Kentucky received at least 10 inches of precipitation. This is 4.5 inches (and greater) above average precipitation for the region this time of year. In stark contrast, Nebraska and pockets of North Dakota and Kansas have received less than 0.5 inches of precipitation in April.

Temperatures across the region during the past month have generally been 1-2°F warmer than average for this time of the year, ranging from the high-30°Fs in the northern portions to the low 60°Fs in the southern portions. Pockets of 1-3°F below normal were more common in the northern half of the region, while the southern half of the region, and South Dakota experienced pockets of 3-5°F above normal.

The 4inch soil temperatures vary across the region. Mesonets across the region show current temperatures in the southern portions of the regions are into the mid-60°Fs, with stations in the central portion varying low-to-mid 50°Fs, and stations in the northern portions still in the low-to-mid 40°Fs limiting the planting of more warm season crops.

Images from High Plains Regional Climate Center (HPRCC), Online Data Services: ACIS Climate Maps. Generated: 05/01/2025.



Growing degree days (GDD, base of 50°F) since April 1st have begun to accumulate. In the southern portions of the region, GDDs are near or exceed 300 GDD, northern portions have been slower to accumulate GDD, with only 50-100 GDDs accumulated. The majority of the region is near or above average in terms of accumulation, except Wisconsin, which is below average (20 or more GDD) accumulation for this time of the year. GDD can be rapidly accumulated with warmer weather. Southern portions of Kentucky have accumulated (30 or more GDD) more GDD than average for this time of the year.

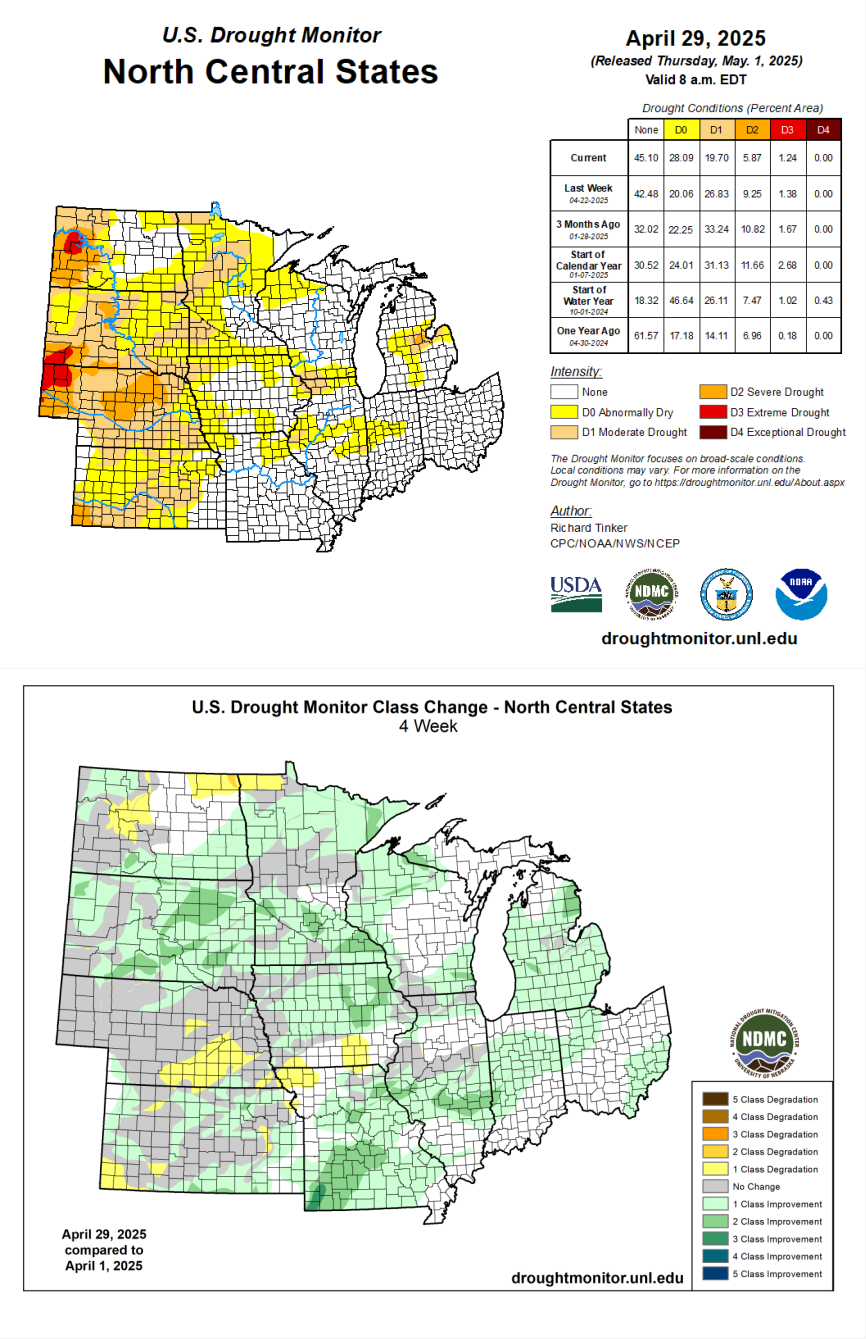
Impacts

Drought

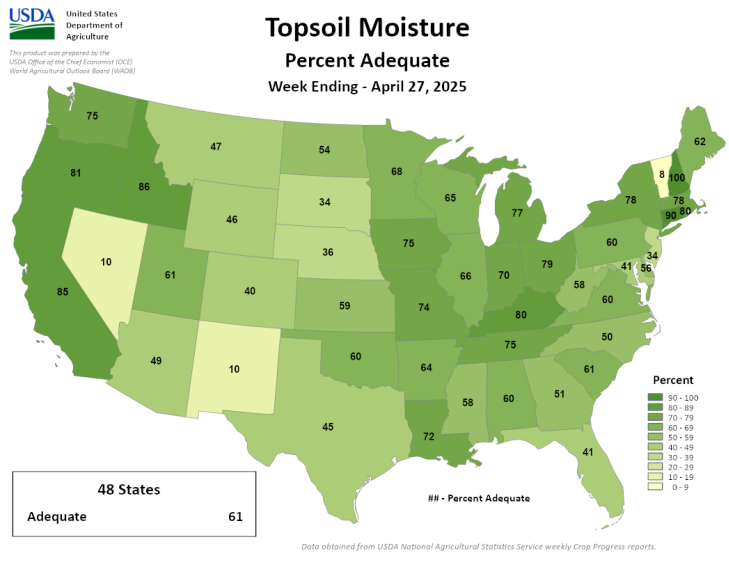
Currently, 73% of the North Central region is drought-free (None and D0) according to the U.S. Drought Monitor (USDM), with the eastern portion of the region fairing the best in terms of drought-free and abnormally dry (D0) conditions. Approximately 28% of the region is classified as abnormally dry (D0), and for areas in drought, 20% is classified as moderate drought (D1), 6% as severe drought (D2), and 1% as extreme drought (D3). Large portions of the Plains are under moderate drought conditions, with pockets of severe and extreme drought along the western borders of the Dakotas and Nebraska.

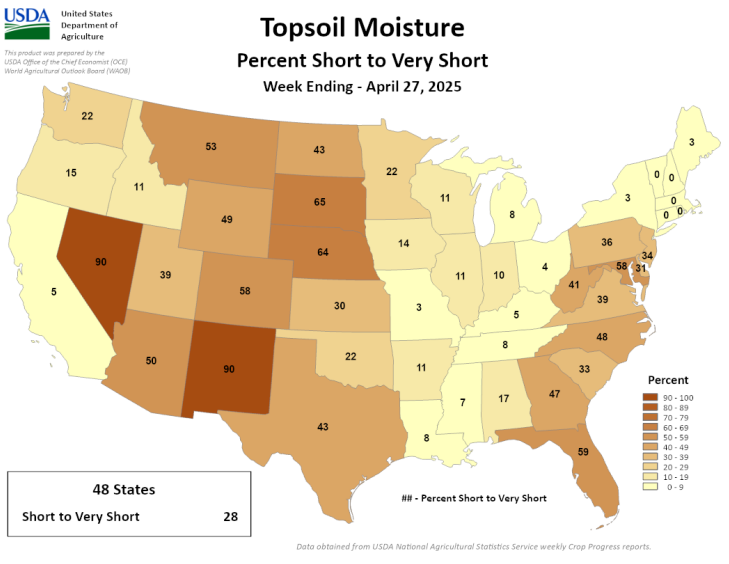
In comparison to last month, much of the North Central region has seen a 1-class improvement in drought conditions. In some instances, such as pockets of Missouri and South Dakota, drought conditions improved by 2-classes due to spring showers. Notable exceptions include portions of Nebraska and pockets of North Dakota, Iowa, Missouri, and Kansas – which have experienced a 1-class degradation over the last month.

As of the week ending April 27th, most of the region's topsoil moisture is adequate. For the eastern portion of the region, spanning Iowa to Ohio – 65 to 79% of topsoil moisture is adequate with over 20% of several states (Missouri, Illinois, Indiana and Wisconsin) in surplus. In contrast, the western portion of the region is struggling with low moisture conditions. North Dakota, South Dakota, and Nebraska range from 43 to 65% of topsoil moisture in short or very short supply – with South Dakota and Nebraska facing the driest conditions. These topsoil conditions likely allowed for planting progress ahead of the 5 year average in the central and western Corn Belt. States from Wisconsin to Kentucky were behind the 5 year average because of wet soils.



Maps generated by the National Drought Mitigation Center.



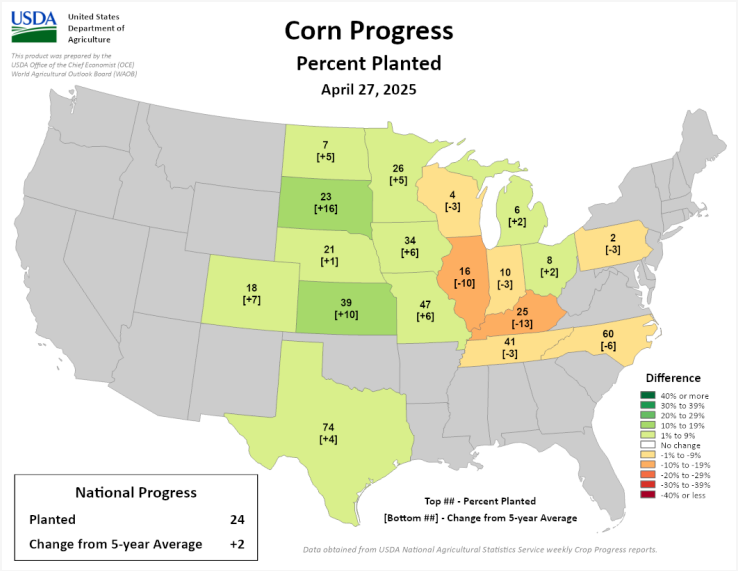


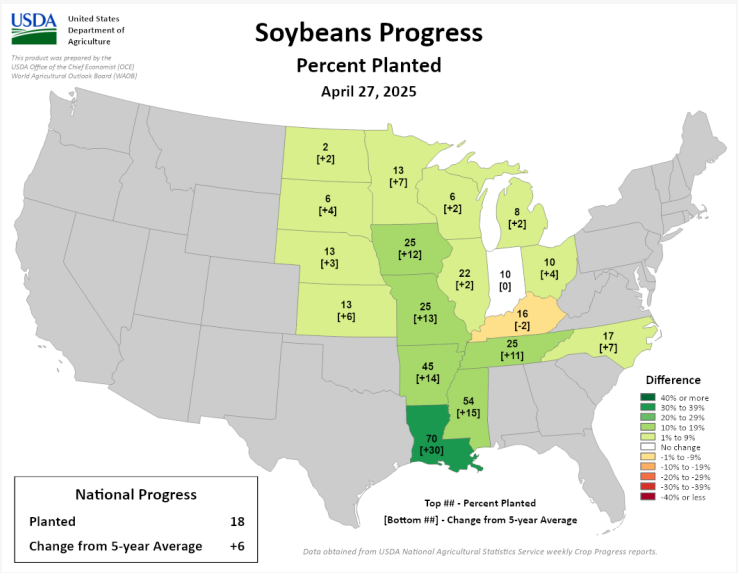
River Levels

Based on monitoring by NOAA and USGS, river levels across the Midwest region are mostly sitting at normal flow levels compared to the historical average. Notably, pockets of stations in Wisconsin are near action levels from the most recent rains but are expected to fall to normal levels in the next few days. Several stations along the Mississippi River also report or forecast action levels, but do not expect flooding. Further south, several river gauges in southern Missouri are reporting or anticipating action or minor flooding levels. Similarly, gauges in southern Illinois to Ohio report action or minor flooding levels – likely a lingering impact of historical rainfall last month.

Crops and Livestock

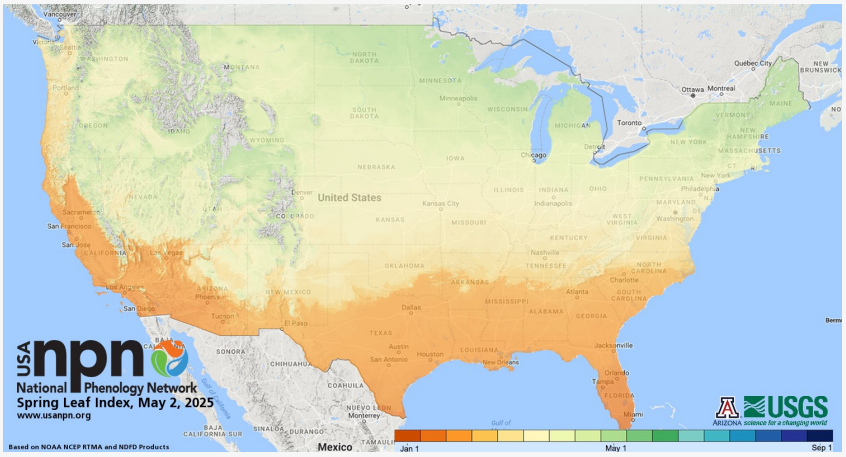
Over the past month, producers across the region have begun planting as the growing season has rolled in. While for most, planting progress aligns with previous years, those on the ground report varied progress due to recent rains causing delays. As of the end of April, almost half (47%) of corn has been planted across Missouri, 39% in Kansas, and 34% in Iowa, with northern states ranging from 4-26% of corn planted. While much of the region's western portion corn planting is ahead of the 5-year average, Wisconsin, Illinois, Indiana, and Kentucky are behind the 5-year average by 3-13%. Soybean planting is making headway across the region, with Iowa, Missouri, and Illinois having planted 20-25%. Northern states and the Plains are sitting closer to 5 to 10% of soybeans planted, but tracking above the 5-year average for this time of year.





Maps generated by the United States Department of Agriculture.

Due to spring rainfall, livestock conditions across much of Wisconsin, Minnesota, and Iowa remain drought-free, likely leading to favorable pasture conditions. However, South Dakota and Nebraska are currently classified as drought areas which may impact forage quality.



Map generated by the National Phenology Network.

As we enter May, spring leaf-out spreads across the Midwest region. According to the USA National Phenology Network (NPN), southern portions of the region are tracking upwards of 15 days early in terms of the Spring Leaf Index; in contrast, spring progress has slowed down in northern parts of the region over the past 2 weeks. Much of the southern portions of the region, from Kansas across to Ohio, have reached the requirements for first bloom, meaning that we can expect to see lilacs and honeysuckles flowering.

Severe Weather

April brought severe weather, including hail, tornadoes, and flooding to much of the region. With it came severe damage and numerous deaths across the area. Over the last week of April, atmospheric conditions were right for severe weather, resulting in large hail (2.75 inches in diameter) spanning from South Dakota to Wisconsin. According to the National Weather Service (NWS), numerous tornadoes touched down in Wisconsin and Minnesota during the April 28th weather event. Earlier in the month, the Ohio Valley received historic levels of rainfall, with widespread reports of 6-12 inches over a 4-day period, and a swath of western Kentucky recorded upwards of 16 inches. As a result, flash flooding and moderate to major river flooding impacted much of the Ohio Valley.

Fire

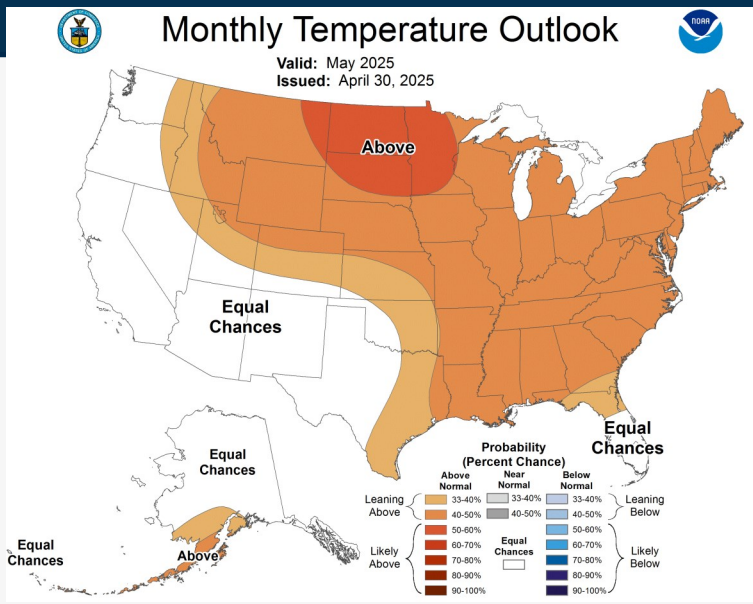
Through May, there is normal wildland fire potential across the region. Over the next 7-days, much of the region has little or no risk for significant fire potential. Feeling the impacts of little rainfall, Michigan, Nebraska, and northwest North Dakota sit at a low risk for fire potential over the coming week – while still low, a higher fire risk than the rest of the region.

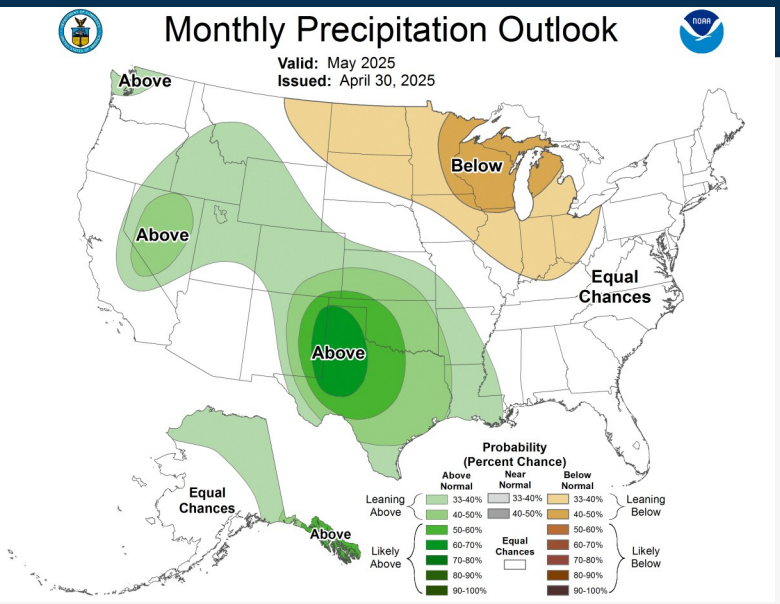
Outlook

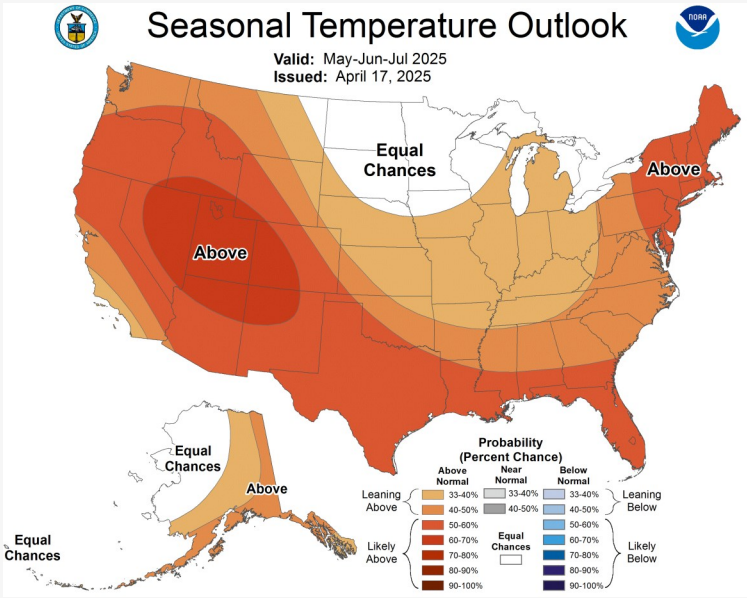
Looking ahead to May, nearly all of the North Central region is slightly more likely to experience above-average temperatures, with an even higher chance in the Dakotas and Minnesota. Monthly precipitation for the Dakotas and Minnesota around the Great Lakes leans toward below-average precipitation. Parts of the Central Plains lean toward above average based on a more active early part of May. There is a region of equal chances of experiencing above- or below-average precipitation sandwiched between the regions of above- and below-average precipitation.

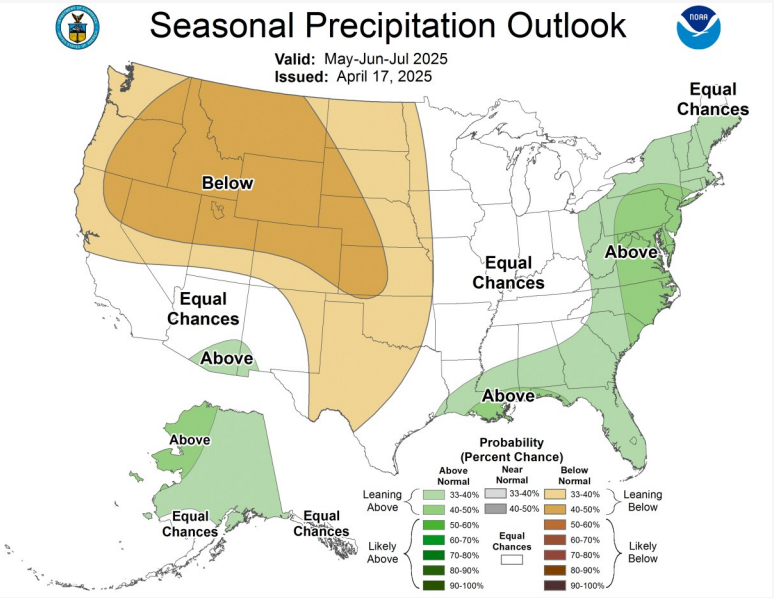
The seasonal temperature outlook for May-July shows the majority of the region is leaning towards above-average temperatures. The Dakotas, Minnesota, and northern Wisconsin have equal chances of experiencing above or below average temperatures. For the region's western portion, seasonal precipitation is leaning toward below-average precipitation during May-July. The eastern portion has equal chances of experiencing above or below average precipitation.

The atmosphere has caught up to the dissipation of La Niña ocean conditions. ENSO neutral is expected to persist through the northern hemisphere summer.









Outlooks provided by the Climate Prediction Center.

Partners and Contributors

United States Department of Agriculture (USDA)

National Oceanic and Atmospheric Administration (NOAA)

Climate Prediction Center (CPC)

National Weather Service (NWS)

National Center for Environmental Information (NCEI)

National Drought Mitigation Center (NDMC)

National Integrated Drought Information System (NIDIS)

Midwestern Regional Climate Center (MRCC)

Midwest State Climatologists

High Plains Regional Climate Center (HPRCC)

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