

National Drought Summary for June 6, 2023

Summary

Heavy rains fell this week across some of the western parts of the Central and Southern Great Plains, especially in the Texas Panhandle and western Oklahoma and Kansas, leading to widespread improvements to ongoing drought in the western Great Plains. Heavy rains in the central and southern Florida Peninsula also led to improvements to ongoing drought and abnormal dryness in the southwest Florida Peninsula. Widespread degradations occurred in the Midwest and western portions of the Northeast, amid very dry and warm recent weather. In the West, some minor improvements occurred in parts of Nevada, Utah and Idaho, where high streamflows and large precipitation amounts from the winter into May led to a reassessment of conditions. Degradations were made in a few parts of western Montana and northwest Washington, where precipitation deficits mounted amid declining soil moisture and streamflow.

Northeast

Pennsylvania, New York, Maryland, New Jersey, Delaware and southern New England saw primarily dry weather this week. Temperatures were mostly above normal across the western half of the region, with localized readings ranging from 4 to 6 degrees warmer than normal. Coastal areas tended to be cooler than normal this week, with isolated spots coming in 4 to 6 degrees below normal. More generally over the last few weeks, especially across the western half of the Northeast, streamflows and soil moisture are very low, amid unusually hot temperatures and high evaporative demand for this time of year. As a result, drought and abnormal dryness expanded across much of the western half of the region, especially from western New Jersey through Pennsylvania and New York, as well as northern Virginia and eastern West Virginia. Philadelphia reported its driest May on record, with only 0.24 inches of rainfall. A few areas that saw higher precipitation amounts this week, including the fringes of the abnormally dry areas in New England, saw localized improvements out of dry conditions.

Southeast

Heavy rains fell in the central and southern parts of the Florida Peninsula this week, with amounts reaching or exceeding 4 inches in some areas. The above-normal precipitation amounts alleviated short-term precipitation deficits in the western Florida Peninsula and raised streamflows, leading to widespread improvement to drought conditions. Severe drought held on in some areas between Tampa and the Big Bend, where soil moisture deficits and longer-term precipitation deficits remained more severe. In northern Virginia, short-term precipitation deficits mounted along with decreasing

streamflow and soil moisture values. As a result, abnormal dryness increased in coverage and moderate drought was introduced in a few areas along Virginia's border with Maryland and West Virginia. Elsewhere across the Southeast, spotty heavy rains (locally exceeding 2 inches) fell amid mainly drier conditions. Temperatures were mostly near or cooler than normal, with a few exceptions in northern reaches of Alabama and Georgia. Abnormal dryness was added or expanded in a few locations, but few large-scale changes to the USDM depiction were made outside of Florida and Virginia.

South

Relatively dry weather occurred this week in Arkansas, Tennessee, Mississippi and east-central and northeast Oklahoma. Farther west, in the Texas Panhandle, northwest Oklahoma and the eastern Oklahoma Panhandle, the recent wet pattern continued, and widespread 2- to 5-inch rains fell, with localized higher amounts. Widespread improvements were made to the drought and dryness depiction in this region, where soil moisture improved and precipitation deficits lessened. The rest of Texas saw a mixture of a few improvements and degradations, as heavier precipitation amounts around the state were more spotty. Farther east in eastern Oklahoma and northern Arkansas, abnormal dryness and moderate drought were introduced or expanded in areas that have recently seen growing short-term precipitation deficits, declines in soil moisture, and lowering streamflows.

Midwest

Localized heavier rains (exceeding 2 inches in spots) fell across the western reaches of the Midwest region, though large swaths of drier-than-normal weather occurred here. Farther east, in Kentucky and the Great Lakes states, mostly or completely dry weather occurred this week, which led to mounting short-term precipitation deficits and worsening streamflows and soil moisture values. Unusually warm temperatures, reaching or exceeding 9 degrees above normal in large portions of Michigan, Wisconsin and Minnesota, also contributed to worsening dryness. Large-scale additions and expansions of abnormal dryness and moderate drought occurred, especially along and east of the Mississippi River and in central Minnesota, where the combination of precipitation deficits, low streamflow and declining soil moisture was most prevalent. Due to similar conditions along the Missouri River in western Iowa, some expansions were made to severe drought there.

High Plains

Heavy rains fell over parts of the Colorado, Kansas, Nebraska and southeast Wyoming plains again this week, leading to widespread one-category improvements in areas with increasing soil moisture and lessening precipitation deficits. After recent heavy rains, some improvements were also made in northeast and east-central Kansas. In eastern Nebraska, some heavier rains fell, but these were quite spotty, so drought areas remained mostly unchanged. Conditions improved in a small area southeast of Lincoln where rainfall amounts locally exceeded 4 inches. North of Omaha, extreme drought expanded slightly, as soil moisture and precipitation deficits worsened alongside poor streamflow. During May, Lincoln and Omaha both received much less than an inch of rainfall, and much of Saunders County received less than an inch of rain as well. Omaha's May total of 0.17 inches of rain came in as the driest May on record there. In South Dakota, moderate and severe drought increased in coverage in the southeast, where short-term precipitation deficits mounted amid decreased streamflow and soil moisture. Rolling corn was reported north of Mitchell, and very dry soils were reported in far southeast South Dakota, where impacts to agriculture and need for irrigation are quickly ramping up.

West

Small-scale improvements were made in parts of southern and central Idaho, Nevada and northwest Utah, where high streamflows and large precipitation amounts from the winter into May led to a reassessment of conditions. Moderate and severe drought increased in coverage in northwest Montana and northwest Washington, where short-term precipitation deficits were occurring amidst low streamflow and decreasing soil moisture. In Oregon, a tight gradient in temperature and precipitation anomalies has been present recently, resulting in worsening conditions in the north and west portions of the state, while conditions have improved in the southeast part of Oregon. In some areas, streamflow and snow cover has quickly decreased as a result of early melt off and recent dry weather. Due to heavy rains associated with a storm system responsible for the heavy rain in the southern Great Plains, some improvements were also made in the plains of east-central New Mexico.

Caribbean

No changes were made to the drought depiction in Puerto Rico this week. A small area of short-term moderate drought continued in the northwest, with a few other areas of abnormal dryness also continuing. Precipitation was below normal in the northern half of Puerto Rico, and temperatures were generally 1 to 4 degrees above normal across the island, so increases in drought and abnormal dryness may occur if wetter weather does not return soon.

Extremely warm temperatures and little to no rain affected the USVI this week. In St. Croix, only 0.10 inch of rain fell at the Henry Rohlsen airport, while the different CoCoRaHs stations on the island had less than 0.20 inch of rain. The May 2023 rainfall total at the airport was 0.34 inch, which is 9.4% of normal. The year-to-date (YTD) total was 46.3% of normal. SPI values were indicative of abnormally dry to extreme drought at the 1, 3, 6, and 9 months. Groundwater levels have been steadily decreasing since Nov 2022. Reports of impacts on the island included 24-inch cracks and several dead farm animals. St. Croix continued to be in short- and long-term extreme drought this week.

St. Thomas continued to be in short-term severe drought since it had little to no rain this week. The Cyril E King airport had no reported rainfall this week, resulting in a May total of 1.30 inches (43% of normal) and a YTD of 56.3% of normal. CoCoRaHs stations across St. Thomas had between 0.13 to 0.28 inch of rain for the week. SPI values were indicative of abnormally dry to severe drought at the 1, 3, 6, and 9 months periods.

St. John had a bit more rain, according to the CoCoRaHs stations, at 0.67 and 0.88 inch of rain for the week. The May rainfall total at the Windswept beach was 2.54 inches or 57.1% of normal, while the YTD was 89.1% of normal. SPI values at the 1, 3, 6, and 9 months were indicative of abnormally dry conditions to severe drought. St. John's drought classification of short-term moderate drought remained this week.

Pacific

This week, precipitation totals locally exceeded an inch in parts of the Alaska Range and exceeded 2 inches in southern parts of southeast Alaska. From northeast of Anchorage into the Mat-Su area, a recent stretch of dry weather in the last month continued alongside windy weather and low streamflow values. Therefore, a small area of abnormal dryness developed in this region.

No changes were made in Hawaii to the depiction for this week. Short-term abnormal dryness continued across most of Maui, excluding some of the northeast coastal area. Short-term abnormal dryness also continued in the northern reaches of the Big Island. In general this week, Maui and the windward portion of the Big Island received below-normal precipitation, while Lanai and the windward side of Kauai were wetter than normal.

Drought was not a concern across the US Affiliated Pacific Islands at this time since this was mostly a wet week for much of the islands in the region, receiving over their weekly threshold (1 or 2 inches of rain) to meet most water needs.

Saipan (Mariana Islands), Nukuoro (FSM), Mili and Wotje (Marshall Islands) had less than 1 inch of rain this week, which is less than their weekly threshold of 1 to 2 inches of rain to meet most water needs. However, the May rainfall totals were over their monthly

threshold of 4 to 8 inches of rain, so drought free conditions persisted for these locations as well.

Looking Ahead

For June 8-13, an inch or more of rain is forecast from the Pacific Northwest to the western interior, then across the central Plains, northern parts of the Southeast, and much of the Midwest. Local amounts up to or exceeding 3 inches of rain is forecast in northern and central Montana and the northern Rockies of Colorado. Far southern Florida may also see an inch or so of rain during this period. A quarter inch or more can be expected in the northern Plains into the western Midwest, the Northeast and the South from Texas to Florida. Little to no precipitation is predicted for the lower four-corners area and Pacific West Coast.

For the period from June 13-17, the National Weather Service Climate Prediction Center forecast favors below-normal precipitation across parts of the south-central and southeast United States, especially the central and western Gulf Coast areas into southwest Texas and southern New Mexico. Above-normal precipitation is favored in the Intermountain West and Great Basin, and with lesser confidence also favored from the Central Great Plains eastward into the Ohio Valley, Mid-Atlantic, and Northeast. Below-normal precipitation is favored in the Great Lakes vicinity. Above-normal precipitation is favored in most of Alaska, with the exception of the far southern reaches of the southeast Panhandle, where below-normal precipitation is more likely. Temperatures in Alaska are likely to be below normal in most areas, excluding the far north, with the highest forecast confidence centered over south-central and southeast Alaska. In the Lower 48, cooler-than-normal temperatures are favored in the Southwest and Intermountain West, excluding southeast New Mexico, and in the Upper Ohio River Valley. Warmer-than-normal temperatures are more likely in the north-central and northwest United States, especially in Minnesota and surrounding states, and from Texas and Oklahoma southeast into southern Alabama and Georgia and all of Florida.

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