

National Drought Summary – March 24, 2020

Summary: Storms delivered much-needed precipitation to California’s key watershed areas before soaking an area from the southeastern Plains into the Ohio and Tennessee Valleys with as much as 2 to 4 inches of rain. Some of the rain overlapped existing drought areas in southern Texas, providing substantial relief. Widespread precipitation also fell across the remainder of the West, except in the northern Rockies. Significant precipitation was also noted in Iowa and environs, while wind-driven snow blanketed parts of northeastern Colorado and western Nebraska. In contrast, warm, dry weather dominated the lower Southeast, including Florida, boosting irrigation demands and further reducing topsoil moisture. Weekly temperatures averaged more than 10°F above normal in many areas from the central Gulf Coast into the Southeast, contributing to further introduction or intensification of abnormal dryness (D0) and moderate to severe drought (D1 to D2).

Northeast: The newly added area of abnormal dryness (D0), stretching from the Delaware River Valley to southern New England, received two rounds of heavy precipitation. From March 19-24, precipitation totaled at least 2 inches in many locations within last week’s D0 area, including Providence, Rhode Island (2.67 inches); Newark, New Jersey (2.25 inches); and Bridgeport, Connecticut (2.19 inches). As a result, the D0 area was significantly reduced in size and split into two pieces. Despite the recent precipitation much of the Northeast remains in a “snow drought,” with season-to-date totals through March 24 including 15.1 inches (37% of normal) in Boston; 11.8 inches (36%) in Providence; and 4.8 inches (19%) in New York’s Central Park.

Southeast: The Southeast remains a tale of two landscapes: wet to the north in recent weeks, except in some locations across the coastal plain and along the Atlantic Coast, but dry along the Gulf Coast and in Florida. The dryness extends back several months in parts of Florida, where moderate to severe drought (D1 to D2) was introduced or expanded. The new D1 area, highlighted by dry soils, low streamflow, and increasing fire danger, encompasses part of interior southern Florida, south of Lake Okeechobee. During the first 24 days of March, no measurable rain fell in many Florida locations, including Tampa, Lakeland, and Sarasota-Bradenton. Those values are 2 to 3 inches below normal—and have been accompanied by temperatures averaging 4 to 6°F above normal. March 1-24 rainfall totaled just 0.02 inch in Orlando, Fort Myers, and Daytona Beach, Florida. According to the U.S. Department of Agriculture, topsoil moisture in Florida was 51% very short to short on March 22, up from 38% a week earlier.

South: Heavy rain across interior southern Texas provided significant drought relief. According to the U.S. Department of Agriculture, statewide topsoil moisture rated very short to short stood at 19% in Texas on March 22, down from 40% the previous week. On the same date, 49% of the winter wheat in Texas was rated in good to excellent condition. In southern Texas, a small patch of exceptional drought (D4) persisted along and near the Rio Grande, but rain resulted in a general reduction in coverage of moderate to extreme drought (D1 to D3) in many other areas. Cotulla, Texas, in La Salle County, received 2.98 inches of rain from March 18-22. Closer to the Gulf Coast, however, March 1-24 totals included 0.22 inch in Corpus Christi and 0.01 inch in Rockport. Farther north near the coast, there was some expansion of moderate to severe drought (D1 to D2) in southeastern Texas. Meanwhile, there was no change in the drought depiction

across Oklahoma's panhandle, but the small area of abnormal dryness (D0) and moderate drought (D1) in southwestern Oklahoma was split into two pieces and reduced in size and intensity. Elsewhere, dryness persisted along and near the central Gulf Coast. D1 persisted across southeastern Louisiana, while D0 was slightly expanded.

Midwest: The Midwest has been completely free of drought early-November 2019 and has experienced no dryness (D0) since January 7, 2020. It was a wet week across the region, with rain changing to snow in Iowa and portions of neighboring states. In Sioux City, Iowa, March 19-20 featured precipitation totaling 1.60 inches and 3.8 inches of snow. Meanwhile, heavy rain fell from Missouri into the Ohio Valley.

High Plains: Dryness (D0) and moderate to severe drought (D1 to D2) remains mostly confined to the southwestern part of the region, although a spot of D0 was introduced in northwestern North Dakota. On March 19, a spring storm delivered wind-driven snow to parts of northeastern Colorado and western Nebraska. Denver, Colorado, reported 6.0 inches of snow on that date, along with a peak northerly wind gust to 49 mph. Some snow fell in the region's mountainous areas, but there was little overall change in the drought depiction, except for some removal of moderate drought (D1) in northwestern Colorado.

West: It was an active drought-monitoring period in the West, although northern sections of the region received little or no precipitation. During the 10-day period ending March 24, the average water equivalency of the Sierra Nevada snowpack rose from 10 to 14 inches, according to the California Department of Water Resources, representing an improvement from just over one-third of the mid-March normal to about one-half of the late-March normal. Meanwhile, several rounds of heavy precipitation also struck southern California and the Desert Southwest, resulting in modest reductions in drought severity. While the late-season precipitation has reduced irrigation demands and has provided a nice boost in soil moisture and snowpack, the moisture is generally too late for drought-stressed rangeland that has already lost forage yield potential due to winter drought. Farther north, drought slightly expanded in northwestern California and western Oregon, as below-normal seasonal precipitation was reflected by dry soils, sub-par snowpack, and unusually low streamflow. Patches of dryness and drought also stretched from the eastern slopes of the Cascades onto the northern High Plains.

Alaska, Hawaii, and Puerto Rico: Neither dryness nor drought exists in Alaska and Puerto Rico. Meanwhile in Hawaii, extremely heavy rain fell on Kauai from March 16-18. During that 3-day period, rainfall totaled 8.46 inches in Lihue, Kauai. Elsewhere on Kauai, 72-hour rainfall amounts (ending at daybreak on March 18) reached 29.05 inches on famously wet Mount Waialeale; 14.27 inches in Hanalei; and 11.77 inches in Wailua. Much of Mount Waialeale's total—22.10 inches—fell in a 24-hour period on March 16-17. Elsewhere, March 16-18 rainfall totaled 3.03 inches in Honolulu, Oahu, and 4.91 inches in Hilo, on the Big Island. In Hawaiian areas affected by dryness (D0) and moderate to severe drought (D1 to D2)—encompassing just over one-tenth of the state but limited to parts of Maui and Hawaii Counties—assessments continue to determine how much of a positive impact the mid-March rainfall is having on streamflow and pasture conditions.

Looking Ahead: In the West, showers will gradually diminish as the week progresses. By late Friday, a significant spring storm system will begin to intensify across the central Plains. The storm will move northeastward, reaching the northern Atlantic Coast on Monday. As a result, storm-total precipitation could reach 1 to 3 inches across large sections of the Midwest and Northeast. Accumulating snow may occur from the central High Plains (e.g. northeastern Colorado) into parts of the upper Great Lakes region, as well as northern New England. In contrast, mostly dry weather should prevail during the next 5 days across the southern High Plains and the southern Atlantic region, including Florida.

The NWS 6- to 10-day outlook for March 31 – April 4 calls for the likelihood of near- or below-normal temperatures in much of the eastern one-half of the U.S. and across the nation's northern tier, except Maine. Warmer-than-normal weather can be expected in Maine, along with Florida, the Gulf Coast region, and an area stretching from California to the High Plains. Meanwhile, near- or below-normal precipitation across large sections of the country should contrast with wetter-than-normal conditions along the Canadian border from the northernmost Rockies into the upper Great Lakes region, and across the South from Texas to the southern Atlantic Coast.

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