

National Drought Summary for May 7, 2024

Summary

Heavy precipitation fell in western Oregon and adjacent southwest Washington and northwest California this week, and across large portions of the central U.S., as a series of storm systems caused continued bouts of severe thunderstorms and unfortunately included more significant tornadoes. The wet weather across portions of the Great Plains and Midwest led to either scattered or widespread improvements to ongoing drought or abnormal dryness, dependent on precipitation amounts, improvements to soil moisture and streamflow, and the degree of long-term dryness remaining in different locations. In Virginia, the Carolinas, and eastern Tennessee and Kentucky, heavy rains or lack thereof this week led to localized improvements or degradations in areas of short-term moderate drought or abnormal dryness. Very dry weather for the past few months led to increased fire danger in parts of the Florida Peninsula, and short-term moderate drought and abnormal dryness expanded in coverage. In southwest Kansas and adjacent eastern Colorado, mostly to the west of where this weeks showers and thunderstorms occurred, flash drought conditions continued and severe and moderate drought expanded in coverage. In Hawaii, wet weather continued on the windward sides of the islands, and some improvement to conditions occurred in Lanai and western Maui. Another wet week in Puerto Rico allowed for the removal of abnormal dryness from the northwest corner of the island.

Northeast

Widespread light to moderate precipitation amounts fell across the Northeast region this week (most spots saw 0.5-1 inches, with a few isolated spots exceeding 2 inches). Except for southeast New England, most of the region had warmer-than-normal weather this week. Temperatures in western Pennsylvania and West Virginia ranged from 6 to 12 degrees above normal. No drought areas affected the Northeast this week; abnormal dryness continued south and east of Lake Ontario, while recent dryness from the last few months and decreasing streamflow led to abnormal dryness developing in the northwest reaches of Maine.

Southeast

Scattered heavier rains fell across portions of North Carolina, northern and western South Carolina, and southeast Virginia, where total amounts locally ranged from 2 to 5 inches. Many areas, especially parts of Florida, Georgia and Alabama, were mostly dry. Except for the southeast half of the Florida Peninsula, most of the Southeast was warmer than normal, with most places checking in between 3 and 9 degrees above normal for the week. Virginia and the Carolinas saw a mix of improvements and

degradations, based on where heavier rains fell or missed. Areas that missed out saw a continued decline in streamflows and growing short-term precipitation deficits, while areas that received heavier rains had short-term dryness alleviated. Dry weather continued in central to southern portions of the Florida Peninsula, where short-term moderate drought and abnormal dryness grew in coverage. Sarasota and Brevard counties have implemented burn bans in response to increasing fire danger in this area of the state.

South

Widespread heavy rains fell across portions of the South region, especially in western Arkansas, central and eastern Oklahoma, and central and eastern Texas. Heavier rain also occurred in a few spots in northern Mississippi and Tennessee. Most of the region had warmer-than-normal temperatures this week, with departures of 6-9 degrees above normal being common in northern Mississippi and Tennessee, while 3-6 degrees above normal was common elsewhere. In areas of improvements to drought and abnormal dryness in central and eastern Oklahoma and Arkansas, recent showers and thunderstorms continued to improve precipitation deficits, streamflow and soil moisture. In central Texas, a tight gradient in long-term drought conditions has developed, as heavier rains have recently fallen along the northern edge of moderate to extreme long-term drought conditions. Some reservoirs have seen some recent improvement in levels in the area, though significant deficits remain. In deep south Texas, dry weather over the last month or two has led to significant short-term precipitation deficits, and a small area of short-term moderate drought developed. Heavier rains (or lack thereof) in Tennessee led to small-scale improvements and degradations in areas of moderate drought and abnormal dryness.

Midwest

This week, widespread heavy rain fell across Iowa, Missouri, southern Minnesota and portions of central Kentucky. Temperatures across the region this week were mostly above normal (outside of western Iowa); the warmest temperatures occurred in Indiana and Ohio, where weekly anomalies ranged from 6 to 12 degrees above normal. In the western half of the Midwest region, widespread improvements to drought occurred as the recent wet pattern continued, alleviating short-term precipitation deficits in most areas and creating short-term surpluses in some. Streamflows and near-surface soil moisture improved as a result in many areas, leading to some improvements to drought conditions. However, significant long-term precipitation and groundwater deficits remain in many areas, especially in parts of Iowa, so the current drought depiction still shows widespread moderate and severe long-term drought there. Southeast Kentucky saw a small area of short-term moderate drought develop where short-term precipitation deficits grew and streamflow lessened.

High Plains

Moderate to heavy rain amounts fell in eastern portions of the High Plains region, especially in central and eastern Nebraska, northern and eastern Kansas and eastern North Dakota. Temperature anomalies varied across the region, with temperatures coming in 3-6 degrees above normal in southern Kansas, while northwest Colorado and Wyoming finished the week at 3-9 degrees colder than normal. In eastern Kansas and Nebraska and in eastern North Dakota, heavy rains continued the recent wet pattern, leading to improvements in ongoing drought and abnormal dryness. In parts of eastern Nebraska, improvements were somewhat tempered by remaining long-term precipitation deficits and hydrologic impacts from those deficits. In southwest Kansas and adjacent southeast Colorado, many areas mostly or completely missed out on recent rains, continuing the very dry weather from the last few months, during which Dodge City tied its record for the driest April on record there (with just 0.02 inches of precipitation). In these areas, flash drought conditions continued, and severe and moderate short-term drought expanded. Given the time of year during which this drought began, severe impacts to the wheat crop in portions of Kansas have occurred. Recent dryness led to some expansion of drought and abnormal dryness in portions of eastern Wyoming as well.

West

The West region this week saw heavy precipitation (locally exceeding 2 inches) fall in eastern Montana, while portions of northern California, northeast Oregon, and western Oregon and southwest Washington also saw heavy precipitation amounts (locally exceeding 5 inches in northwest California and western Oregon). Streamflows improved amid the wet weather in northwest Oregon. Farther north in Washington, short-term dryness continued, especially in parts of the Cascade and Olympic ranges, where snow-water content and streamflow remained low, and moderate drought and abnormal dryness expanded. The heavy rains in eastern Montana ended a recent stretch of dry weather there, preventing any degradation to ongoing drought. The effects of these rains across the eastern plains will be evaluated further next week. Except for eastern New Mexico and parts of Arizona, most of the West region was colder than normal this week. Parts of Oregon, southern Idaho, northern Utah and northern Nevada saw temperature readings 6-12 degrees below normal.

Caribbean

Above-normal rainfall continued this week in Puerto Rico, with some locations seeing 3 or more inches above their normal rainfall for the week. With a couple cooler

exceptions, most locations finished the week 1-4 degrees warmer than normal. Given the recent wet weather and improvements in streamflow and vegetation health, the remaining abnormal dryness in northwest Puerto Rico was removed.

The abnormally dry (D0) designation was removed from St. Thomas, and now all three monitored sites in the U.S. Virgin Islands are free from any dryness or drought designation. Three locations around Charlotte Amalie on St. Thomas reported 2.5 to 4.8 inches of precipitation last week, continuing a wet pattern that has persisted across the region for several weeks, bringing an end to any semblance of dryness.

On St. Croix, most locations in and near Christiansted reported very heavy rainfall (5.3 to 7.1 inches), with only slightly less falling across most of the Frederiksted area (4.3 to 6.4 inches). This was much more than sufficient to keep any signs of dryness at bay.

Amounts were not quite as robust on St. John but were still much more than what would be needed to keep out any indication of dryness. Around 3 inches fell on Windswept Beach, and 1.4 inches was reported across Cruz Bay and vicinity.

Pacific

Recent dry weather in southeast Alaska continued this week and abnormal dryness remained in place. Elsewhere across the state, a mix of above- and below-normal precipitation occurred. Temperatures in southeast Alaska were generally between normal and 10 degrees above normal. In northern Alaska, below-normal temperatures were widespread, with most stations checking in 5-10 degrees below normal, with a couple spots falling at least 10 and 20 degrees below normal.

Wet weather on the windward (northeast-facing) sides of the Hawaiian Islands continued this week, while leeward sides remained drier. Temperatures across the state were mostly within a degree or two of normal. Abnormal dryness was removed from Lanai after a wet April there. Due to recent rainfall, parts of west Maui saw reductions in coverage of moderate drought and abnormal dryness.

Less than two-tenths of an inch of rain fell on Palau last week, but after more than 13 inches in April, dryness is not an issue there at this time.

Several tenths of an inch of precipitation fell on most sites in the Marianas Islands last week, which is about half normal for the period, and also half of what is necessary to keep up with environmental and human demand (approximately 4 inches per month). This continues a dry trend across the region dating back to the start of the calendar year. Across Saipan, Rota, and Guam, rainfall totals have ranged from 1.5 to 3.0 inches each month during January April 2024, with the exception of just under 7.2 inches of rain at Guam in April. From January through the first week of May, About 52 percent of normal rainfall was reported at Rota (10.1 inches), and 71 percent of normal has been

reported at Saipan (7.9 inches). Due to these multi-month deficits, and how far short totals have fallen from the amounts needed to keep up with environmental and human demand, extreme drought (D3) has been identified at Saipan, and severe drought (D2) at Rota and Guam. This represents a one-category deterioration at Rota in the past week.

Far western Micronesia (Ulithi and Yap) remains entrenched in exceptional drought (D4), the most intense classification. No precipitation was reported at either location last week, compared to a weekly normal of about 2.20 to 2.35 inches. Since November 2023, Yap and Ulithi reported 21.3 to 21.6 inches of precipitation (47 to 57 percent of normal, and well under the approximately 50 inches needed to keep up with human and environmental demand). Precipitation should be increasing climatologically from May through Summer, which is much needed in this area.

Dryness is not as severe from west-central into central Micronesia, but unfavorably low rainfall has been observed for most of the past few months at Woleai and Chuuk. There was some increase in totals during April, and so far May totals have been slightly below normal and just under the amount needed to keep up with demand. At Woleai, about 8.2 inches of rain fell during April, which was the wettest month since November 2023, and the first to provide sufficient moisture to keep up with demand in the same span. With an additional 1.9 inches this past week, conditions were improved from severe drought to moderate drought (D1) this week. Chuuk recorded about normal rainfall in April after two abnormally dry months, and like Woleai, reported 1.9 inches of rain for the first week of May. As a result, abnormally dry conditions (D0) were maintained at Chuuk.

Central, southern, and eastern Micronesia remained free of drought and abnormal dryness this week. April 2024 brought 11.6 to 21.4 inches of rain to Lukunor, Nukuoro, Kapingamaringi, Pohnpei, Pingelap, and Kosrae, which is near- to above-normal at all of these locations, and considerably more than what is required to keep up with demand. This past week, only 0.8 inch dampened Lukunor, but anywhere from 1.7 to 6.2 inches were reported elsewhere (Pingelap did not report). All of these locations also received enough rainfall to keep up with demand in March, so abnormal dryness is not currently a concern.

Extreme drought (D3) is assessed at Wotje in the northeastern Marshall Islands, an improvement from the exceptional drought (D4) in place last week. Wotje has the lowest precipitation normal of the monitored affiliated Pacific Islands, so once in drought, improvement can be slow to occur. About 3.3 inches of rain fell during April, which is slightly below normal but well above the 0.68 inch observed during the prior 2 months combined (February-March, less than 20 percent of normal). Rainfall is climatologically on the increase, with normal ranging from 4.3 to 5.6 inches per month through summer, then 7.7 to 8.7 inches during each autumn month.

Dryness is less intense from central through northwestern sections of the Marshall Islands, with moderate drought (D1) currently assessed at Majuro and Kwajalein, and

abnormal dryness (D0) at Ailinglapalap. January-March was considerably drier than normal at all three locations, with Ailinglapalap recording somewhat more than the other two sites. Totals ticked up closer to normal in April, but the first week of May brought less than an inch to these locations, so last weeks drought/dryness classifications were unchanged this week.

On American Samoa, Pago Pago reported 10.8 inches of rain in April, followed by over 3 inches during the first week of May. These amounts are close to normal, and well above the amounts needed to keep up with demand, so dryness is not a concern at this time.

Jaluit in the southern Marshall Islands has reported subnormal precipitation for several consecutive months, but not dramatically so. Jaluit received 8.2 inches of rain in April, which is below normal but sufficient to keep up with demand, and the wettest month since November 2023. The first week of May brought over 1.1 inches of rain, about half the weekly normal of 2.2 inches and not at a rate sufficient to keep up with long-term demand. No dryness designation is assessed at this time, but abnormal dryness ended just a few weeks back, and the location will need to be monitored for re-development.

Looking Ahead

As of time of writing (the afternoon of May 8), precipitation forecasts from the National Weather Service Weather Prediction Center show mostly dry weather west of the Continental Divide within the contiguous U.S. through the evening of Monday, May 13. East of the Continental Divide, 0.5-1 inch of rain, with locally higher amounts, is forecast for portions of central and eastern Colorado, western Kansas, the Texas and Oklahoma panhandles, western Oklahoma and northeast New Mexico. Heavier rain amounts (locally exceeding 2 inches) are forecast from eastern Texas eastward across Louisiana, southern portions of Mississippi, Alabama and Georgia, and in Tennessee. Separate areas of forecasted rainfall above an inch are in north-central Iowa and from south-central New York to south-central Pennsylvania.

For May 14-18, the National Weather Service Climate Prediction Center forecast favors warmer-than-normal temperatures across most of the contiguous U.S., with the exceptions of portions of the south-central U.S. from Oklahoma to Tennessee and in the northwest half of Washington. Except for far northeast Alaska, the forecast favors colder-than-normal weather in most of Alaska, especially southwest, south-central and southeast Alaska. Near-normal temperatures are most likely in Hawaii. Precipitation forecasts in the contiguous U.S. favor near- or above-normal precipitation across most areas, except for the Pacific Northwest and a small part of southwest Texas. The highest confidence for wetter-than-normal weather is in the Southeast region. Wetter-than-normal weather is favored in most of Hawaii, with the highest confidence for above-normal precipitation in Niihau and Kauai. Above-normal precipitation is also favored in Alaska.

Author(s)

Curtis Riganti, National Drought Mitigation Center

Richard Tinker, NOAA/NWS/NCEP/CPC