

National Drought Summary for January 18, 2022

Summary

A winter storm impacted areas from the northern Plains, to the Midwest, into the Southeast and then up the east coast during the period. For many areas, this was the first time that heavy snow occurred in these regions as many have brought up “snow drought” in areas of the country where snow has been minimal. From the Missouri River west, there was very little precipitation for the week. Temperatures were warmest over the northern Rocky Mountains and Plains where departures were 10-15 degrees above normal. Cooler temperatures dominated the East as departures were 5-10 degrees below normal.

Northeast

Temperatures for the week were cooler than normal with some areas in New England having departures of 8-10 degrees below normal. Most of the precipitation took place off the Great Lakes as snow and then a mix of rain and snow along the coastal regions. No changes to the drought status of the region occurred this week.

Southeast

Cooler than normal temperatures dominated the region with departures of 3-6 degrees below normal common throughout the Carolinas, Georgia, and into Alabama. As a winter storm tracked through the region, bringing with it ice, rain, and snow, some areas of Coastal Carolina, southern Georgia, the Florida panhandle and Virginia recorded over 400% of normal precipitation for the week. With dryness dominating the region as of late, the influx of moisture was welcomed and allowed for some widespread improvements to the drought status of the region. A full category improvement to the drought status took place over much of eastern Virginia, eastern North Carolina, eastern South Carolina and the panhandle of Florida. Moderate drought and abnormally dry conditions are all that remain after this week’s improvements.

South

Most of the region was dry for the week with only portions of northern Arkansas, Tennessee, and Mississippi recording widespread precipitation, with some areas at 150% of normal or more. Temperatures were near normal to slightly above with departures of 2-4 degrees above normal over the panhandles of Texas and Oklahoma

as well as eastern Arkansas. Coastal areas of Texas into the Delta were 2-4 degrees below normal. Degradation continued as most areas have been dry since the fall and temperatures have remained well above normal during this period. In Oklahoma, a new area of exceptional drought was added in the panhandle with extreme drought areas expanded to the east. Severe drought expanded in southern Arkansas and into Louisiana and Mississippi. For Texas, severe and extreme drought expanded in the central and northern portions of the state while moderate and severe drought expanded in south Texas. There was an improvement to moderate drought and abnormally dry conditions in east Texas.

Midwest

Precipitation was mixed in the region this week with the western extent of the Midwest seeing the most while other areas remained dry. The greatest precipitation for the week was from southern Minnesota into Iowa, where over 200% of normal precipitation occurred with a winter storm. Outside of Michigan, most of the rest of the region was warmer than normal with temperatures up to 3-6 degrees above normal. Michigan had temperatures that were 3-6 degrees below normal. Even with the influx of moisture to some areas associated with the winter storm, it brought the first big snow event of the season and stopped a trend of dryness. Only a few changes to the overall drought status were made this week, with some expansion of abnormally dry conditions in northern Illinois and southwest Missouri while some improvement took place along the Missouri and Illinois border.

High Plains

Warmer than normal conditions dominated the region with areas of the Dakotas recording temperatures that were 10-15 degrees above normal for the week. The same winter storm that impacted portions of the Midwest also brought snow to much of North Dakota, eastern South Dakota and eastern Nebraska. Much of the rest of the area recorded below-normal precipitation for the week. With an ongoing "snow drought" in portions of the western Dakotas, degradation was shown this week in the Black Hills of South Dakota where moderate drought was expanded and in western North Dakota where severe drought was expanded. Some improvements were made to areas of extreme drought this week in southeast Wyoming, western Nebraska, and central Colorado. Many of the improvements were based on a reassessment of the region after the last few weeks brought several precipitation events to these areas.

West

Temperatures were near normal for most of the region this week with areas of Wyoming and Montana having departures of 10-15 degrees above normal. With most of the region recording little to no precipitation for the week, most of the changes in the area were based on an assessment over the last several weeks. Improvements were made to the extreme and exceptional drought in western Montana and eastern Idaho as well as in northwest Wyoming.

Caribbean

Over the last several weeks, Puerto Rico has shifted to a wetter pattern and this allowed for some improvements to the moderate drought and abnormally dry conditions, especially over eastern portions of the island.

Surface high pressure dominated the northeastern Caribbean during this USDM week. Beneficial rain fell over parts of St. Croix and St. Thomas as low-level convergent zones crossed the area and a weakening frontal boundary touched northern regions, competing with the high pressure. Radar- and satellite-based tools indicated the heaviest precipitation fell over western parts of St. Croix and eastern parts of St. Thomas. The rainfall gauge reports were over an inch and near normal in some cases, but since this is the dry season, the rain did little to improve drought conditions. At best, it kept drought from getting worse.

The week was dry on St. John, with CoCoRaHS observations for this week ranging from 0.13 inch to 0.37 inch. Standardized Precipitation Index (SPI) values at Windswept Beach were at D2 to D4 levels at the 1- to 3-month time scales, and D1 at longer time scales. The 12-month SPI value at East End fell in the D3 range. The Susannaberg DPW 3 USGS well has been steadily declining the past week and last several weeks. D2-SL continues for island of St. John.

Weekly rainfall amounts varied across St. Thomas, ranging from 0.42 inch in the east to 1.62 inches along the north-central coast. The weekly total of 0.77 inch at King AP brought the monthly total to 1.32 inches, which is 86% of normal. The total rainfall since August 1 (which encompasses the wet season) is 15.51 inches, which ranks at the 18th percentile (D1). SPI values for King AP were in the D2 range at the 3- to 6-month time scales and D1 at longer time scales. The Grade School 3 USGS well groundwater level rose a couple feet in the last week, then started dropping again during the latter half of the week. D2-SL continues for St. Thomas.

Northwestern parts of St. Croix received several inches of rain, with CoCoRaHS observations ranging from 1.80 to 2.35 inches for the week. Less than an inch was reported in southern and eastern portions, with some stations receiving less than half an inch of rain. Rohlsen AP recorded 1.69 inches for the week, bringing the monthly total to 2.15 inches, which is 196% of normal. The August-January total of 13.56 inches ranked fourth driest for the period, and the 365-day total (January 19, 2021-January 18, 2022)

ranked as third driest out of 62 years, which translates to the 0.048 percentile, or D3 level. SPI values at Rohlsen AP were in the D2 range for the last 3 to 12 months. The Adventure 28 USGS well has not shown any improvement; instead, it has been steadily declining the past week and last several months and continues at a 2016-2022 record low. D3-SL continues for St. Croix.

Pacific

There were no changes in Alaska and Hawaii this week.

Troughs and trade-wind convergence generated a large band of precipitation across southern portions of Micronesia during this USDM week, while frontal remnants and shear lines teased the Marianas with precipitation. Otherwise, northern portions of Micronesia were generally dry, especially northern parts of the Federated States of Micronesia (FSM) and much of the Marshall Islands (RMI). South of the equator, the South Pacific Convergence Zone (SPCZ) generated widespread precipitation over and around the Samoan Islands. A low pressure circulation that formed within the SPCZ moved over American Samoa, enhancing precipitation. Satellite-based QPE tools indicated 7-day precipitation totals of 2+ inches over and around the Samoan Islands and in the band across southern Micronesia, and little to no rain over northern portions of Micronesia, other than streaks of 0.2-0.5 inch across the Marianas.

Over 4 inches of rain (4.13 inches) was recorded at Pago Pago, bringing the monthly total so far in January to 6.12 inches, which is above the 4-inch monthly minimum needed to meet most water needs. The automated stations at Siufaga Ridge and Toa Ridge recorded 2.27 inches and 1.74 inches, respectively, for the week. D-Nothing continues at Tutuila.

With 0.50 inch reported at Airai and 0.29 inch at Koror COOP, this week has been dry, and January to date has been dry with 2.73 inches at Airai and 3.54 inches at Koror COOP. But previous weeks and months have been wet, so D-Nothing continues at Palau.

Over an inch of rain (1.35) was recorded at the Guam airport (1.35) and Rota (1.34) this week, while the Saipan IAP (0.47) and ASOS station (0.48) had less than half an inch. With 2.71 inches for the month so far, Guam is above the monthly (to date) minimum needed to meet most water needs. Reports have been received of fires in the southern part of the island in the past week. D0-S was changed to D-Nothing at Guam to reflect the above-minimum rainfall totals. At Rota and Saipan, last week was wet or nearly wet and the January monthly total so far is above minimum, so D-Nothing continues.

The last 2 weeks have been dry (below the 2-inch weekly minimum needed to meet most water needs) at Kapingamarangi (0.75 inch this week and 0.05 inch the week before), but previous weeks were wet. For January so far, 3.54 inches have been

received, which is below the monthly (to date) minimum. Compared to full Januaries, January 2022 ranks as the third driest January in 32 years of data, which equates to the 9th percentile or D2 level. But December 2021 was wet. When the dry months from August-November are included, low ranks become evident. Assuming no more rain falls this January, Kapingamarangi's precipitation ranks include: fifth driest November-January, fourth driest October-January, fifth driest September-January, and third driest August-January. Considering the dryness of January and previous months, D1 was continued at Kapingamarangi but it was changed to D1-SL to include the longer-term dryness.

This week was wet (2.36 inches) at Nukuoro, but the previous two weeks were dry, and the January total so far (2.68 inches) is below the monthly minimum. D0-S continued at Nukuoro this week, but if wet conditions continue the abnormal dryness may be discontinued next week.

Dry conditions continued at Chuuk (0.21 inch this week and 2.19 inches for the month so far). Rain gauge data were not available from Fananu this week, but satellite estimates from JAXA and NASA Sport suggest it has been mainly dry the last week. A similar scenario is likely for Namonuito atoll to the west of Fananu. D0-S continued at Chuuk and the status at Fananu was worsened to D1-S.

Pohnpei had 0.90 inch of rain so far this week, each of the last 4 weeks have been below the weekly minimum of 2 inches, and the monthly total so far in January is 2.98 inches, which is below the min. D-Nothing continued for Pohnpei this week, but D0-S could be considered next week if the dryness continues.

Woleai had 0.28 inch of rain so far this week and 0.10 inch last week, with 0.63 inch so far this month, but the previous week recorded 2.84 inches of rain. D-Nothing continued this week at Woleai, but D0-S could be considered next week if the dryness continues.

At the remaining stations in the FSM, either this week was wet, or last week or the week before were wet, so D-Nothing continued.

Kwajalein received no measurable rain this week and only 0.52 inch so far this month, and each of the last 6 weeks have been dry. With December dry and so far January dry, the December-January total of 4.26 inches ranks as the 3rd driest December-January total when compared to complete Januaries. This equates to the 4th percentile (D3 level). RTS Weather reports that vegetation continues to dry up and brown, and dust has started to blow. Water supplies on Kwajalein were still good, but reports have been received that the islets of Ebadon and Mejatto on the west end of the atoll have some heightened concerns with water at this time given their remote location on the atoll. The status at Kwajalein was worsened to D1-S.

Wotje has had no rain this month and no rain since December 4. Reports have been received that remote atolls in the general vicinity of Wotje have been requesting water assistance the last week. D2-S continued on at Wotje.

Jaluit received 2.18 inches of rain this week, which is above the weekly minimum, so D-Nothing continued. But it was dry at Ailinglaplap (0.42 inch this week), Majuro (0.58), and Mili (0.74), with monthly totals also quite low. The reservoir storage at Majuro had dropped to 20.6 million gallons, which is 64% of maximum and well below the level (28.8 million gallons) which triggers drought concern. The Majuro water company has restricted water delivery on Wednesday due to declining water levels. With monthly totals so far this month dry, and the last 3 weeks each dry, the status was changed to D0-S at Ailinglaplap, Majuro, and Mili.

Looking Ahead

Over the next 5-7 days, it is anticipated that cooler than normal conditions will dominate the eastern half of the United States, with the greatest departures along the Canadian border in the Great Lakes region where departures of 12-15 degrees below normal are anticipated. Warmer than normal conditions over the West and northern Rocky Mountains with departures of 6-9 degrees above normal could be observed. Some precipitation is expected over the Pacific Northwest and into the Rocky Mountains. The wettest locations are expected to be in the South and Southeast and into the Mid-Atlantic where up to an inch or more of precipitation could be expected.

The 6-10 day outlooks show the high probability of colder than normal temperatures over the eastern half of the country, especially from the Great Lakes to the Mid-Atlantic into New England. It is anticipated that below normal precipitation will impact much of the country centered on the Great Basin and the Midwest. There are above normal chances for above normal precipitation in much of Alaska, central Rocky Mountains and along the Gulf Coast.

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