

# **National Drought Summary for December 31, 2024**

## **Summary**

Precipitation fell across much of the U.S. this week, with heavier amounts (> 1 inch) falling across large portions of the Northwest U.S. and from south-central U.S. to the Ohio Valley. Coastal areas of the Pacific Northwest, from Washington to northern California, reported weekly rainfall totals between 2 to 15 inches, while precipitation totals of 2 to 10 inches were reported in areas from eastern Texas to Alabama, as well as parts of the Ohio Valley and the Southeast. Above-normal precipitation supported drought improvements across large portions of the South and Midwest, and in parts of the Pacific Northwest, Midwest and Southeast. Conversely, weekly precipitation totals were below normal in areas of the southwestern U.S., Mid-Atlantic and Northeast. Drought and abnormal dryness were expanded or intensified in portions of the Southwest and in small pockets of the High Plains. Temperatures were above normal across much of the U.S. this week. Areas along the Northern Tier, from northern portions of the West, to the Midwest observed temperatures 10 to 25 degrees above normal. Below-normal temperatures were reported across northern portions of the Northeast, from northern New Jersey to Maine, where departures were up to 5 degrees F below normal this past week. Below-normal temperatures were also observed in small pockets of the Southeast this week.

## **Northeast**

Precipitation fell across much of the Northeast this week, but amounts were mostly near to below normal and enough to prevent further degradations across the region. Heavier rainfall amounts (1 to 2 inches) were observed in portions of eastern Pennsylvania and New Jersey, resulting in improvements of moderate to extreme drought in this area. Recent rainfall also justified improvements to severe drought in southern New York and in parts of Connecticut and Massachusetts, while moderate drought was improved in northern parts of West Virginia and Maine. Abnormal dryness was also improved in areas of western New York and southern West Virginia. For the week, average temperatures varied across the region, with above-normal temperatures being observed across most of the region. Below-normal temperatures were observed from western New York to West Virginia, with departures ranging from 1 to 15 degrees F below normal.

## **Southeast**

Warmer temperatures dominated the Southeast this week, with departures ranging up to 9 degrees F above normal. Small areas located in Georgia, Virginia and along the North Carolina-Virginia and Georgia-South Carolina borders observed below-normal

temperatures this week, with temperatures between 1 to 3 degrees F below normal. Weekly rainfall totals of 2 inches or more were observed across much of Alabama and in parts of northern Georgia, western North Carolina, and in southern portions of South Carolina and Florida. Extreme drought was reduced in northern Alabama while severe drought was removed from southern Alabama and trimmed in central and northern parts of the state. Moderate drought was removed from southern Florida and improved in parts of Alabama, Georgia and South Carolina. Large areas of abnormal dryness were improved in western North Carolina, northern Georgia, South Carolina and in southern Florida. Drought reduction and improvements were based on precipitation amounts, short-term SPI/SPEI, NDMC short-term blends, and improvements to streamflow and soil moisture data.

## **South**

Heavy rainfall was observed across much of the South this week, with precipitation totals ranging between 1 to 8 inches above normal. Above-normal rainfall, with amounts up to 600% above normal, along with improvements shown in short-term SPI/SPEI, streamflow and soil moisture data, supported widespread improvements to drought made from eastern Texas to Mississippi this week. Severe drought was removed along the Oklahoma-Texas and Louisiana-Arkansas borders, as well as from southern Mississippi, and improved in central Texas. Moderate drought was improved over large portions of Arkansas, eastern Texas, and in parts of Oklahoma, Louisiana and Mississippi. Conversely, western portions of Oklahoma and Texas observed below-normal precipitation this week. Moderate drought and abnormal dryness were expanded in small parts of western Texas. Temperatures were above normal across the entire region this week, with departures ranging between 1 to 15 degrees F above normal.

## **Midwest**

Above-normal temperatures, with departures ranging between 5 to 20 degrees F above normal, were observed across the entire Midwest region this week, with the largest temperature departures being observed in northern Minnesota. Precipitation was reported across most of the region this week, with much of the region observing weekly rainfall totals between 200% to 600% above normal. Severe drought was removed from northern Indiana and improved in southeast Ohio, while moderate drought was improved in large portions of Illinois, Indiana and Ohio, and in parts of Minnesota, Iowa and Missouri. Below-normal precipitation was observed over western portions of Minnesota and Iowa, and in parts of northern Michigan, southeast Ohio and eastern Kentucky.

## **High Plains**

Warm temperature dominated the High Plains this week, with departures ranging up to 20 degrees F above normal, especially along the northern portions of the region. Precipitation fell across much of the region this week, but amounts were not large enough to justify large improvement across much of the High Plains. Extreme drought was expanded in northern Nebraska, while moderate drought was expanded in southeast Kansas. Abnormal dryness was expanded in southwest Colorado, where weekly rainfall totals are 5% to 20% or normal for the week. Small areas of the region did observe heavy rainfall, where rainfall totals were more than an inch above normal. This above-normal precipitation allowed for improvements to be made in South Dakota and along the Wyoming-Colorado border. Moderate to extreme drought were improved in northern Colorado and southern Wyoming, while severe drought was improved in western South Dakota. Abnormal dryness was also improved in areas along the Wyoming-Colorado border this week.

## **West**

Average temperatures were above normal across nearly the entire region this week, while small pockets of below-normal temperatures were observed in northern California and along the southern coast of California, where temperatures were between 1 to 3 degrees F below normal. Conversely, Montana observed temperatures ranging between 6 to 15 degrees F above normal this week. Precipitation varied across the region this week, with heavy amounts falling in northern portions, while some areas in the southern portions of the region observed no precipitation. In the north, precipitation amounts of 1 inch or greater fell across much of the Pacific Northwest and northern California, with some areas receiving up to 8 inches above normal for the week. Moderate to severe drought were improved in western Montana and eastern Idaho, while moderate drought was removed in southeast Oregon and trimmed in the northeastern part of the state. Abnormal dryness was improved in northeast Oregon and in small parts of eastern Washington and southern Idaho. In the southern part of the region, above-normal temperatures and below-normal precipitation resulted in expansion of drought in Arizona, California and Nevada. Extreme drought was expanded in southern Arizona, while severe drought was expanded in southern and northwestern parts of the state. Moderate drought was expanded in western and eastern Nevada, southern California and across parts of Arizona, while abnormal dryness was expanded in parts of California, Arizona, Utah, Colorado and New Mexico this week.

## **Caribbean**

Puerto Rico remains drought-free this week based on recent precipitation, vegetation health and soil moisture data.

In the U.S. Virgin Islands, briefly heavy downpours on December 27-28 helped to maintain drought-free conditions. During the late-December deluge, 24-hour totals of 2 to 4 inches were common across St. Thomas and St. Croix, with slightly lower amounts observed on St. John. The Vegetation Health Index (VHI) indicates lush conditions across all three major islands, especially when compared to the same time a year ago, when the territory was still emerging from drought. Groundwater reserves remain abundant, with the December 31 depth to water at the U.S. Geological Surveys Adventure 28 Well on St. Croix approximately 18 feet closer to the surface than last year at this time. Similarly, depth to water at the Grade School 3 Well on St. Thomas was less than 2 feet on December 31, compared to more than 10 feet as recently as October 26, 2024. Year-to-date rainfall at Windswept Beach has topped 70 inches, representing the third-highest total in the last 40 years behind 76.41 inches in 2017 and 75.56 inches in 2010.

## **Pacific**

Precipitation continues to be below normal across areas of western Alaska. Abnormal dryness was introduced into parts of the Seward Peninsula and Yukon Delta, where conditions are impacting communities.

No changes were made to drought coverage and intensity across Hawaii this past week. Drought coverage remains widespread throughout Maui, Lanai, Molokai, Oahu, and Kauai.

In the U.S.-Affiliated Pacific Islands, seasonably drier weather has developed across northern areas, while abundant showers continue mainly well south of 10N Latitude. During the drought-monitoring period ending December 31, rainfall across the Federated States of Micronesia (FSM) totaled more than 5 inches in several locations, including Kosrae and Pohnpei. However, moderate drought (D1-S) persisted for Yap, FSM, where rainfall has fallen short of the 2 inches needed to meet most water requirements in each of the last 5 weeks. Additionally, abnormal dryness (D0-S) was introduced for Pingelap, FSM, where less than 2 inches of rain has fallen each of the last 4 weeks and 6 of the last 7 weeks. Meanwhile in the Republic of the Marshall Islands (RMI), abnormal dryness (D0-S) continued for Kwajalein and Wotje. December rainfall for Kwajalein totaled 6.14 inches, with only 0.70 inch falling during the last 12 days of the month. Wotje reported a fourth consecutive week with rainfall totaling 1.50 inches or less, with negligible rain falling the last 2 weeks. Farther west, mostly dry weather dominated the Marianas, with many locations reporting weekly rainfall totaling 0.50 inch or less. Abnormal dryness (D0-S) persisted across Saipan, where rainfall at the international airport totaled just 3.20 inches (88% of normal) from December 1-30. Elsewhere, neither dryness nor drought was observed across American Samoa and the Republic of Palau. An official observation site (Koror) in the Republic of Palau received December rainfall totaling more than 18 inches.

## ***Looking Ahead***

During the next five days (December 31, 2024-January 4, 2025), A low pressure system tracking from the Ohio Valley into the Northeast will spread precipitation across those regions Tuesday-Wednesday. Precipitation should fall as rain for most of the Ohio Valley to the coastal areas/lower elevations of the Northeast. Snow is likely in the higher elevation areas of the Interior Northeast like the Adirondacks and the Green and White Mountains. The Pacific Northwest will see a relative break in precipitation on Tuesday after a steady train of atmospheric rivers into the region. But by Tuesday night or Wednesday moist inflow may get renewed there and rounds of precipitation are likely to continue through late week and at times farther east into the northern Rockies. The eastern U.S. can expect one more day of above average temperatures (by 10-15F) on Tuesday, before upper troughing pushes along a series of cold fronts that gradually cool temperatures to near normal on Wednesday and gradually below normal into late week. High temperatures by Saturday are forecast to be around 10-15F below normal for the Ohio Valley to Appalachians and Mid-Atlantic while lows should be 5-10F below average. Colder than normal temperatures will also impact the north-central U.S., and lows could reach 10-15F below zero over northern North Dakota and Minnesota by Friday and/or Saturday. Meanwhile, the amplifying upper ridge over the West will promote warming, with temperatures generally 5-10F above average increasing in coverage by the second half of the week. Locally higher anomalies are likely in the Southwest and highs could reach well into the 70s. Highs of 5-15F above normal may reach into the southern High Plains by next Saturday.

The Climate Prediction Centers 6-10 day outlook (valid January 5-9, 2025) favors above-normal precipitation across much of the U.S., with below-normal precipitation favored in portions of the Southwest and Northeast, as well as parts of northern Alaska and on southern parts of the Big Island. Increased probabilities for above-normal temperatures are forecast for Hawaii and across much of the West and Alaska, while below-normal temperatures are likely from the northern Rockies to the East Coast, and in northern parts of Alaska.

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