

National Drought Summary for June 25, 2024

Summary

Much of the eastern contiguous U.S. (CONUS), south of the Great Lakes, received little to no rainfall, and this is on top of several weeks of below normal rainfall leading up to last week. In addition, temperatures have remained hot for many locations. This combination of antecedent dryness, much below normal rainfall, and hot temperatures has resulted in rapidly deteriorating conditions, particularly across the Ohio Valley, Mid-Atlantic, and Southeast, with large increases in abnormally dry (D0) and moderate drought (D1) conditions. Conversely, southern Texas, the Four Corners region, and the Upper Midwest and Northern Plains experienced several rounds of heavy rainfall. Some locations across southern Texas (associated with Tropical Storm Alberto) and the north-central CONUS received well in excess of 5 inches of rainfall that led to flash and river flooding, as well as improvements to drought conditions. Some localized flooding also occurred in portions of the Four Corners region, associated with a surge of tropical moisture from the remnants of Tropical Storm Alberto that came ashore in northern Mexico late last week. Across much of the western CONUS, conditions are starting to dry out a bit, particularly in the Pacific Northwest and northern Rockies. In Alaska, moderate drought was introduced in the eastern interior Mainland, where warm and dry weather continues, elevating fire concerns. In Hawaii, trade winds are lacking moisture resulting in below normal rainfall across the islands and the widespread expansion of abnormal dryness. Puerto Rico continues to remain drought-free.

Northeast

Several rounds of hot temperatures along with several weeks of dry weather has led to rapidly deteriorating conditions across the upper Ohio Valley and Mid-Atlantic, warranting the broad expansion of abnormal dryness (D0) and moderate drought (D1) conditions. In recent weeks, portions of New York and New England have also experienced some isolated abnormal dryness. Fortunately, these areas received some timely rainfall associated with a slow moving storm system moving eastward from the Great Lakes last week. Several days of moderate rainfall associated with this storm system led to widespread weekly rainfall surpluses, warranting some targeted reduction in coverage of abnormal dryness where short-term (30 to 60 day) rainfall deficits were erased.

Southeast

Throughout most of the Southeast, rainfall has been largely lacking over the past 3 to 4 weeks. Additionally, much of the region has experienced several heat waves over the past month, resulting in rapidly deteriorating conditions leading up to and including last

week. Soil moisture, stream flows, and several derived drought indices are worsening by the day. Impacts are widespread, particularly in the agricultural sector, as pastures and rangelands are going dormant or turning brown, increasing livestock concerns as well. Several reports that crop yields are also in danger if the region doesn't get any meaningful rainfall soon. High evapotranspiration (i.e. the evaporation of moisture from land and vegetation) rates are rapidly drying out soils and vegetation, increasing fire concerns.

South

The passage of Tropical Storm Alberto in northern Mexico resulted in a large influx of moisture into southern Texas, with widespread 5 inch rainfall totals (locally upwards of 8 inches for some locations). This heavy rainfall caused localized flash flooding and resulted in large improvements to soil moisture. However, leading up to last week, southern Texas was experiencing abnormally dry and moderate drought conditions, so despite some large improvements (2-category improvements in some cases), some parts of southern Texas remain abnormally dry given the rainfall deficits leading up to Alberto's landfall. Heavy rainfall also fell across portions of the Oklahoma Panhandle, with several locations receiving in excess of 5 inches of rain, warranting some targeted 2-category improvements to the drought depiction there as well. Elsewhere in the Southern region, conditions are rapidly deteriorating, as rainfall has been lacking entirely over the past few weeks for many locations. Persistent heat has exacerbated the ongoing dryness, leading to degradations across parts of the Tennessee and Lower Mississippi Valleys, western Texas, and northern Oklahoma. Following a very wet May, the last few weeks have been very dry across eastern Texas and this area will need to be monitored in the coming weeks if warmer than normal temperatures persist.

Midwest

Precipitation has mainly been confined to the Upper Midwest and Great Lakes due to high pressure dominating the eastern U.S., keeping the storm track farther northward. Due to the northward-shifted storm track, there are stark differences in rainfall totals in the Midwest over the past month, with much of the Upper Midwest and northern Great Lakes experiencing rainfall surpluses, resulting in week after week of improving conditions and leading to widespread flash and river flooding in the Upper Mississippi Valley. Conversely, the Middle Mississippi and Ohio Valleys are rapidly drying out. The persistent high pressure in the East has led to several heat waves across parts of the Corn Belt, resulting in a widespread, rapid deterioration of conditions and warranting a large expansion of abnormal dryness (D0) and moderate drought (D1), particularly across the eastern Corn Belt.

High Plains

The High Plains region experienced a mixture of both deteriorating and improving drought conditions last week, which has predominantly been the case over at least the last month. High pressure over the eastern U.S. and an active storm track across the northern tier of the lower 48 states have been able to funnel moisture northward over the past few weeks, but precipitation has been hit-and-miss from week to week. However, last week was a little different from prior weeks, as some of the moisture from Tropical Storm Alberto was funneled northward into the Four Corners region and then into the Central and Northern Plains. Southeastern South Dakota received in excess of 5 inch rainfall surpluses for the week leading to flooding along the Missouri River and some of its tributaries. Heavy rain also fell across parts of southeastern Colorado and southwestern Kansas last week, associated with the surge of moisture from Alberto, leading to some targeted improvements to the drought depiction in those areas as well. Elsewhere in the High Plains region, targeted degradations are warranted due to antecedent dryness, below normal weekly precipitation, and predominantly above normal temperatures (with the exception of northern Montana and the Dakotas).

West

A surge of moisture from Tropical Storm Alberto led to widespread, localized heavy rainfall across portions of the Four Corners region, leading to localized flash flooding and targeted drought improvements across Arizona, New Mexico, and southeastern Colorado. Conversely, targeted degradations are warranted across parts of the interior Pacific Northwest and northern Rockies, where warm and dry weather prevailed. Elsewhere in the West, conditions are largely drying out, but the influx of tropical moisture from Alberto has helped to stall the progression of the dryness a bit for many locations.

Caribbean

Antecedent wetness and a week of near and above normal rainfall, despite warmer than average temperatures, warrant a continuation of the drought-free depiction in Puerto Rico.

The U.S. Virgin Islands remained free of drought or abnormal dryness this week. On St. John, Rafe Boulon/Windswept Beach reported 0.98 inch of rain this week. The depth to water level at Susannaberg DPW 3 well (St. John, USVI) on June 25 was 7.59 ft below land surface. The analysis showed a significant decrease in water level (about 2.6 ft) since December 18, 2023 when it was 5.01 ft below land surface. This weeks SPI values at all timescales (1-, 3-, 6-, 9- & 12-month) also confirms wet conditions persist on the St. John. A total of 0.35 inch of rainfall was reported on St. Croix (Henry Rohlsen

AP) this week. The depth to water level at Adventure 28 Well (St. Croix, USVI) on June 25 was 23.72 ft below land surface. The analysis showed a significant increase in water level (over 11 ft) since September 29, when it was 35.33 ft below land surface. This weeks SPI values at all timescales also confirms wet conditions on the island. On St. Thomas, three CoCoRaHs observation site locations in the northern and western portions of the island each reported rainfall amounts greater than one inch this week. The depth to water level at Grade School 3 well (St. Thomas, USVI) on June 25 was 4.28 ft below land surface. This is down about 2 ft since 2.03 value on June 7 but about 13 ft above the annual minimum of 17.27 ft set on August 5.

Pacific

Expansion of abnormal dryness (D0) and the introduction of moderate drought (D1) in the eastern interior Alaska Mainland are warranted, as several weeks of below normal precipitation and warm temperatures have dried out the biomass. This is increasing fire concerns, as Alaska is in the midst of its fire season.

Following a wet May, the dry season seems to have finally settled in across Hawaii. Trade winds have not had very much moisture associated with them, with most windward slopes have received near to below normal rainfall in recent weeks, leading to stream flows slowly declining. As such, broad expansion of abnormal dryness (D0) is warranted across the islands, along with the introduction of a small area of moderate drought (D1) on the southern tip of the Big Island.

Conditions were dry over American Samoa this week. Pago Pago only received 0.02 inch of rainfall this week, while Toa and Siufaga Ridges reported 0.24 and 0.34 inch of rain, respectively. American Samoa remained free of drought or abnormal dryness for the week due to previous wet weeks and months.

Palau remained free of drought or abnormal dryness this week, with reported rainfall totals of 3.07 inches at Palau Airport and 2.45 inches at Koror.

Wet conditions continued across the Mariana Islands this week. Drought was removed on Saipan after 3.20 inches of rain fell on the island, improving conditions to short-term abnormal dryness. On Rota, drought conditions were improved to short-term moderate drought after reporting 4.40 inches of rainfall this week, while Guam remained in short-term abnormal dryness after receiving 1.12 inches of rainfall this week.

Wet conditions were observed in Kapingamarangi, Pohnpei, Chuuk and Nukuoro with reported rainfall totals of 1.87, 1.66, 1.60 and 1.31 inches, respectively. These locations remained free of drought and abnormal dryness this week due to previous weeks and months being wet. Wet conditions were also observed across western portions of Micronesia. Yap reported 2.27 inches of rainfall this week, while Ulithi reported 1.93 inches this week. Drought conditions were improved to short-term severe drought on

Yap and Ulithi based on recent precipitation, along with reported improvements to vegetation and catchment tanks. Drier conditions were observed on Pingelap, reporting 0.20 inch of rainfall this week, becoming the third consecutive week of below-normal precipitation. Therefore, Pingelap was degraded to short-term abnormal dryness. Depictions were not made for Fananu, Kosrae, Lukunoch or Woleai due to insufficient data.

Rainfall brought heavy rainfall to portions of the Marshall Islands this week. Weekly rainfall totals of 3.12 and 2.60 inches fell on Ailinglapalap and Majuro, respectively. Wet conditions were also observed on Kwajalein, reporting 5.41 inches of rainfall this week and bringing the monthly total to more than 9 inches, while the monthly total during May exceeded 11 inches. Therefore, abnormal dryness was removed from Kwajalein this week. Wotje received 0.86 inch of precipitation this week and remains in short- and long-term severe drought this week. Only 0.06 inch of rainfall was reported on Jaluit this week, making it the third consecutive week of below-normal precipitation. Jaluit was degraded to short-term abnormal dryness this week. No depictions were made for Mili and Utirik due to missing data.

Looking Ahead

During the next five days (June 27 - July 1), a couple of storm systems and trailing frontal boundaries are forecast to bring periods of rainfall to portions of the eastern U.S. These storm systems are likely to usher in some cooler than normal air behind them, particularly across the northern tier of the lower 48 states. Temperatures are expected to remain predominantly warmer than normal across the southern tier of the U.S., with excessive heat also possible across the Gulf Coast states.

The Climate Prediction Centers 6-10 day outlook (valid July 2 - 6), favors enhanced chances of above average temperatures across the southern two-thirds of the lower 48 states and near to below normal chances across the northern tier states. Near to below normal temperatures are also favored in the Desert Southwest, due to the increased potential for above normal precipitation. Below normal precipitation is favored across parts of California and Nevada, and across the southeastern U.S. Increased above normal precipitation chances are favored elsewhere across the lower 48 states, with the highest chances across portions of the Southwest and Midwest.

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