Summary: Summer thunderstorms brought heavy rainfall to the Central Plains into parts of the Northeast, with showers and thunderstorms also occurring across parts of the Northwest, Southern Rockies, and Central Gulf Coast. Below-average temperatures accompanied the heavy precipitation for the most part. The Southwest saw little to no rain and record to near-record heat, while heat and humidity continued to the east. The above-average temperatures and dry conditions brought elevated fire risk over the Great Basin and portions of the northern Intermountain West. South central Alaska remained dry and fires continued to burn, with smoke warnings in effect. Heavy rains, flash flooding, and severe weather occurred as a front stretched from the Southern Mid-Atlantic into the Southern Plains.

Northeast: Much of the Northeast has received near- to above-average rainfall over the summer months, but with some areas receiving below-average amounts. This week abnormally dry conditions (D0) spread a bit southward in northern New York and eastward across northern Vermont and New Hampshire and just into Maine. Agricultural impacts have been reported in Monroe County in western New York where precipitation has been around 60 percent of normal over the past couple of months. Abnormal dryness was introduced here this week.

Southeast: This past week beneficial rains fell across parts of the Southeast that have been in some form of dryness or drought, with locally heavy amounts observed. A swath of the Midlands and Upstate South Carolina received at least two inches of precipitation, with some areas observing close to six inches (McCormick, for example, reported 6.20 inches in a 24-hr period). This stretch returned to normal conditions and moderate drought (D1) was reduced in Aiken County near the Georgia border. Some areas missed out on the rain, however, and D1 spread northward to southern Sumter and eastern Richland Counties. Normal conditions also returned to part of south central North Carolina to the east of Charlotte and in part of the coastal region around New Bern over to northeastern Bladen County. In Georgia, precipitation was mixed. Moderate drought expanded near the South Carolina border and was introduced in part of the Atlanta Metro area. However, to the east beneficial rains allowed for improvement in Washington and Hancock Counties. Improvements were also seen in parts of central Alabama, from the north to the south, including improvements of D1 and D2 (severe drought) in Jefferson, Bibb, and Tuscaloosa Counties.

South: Texas, Oklahoma, Arkansas, and Louisiana saw sharp gradients and some complicated rainfall patterns, with heavy precipitation in some places and little to none in others, and so many areas saw improvement in short-term dryness and drought while many others saw degradation. Conditions improved across part of the Oklahoma Panhandle into northern Texas and also in in the central region and southeast, but there was also a degradation to extreme drought (D3) along the Texas border, encompassing parts of Kiowa, Comanche, Cotton, and Tillman Counties (and northern Wichita and northeastern Wilbarger County in Texas) where rain was scarce. This is the first occurrence of D3 in Oklahoma since September 2018. Temperatures here were in the 105-109 degree F range. In Texas, the D3 area to the west expanded, as did the D3 area in the extreme south, with a new small spot as well. Primary impacts across the state include wildfires, dry stock tanks, supplemental feeding, and impacts to late-season crops, namely cotton. Moderate drought spread from east Texas into southwestern Arkansas and northwestern Louisiana. Abnormal dryness also spread eastward to south central Arkansas and central to northeastern Louisiana.
**Midwest:** Moderate drought (D1) was introduced across northern Michigan and the eastern Upper Peninsula this week. Abnormal dryness also spread from the south northeastward to the Saginaw Bay. There are reports of impacts to forage yields and concerns about annual crop production, in addition to general drying out of some soils. Abnormal dryness (D0) also expanded slightly in northern Minnesota and spread from Iowa into southern Minnesota. Part of central Iowa already experiencing dryness also saw D0 expansion, while the southeast saw an expansion of D1. Across Indiana, rainfall over the past week diminished in intensity and coverage as fronts moved from northwest to southeast. Areas of D0 decreased in the north, west central and south central portions of the state. All three D1 areas also shrank across the state as the beneficial rains fell. Missouri received around 2 inches of rain over the past week or two across most of the areas designated as abnormally dry, which is well over twice (or more) the normal amount. With no impacts reported, the entire state has now returned to normal conditions. In Kentucky, rain was widespread, steady, and long, just the kind of rain to soak into the soil and improve drought conditions. The area of D1 in central Kentucky that was introduced last week disappeared this week, and the area of D0 shrank significantly. With respect to agriculture, the rain, combined with cooler temperatures, will help eliminate agricultural impacts and should help double crop soybeans.

**High Plains:** In the Northern High Plains, normal conditions returned along the western to central North Dakota/Canadian border. Precipitation has been adequate and soil moisture conditions have improved. In the Southern High Plains, rainfall has been below average over the last couple of months - including the past week - in eastern Colorado while temperatures have been above average. Several areas of abnormal dryness were introduced this week, including in the central Colorado Mountains over the higher elevations, eastern Larimer and western Weld Counties and Colorado springs, and in Las Animas. With the heat, evaporative demand has been high for many of these locations. Reports from water providers indicate that there has been peak demand in the last week with lawn irrigation. Peak demand usually occurs in July. Southwestern Kansas has also seen a dearth of precipitation, and both D0 and D1 expanded westward in this area. The rest of the state, on the other hand has seen plentiful rainfall and D0 contracted westward in the central and south central region.

**West:** With respect to precipitation, 2019 to-date is a year of extremes in parts of the West. As monsoon rains continue to fail and heat continues to build, impacts, including wildfire risk, are growing in the Southwest. After emerging from nearly a decade of drought conditions on June 11, moderate drought (D1) returned to both the eastern and western parts of Arizona this week, and abnormally dry (D0) conditions spread across much of the rest of the state, save for part of the south. Locally, many areas are experiencing one of their 10 driest monsoon seasons on record. Phoenix is also on track to have its third or fourth hottest June-August period on record and Tucson its second hottest. The D1 that spread to eastern Arizona also spread over the remainder of northwestern New Mexico into southwestern Colorado and southeastern Utah at the Four Corners. In New Mexico, D1 in the south expanded eastward from Sierra County to the D1 area at the Texas border. Abnormally dry conditions also spread outward across the southwestern states, including across Imperial County, California, to join with the long-lasting D0 area in San Diego, Orange, and Riverside Counties.
Alaska, Hawaii, and Puerto Rico:
Dry conditions -- and fires -- continued in south central Alaska this past week, with smoke filling the air across large regions. With continued fire danger, severe drought (D2) spread across the remainder of the southern Kanai Peninsula, part of the Alaska Peninsula, and encompassed Kodiak Island. Moderate drought (D1) was extended to the Bristol Bay area, with fire buildup indices approaching 100. Also based on the fire risk, the area of extreme drought (D3) expanded in the northern Kenai Peninsula to the Swan Lake Fire area. Additionally, more water shortages have been reported in south central Alaska, including impacts to the community water supply in Nanwalek and drying of streams that provide salmon spawning habitat, namely Jaklof Creek near Seldovia. The communities of Seldovia, Chignik Lagoon, Chignik Lake, and Tatilek are also reporting water shortages and boil water advisories.

Hawaii has been dry over the past week, especially over the mid-section of the island chain. On Oahu, moderate drought (D1) was introduced along the lower elevations of the south facing slopes of Oahu and also over the western half of Molokai. Additionally, abnormally dry conditions (D0) spread across the remainder of Maui.

No changes were made for Puerto Rico this week.

Looking Ahead: Over the week beginning Tuesday, August 27, according to NOAA’s Climate Prediction Center, dry conditions are expected to continue across southern Texas and much of the western third of the continental U.S., while light to heavy rainfall may occur across the remainder of the country. Parts of Kansas may receive up to about 4 inches, with isolated higher amounts. Hurricane Dorian will bring heavy rain and potential flooding to Puerto Rico and Florida, where 4-8 inches of rain are expected from the storm, with locally higher amounts. Looking further ahead to September 2-6, below-normal temperatures are favored across Maine and parts of the Northern Plains and Midwest, nosediving into Oklahoma and northern Arkansas, while above-normal temperatures are forecast for Alaska, the western third of the CONUS, across most of Texas, and into the Southeast and Mid-Atlantic states. Much of the Southwest and Alaska are both favored to have some badly needed above-average precipitation, as is the Southeast and the northern tier of the CONUS. There are enhanced probabilities of below-normal precipitation for the Southern and Central Plains into parts of the Midwest. Please note the forecast confidence for this period is above average, according to CPC.

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