

National Drought Summary for May 28, 2024

Summary

A front over the Northwest to the Great Basin brought rain and higher-elevation snow to parts of the region, as well as rain and extreme weather to most of the Plains and Lower Mississippi Valley as the front advanced eastward. An additional front from southern Plains to the Great Lakes brought severe weather and thunderstorms from Texas to New York. Meanwhile, a sub-tropical upper-level high over Mexico brought record- to near-record warmth to portions of Texas. Temperatures were above normal across the eastern contiguous U.S., by as much as 10+ degrees F above average from parts of the eastern Great Lakes to the Northeast and in parts of Texas. Precipitation was below normal across much of the southern contiguous U.S. and the Northeast, as well as portions of the Northwest and parts along the East Coast. The most widespread improvements were made to portions of the Midwest and in eastern parts of the High Plains and South, as well as Montana and Hawaii, where above-normal precipitation was observed this past week. Dry conditions continued across the western portions of the Southern region, southern High Plains and Southeast, with degradations occurring in parts of the western Plains and Florida Peninsula. Drought and abnormal dryness also expanded or intensified in portions of the northern Rockies and Pacific Northwest. In Alaska, heavy rainfall resulted in the removal of abnormal dryness from the central interior this week.

Northeast

Precipitation varied across much of the Northeast this week, while precipitation totals were below normal for most of the region during this month-to-date period. The region remains drought free this week, while abnormal dryness was expanded in northern Maine based on precipitation deficits, declining groundwater and soil moisture data. For the week, average temperatures were above normal across the entire region with departures ranging from 2 to 10+ degrees F above normal.

Southeast

Temperatures were above normal across the Southeast, with temperatures ranging up to 10 degrees F above normal in parts of Virginia. Precipitation fell across much of the region this week, with the heaviest amounts of rainfall being observed in northern areas of Alabama and Georgia and parts of eastern and western North Carolina. These areas reported weekly precipitation amounts up to 400% above normal and ranged between 1 to 4 inches of rainfall. Drought reduction and improvement were based on precipitation amounts, short-term SPI/SPEI, NDMC short-term blends, and improvements to streamflow and soil moisture data. Based on these short-term indicators, abnormal

dryness (D0) was improved in parts of northern Alabama and eastern North Carolina. On the dry side, abnormal dryness was expanded in parts of western Alabama and central South Carolina where little precipitation fell. In the Florida Peninsula, precipitation deficits were 2-4 inches below average over the past month and up to 8 inches below average since the end of February, resulting in the introduction of severe drought (D2) and the expansion of moderate drought (D1) and abnormal dryness in the area.

South

Dry conditions continued across the western portions of the South this week, while heavy precipitation fell across eastern portions of the region. Most of Arkansas and Tennessee, as well as eastern parts of Oklahoma and Texas, received between 1 to 6 inches of rainfall (200% to 800% above normal) this week, resulting in the improvement of moderate drought (D1) and abnormal dryness (D0) in Arkansas while D0 was removed from most of Tennessee. Conversely, conditions continued to deteriorate in parts of eastern Oklahoma, Texas and Mississippi, where precipitation totals were 1 to 4 inches below normal this month. Severe drought (D2) and moderate drought were expanded in parts of eastern Oklahoma, while moderate drought was introduced in southern Texas. Abnormal dryness was also expanded into parts of northern and southern Texas and small portions of eastern Mississippi. Temperatures were 2 to 8 degrees F above normal across much of the region this week, while parts of southern Texas observed temperatures between 8 to 10 degrees F above normal. The expansion and intensification of drought categories were based on short-term SPI/SPEI, reservoir levels, streamflow and soil moisture data.

Midwest

Average temperatures were well above normal across much of the Midwest, while below-normal temperatures were observed in western portions of the region. Temperatures ranged between 6 to 10 degrees F above normal across much of Ohio and in parts of Indiana and Michigan, while northern portions of Minnesota observed temperatures up to 6 degrees F below normal this week. Much of the Midwest also observed above-normal precipitation this week, especially along the western and southern portions of the region where the heaviest amounts totaled between 2 to 8 inches of rainfall and ranged between 1 to 8 inches (300% to 600%) above normal. Above-normal precipitation helped to alleviate longer-term precipitation deficits and improved soil moisture and streamflow impacts, resulting in a 1-category improvement across southern Minnesota, southern Wisconsin, eastern Iowa and southern Missouri. Improvements were also made to moderate drought (D1) and abnormal dryness (D0) in northern Minnesota, while abnormal dryness was improved in western Michigan and removed from the eastern Upper Peninsula. Meanwhile, conditions were drier than

normal in portions of Michigan and Ohio this week, but recent precipitation amounts were enough to prevent any degradation this week in these areas.

High Plains

Precipitation fell across much of the region this week, which was enough to prevent further degradation but not enough to warrant large improvements. The heaviest rainfall amounts fell across much of North Dakota and along eastern portions of the region, where rainfall totals were up to 600% of normal and ranged between 1 to 4 inches this week. Severe drought (D2) was improved in south-central Kansas, while improvements to moderate drought (D1) and abnormal dryness (D0) were made in northern Kansas and southeast Nebraska. Abnormal dryness was also removed from northern Wyoming and northeast North Dakota due to heavy precipitation and improvement shown in soil moisture and short-term SPI/SPEI indicators this week. Conversely, dry conditions persisted in eastern portions of the High Plains this week. Deteriorating conditions shown in short-term SPI/SPEI, streamflow, soil moisture and snow water equivalent (SWE) data justified degradations in Colorado and eastern portions of Nebraska and Kansas. Extreme drought (D3) and severe drought were expanded in eastern Kansas, while moderate drought was introduced into southeast Wyoming where precipitation amounts were 50% of normal over the past month. Abnormal dryness was expanded in parts of Colorado, eastern Wyoming and western Nebraska this week.

West

Much of the West remained as status quo this week, while temperatures were below normal (2 to 10 degrees F below normal) across most of the region. Precipitation fell across northern portions of the West, with the heaviest amounts falling over parts of western Washington and Montana. Above-normal precipitation (up to 3 inches), along with cooler temperatures (up to 10 degrees F below normal), resulted in improvements to extreme drought (D3), severe drought (D2), moderate drought (D1) and abnormal dryness (D0) across parts of Montana. Parts of Southwest Montana missed out on some of the beneficial rains resulting in the expansion of moderate drought in the area. Conditions remained dry in the interior parts of Washington, resulting in expansion of moderate drought and abnormal dryness based on short-term SPI/SPEI data, as well as low soil moisture and streamflow.

Caribbean

There were no changes made in Puerto Rico this week.

The U.S. Virgin Islands (USVI) saw heavy precipitation during this U.S. Drought Monitor (USDM) week (May 22 to 28), rebounding from the prior weeks dry conditions. For all but a couple CoCoRaHS stations saw 1 to over 4 inches of rain this week. For St. Thomas and St. John, USGS data showed well levels rising this week, whereas St. Croix saw well levels stay consistent this week. St. Thomas saw well levels rise from 6.52 feet below the surface to 3.55 feet, this following heavy rain between May. 23-24 of 2.38 to 4.28 inches according to the islands CoCoRaHS stations. St. John saw between 3.12 to 3.93 inches this week which contributed to almost a 2-foot jump in well levels. Satellite data (VHI) showed no vegetative drought stress in the USVI. Precipitation for the last several months resulted in wet Standardized Precipitation Index (SPI) values at the 1- to 12-month time scales. As a result, on the USDM map, St. John, St. Thomas and St. Croix continued free of drought and abnormal dryness.

Pacific

Rain showers brought above-normal precipitation to parts of interior Alaska, resulting in the removal of abnormal dryness from the central interior.

Conditions were dry across much of Hawaii this week. Improvements to drought and abnormal dryness were made to portions of the Big Island where previous rainfall have improved vegetation and pasture growth. Conversely, conditions continue to degrade on the leeward slopes of Maui and in the interior of the Big Island, resulting in slight degradations. No changes were made on Molokai, Lanai, Oahu or Kauai this week.

Compared to last week, the U.S.-Affiliated Pacific Islands (USAPI) during this U.S. Drought Monitor (USDM) week (May 22-28) saw drier conditions. Ailinglapalap and Jaluit reported 0.75 and 0.93 inches of rain, following two weeks of good precipitation, remains free of abnormally dry or drought conditions. Majuro reported over 5 inches of rain this week adding to the already high total of 14.41 inches so far this month, thus improving conditions from abnormally dry (D0) conditions to normal conditions. Wet conditions occurred on Wotje, which reported 1.5 inches of rain. Recent precipitation on Wotje improved conditions from short-term severe drought (D2-S) to moderate drought (D1-S). Kwajalein reported 0.69 inches of rain this week, keeping Kwajalein in short-term moderate drought. No depiction was made for Milli and Utirik due to missing data.

Wet conditions continued across the Marshall Islands this week. Ailinglapalap reported 1.89 inches of rain, remaining in abnormally dry conditions (D0). This week, Jaluit received 1.20 inches of rain, remaining free of drought due to the wet conditions in the previous weeks. Majuro reported 2.56 inches of rain this week, following two weeks of good rainfall for a total of 8.21 inches in the past three weeks. Thus, continuing improvements in Majuro to short-term moderate drought conditions (D1-S). Wet conditions occurred on Wotje, which reported 1.5 inches of rain. Despite this recent precipitation, Wotje remains in short- and long-term extreme drought conditions (D3-SL). Kwajalein reported 0.44 inches of rain this week, though five days of observations

were missing. Kwajalein remains in short-term moderate drought after receiving less than 2 inches of weekly total rainfall in the past four weeks. No depiction was made for Milli and Utirik due to missing data.

Western Micronesia received precipitation this week with Ulithi seeing almost 4 inches of rain and Yap just over 1.5 inches, slightly elevating conditions and improving short-term exceptional drought (D4-S) to extreme drought (D3-S) at Ulithi and Yap. Conditions remained in short-term severe drought conditions (D2-S) as Woleai had missing data for the week. Central Micronesia had less than 1 inch of rain and. Eastern Micronesia all received enough precipitation to remain in normal conditions, if not wet, conditions. Pohnpei saw 7.61 inches of rain this week.

Wet conditions were observed across American Samoa. This week Pago Pago and Siufaga Ridge reported 1.31 and 1.38 inches of rain respectively, remaining free of drought. Palau saw heavy precipitation with Koror receiving 4.67 inches and Palau IAP receiving 3.15 inches, lifting Palau out of abnormally dry (D0) conditions.

The Mariana Islands saw precipitation fall with Guam (1.38 inches), Rota (1.44 inches), and trace amounts over Saipan (0.09 inches). Guam remained in severe drought (D2-), and Saipan and Rota remained in extreme drought conditions (D3-S).

Looking Ahead

During the next five days (May 28-June 1, 2024), moisture convergence along a frontal boundary and east of a dryline across Texas and Oklahoma will likely generate scattered to numerous showers and thunderstorms, with the potential for episodes of locally heavy rainfall early to mid-week. The threat of heavy rainfall will be highest in Texas Tuesday into Wednesday as an upper level shortwave moves over the southern Plains, where the potential exists for storms with rainfall rates approaching 2 inches per hour. The coverage of showers and storms will likely expand north across the central and northern Plains later in the week as an organized frontal system moves into the central U.S. from the Rockies. Locally heavy rainfall will be possible across portions of the Rockies going into late Friday and early Saturday as the cold front intercepts an increasingly humid airmass. In terms of temperatures, the Gulf Coast region will continue to remain hot and humid on Tuesday before some limited relief arrives by midweek as a cold front drops southward. However, the heat and humidity will likely continue across Deep South Texas and South Florida with highs running up to 10 degree above average, and heat indices in the 100-110 degree range, especially for southern Texas. Some triple digit heat is also likely for the lower elevations of the Desert Southwest, but very low humidity here will help keep heat indices in check.

The Climate Prediction Centers 6-10 day outlook (valid June 26, 2024) favors above-normal precipitation along much of the West Coast, from the southern Plains to the East Coast, and across much of Alaska, with below-normal precipitation across most of the

interior West and Hawaii. Increased probabilities for above-normal temperatures are forecast for Hawaii and much of the contiguous U.S., while below-normal temperatures are likely across the state of Alaska and in parts of Georgia and South Carolina.

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