The discussion in the Looking Ahead section is a description of what the official national guidance from the National Weather Service (NWS) National Centers for Environmental Prediction is depicting for current areas of dryness and drought. The utilized NWS forecast products include the WPC 5-day QPF and 5-day Mean Temperature progs, the 6–10 Day Outlooks of Temperature and Precipitation Probability, and the 8–14 Day Outlooks of Temperature and Precipitation Probability – valid as of late Wednesday afternoon of the USDM release week. The NWS forecast Web page used for this section is http://www.cpc.ncep.noaa.gov/products/forecasts/.

A series of Pacific weather systems continued to move across the contiguous U.S. (CONUS) in a fairly westerly jet stream flow during this U.S. Drought Monitor (USDM) week. The systems dropped copious amounts of precipitation along the Coastal and Cascade mountain ranges of Northern California and the Pacific Northwest, with above-normal precipitation continuing across most of the Pacific Northwest to the Rockies. The Pacific systems were dried out once they crossed the Rockies, but some picked up Gulf of Mexico moisture to provide above-normal precipitation from parts of New Mexico northeastward to the Great Lakes. Surface lows were generated by the upper-level Pacific systems, with some tracking to the Northeast and others moving along the Gulf Coast. The Gulf lows gave Texas to the Lower Mississippi Valley above-normal precipitation, while the others generated above-normal precipitation in the Middle Appalachian to Mid-Atlantic states. It was drier than normal from California to the Rio Grande Valley, across most of the northern Plains and Southeast, and parts of the central High Plains and Ohio Valley. With a westerly flow, most of the CONUS was warmer than normal, with only the Southeast having near to cooler-than-normal temperatures.

**Northeast:** Half an inch to an inch of precipitation occurred across most of the Northeast this week, with locally 2 or more inches in southern portions and less than half an inch in parts of northern New England. According to the National Weather Service (NWS), the 2.54-inch total in Wilmington, Delaware, on January 25 was the third-wettest January day on record, behind a pair of 2.60-inch amounts (on January 3, 1936, and January 22, 1902). With an inch or more of precipitation falling over Maryland and Delaware, resulting in improving Standardized Precipitation Index (SPI) values, the western and northern portions of the D0 over this area were trimmed. Otherwise, no change was made to the Northeast.

**Southeast:** Most of Florida to the coastal Carolinas had half an inch or less of precipitation this week. Otherwise, half an inch or more of precipitation was widespread across the Southeast from Alabama to Virginia, with an estimated (based on radar) 2 inches or more locally from northeast Georgia to northern Virginia. D0 spread further down the North Carolina coast into the South Carolina lowlands, and D0 expanded across parts of Florida and southern Georgia and further in southwest Alabama, based on mounting deficits over the last one to 3 months. In coastal North Carolina, groundwater levels and surface streamflows were starting to fall into the below-normal range. According to U.S. Department of Agriculture (USDA NASS) statistics, 38% of pasture and rangeland was in poor to very poor condition in Virginia, and there were reports that “hay supplies are tight due to poor hay production in the fall.” The poor conditions in the Southeast were due to autumn drought, followed by insufficient time for re-growth before
winter. For this reason, and because substantial rain occurred this week, no new D0 was added to central Virginia where 6-month precipitation deficits were evident. The USDA statistics also noted that 19% of the North Carolina pasture and rangeland was in poor to very poor condition.

South: Eastern portions of the South region received widespread half inch or more of precipitation, while western Texas was dry, especially along the Rio Grande Valley. An inch or more of precipitation fell from eastern Texas and southeast Oklahoma to the Mississippi River, with embedded areas of 2+ inches along the Gulf Coast and from northern Louisiana to southern Arkansas. Half an inch or more also fell in the Oklahoma panhandle and northern portions of the Texas panhandle. Consequently, drought and abnormal dryness contracted in parts of Texas, Oklahoma, Louisiana, and Arkansas. But drought or abnormal dryness expanded or intensified in parts of western Texas, southern Louisiana, and southeast Mississippi. The USDA reported that 28% of Tennessee’s pasture and rangeland was in poor to very poor condition, but, as for the Southeast, this was due to autumn drought, followed by insufficient time for re-growth before winter.

Midwest: Less than 0.25 inch of precipitation fell across most of Minnesota and parts of southeast Illinois to southwestern Indiana, while most of the Midwest received half an inch or more, and locally more than an inch. With most of the region experiencing wet conditions for the last 1 to 12 months, there was no drought or abnormal dryness in the Midwest this week.

High Plains: Much of the High Plains region had less than a tenth of an inch of precipitation this week. Half an inch or more fell across southeastern Nebraska to southern Kansas and in the mountains of Colorado and western Wyoming, with pockets of 0.25-0.50 inch elsewhere. Although 6-month precipitation deficits are still significant, D2 was deleted in western and southern Colorado where recent precipitation made 1 to 3-month precipitation deficits and drought indicators less severe and where mountain snowpack was near normal. D0-D2 were trimmed slightly in southwest Kansas where precipitation was above normal this week. Reports from eastern Colorado indicate that the recent lack of precipitation is deteriorating conditions. Topsoil is blowing about in the wind, and winter wheat needs more moisture before green-up, so this area will be watched for deterioration in the coming weeks. Based on USDA reports, topsoil moisture was short to very short (dry to very dry) across 61% of Colorado, 32% of Kansas, and 24% of Wyoming; 23% of the pasture and rangeland was in poor to very poor condition in Colorado; and 24% of Colorado’s winter wheat and 23% of winter wheat in Kansas was in poor to very poor condition. USDA reports from Colorado’s southeastern counties included: “conditions were noted as extremely dry and moisture was needed. A reporter noted high winds severely damaged or blew out winter wheat stands in [some] areas. Livestock were being heavily supplemented.”

West: The Pacific weather systems continued to drop several inches of precipitation across coastal areas of Oregon, Washington, and northern California. More than 2 inches was estimated from radar across the coast to Cascades, with 5 inches widespread and locally over 10 inches occurring in parts of Washington. Their westerly track and fast movement dried them out once they traversed the Cascade range, with half an inch to an inch of precipitation falling in the lee areas of Washington and less than half an inch in the Oregon lee regions. The persistent precipitation has made up for deficits over the last month across the coastal regions, and last 2
months in western Washington, but deficits are still widespread and severe for the last 3 to 24 months. Mountain snowpack (SNOTEL snow water equivalent, or SWE) was improved in some basins. But with warmer-than-normal temperatures causing the precipitation to fall more as rain rather than snow, many other basins across the Pacific Northwest still had below-normal SWE values. The western edge of D0-D1 was pulled back in Washington and Oregon to reflect the persistent precipitation, and D1 was pulled back in north central Washington and central Oregon, but otherwise no change was made to the depiction in the Pacific Northwest.

Northern California received 2 or more inches of precipitation this week, but amounts dropped off rapidly to the south, with little to no precipitation falling in Southern California to southern Nevada. Pockets of half an inch or more of precipitation occurred over the higher elevations of Utah and the Four Corners. In California, according to the state Department of Water Resources, Sierra Nevada snowpack, which was 105% of average (for the date) on December 23, stood at 74% of the late-January average on January 28. January has been quite dry across the state, with precipitation deficits occurring in places out to the last 6 months. As a result, a large area of D0 was added to the central valleys and from the Bay area to the Sierra Nevada, stretching into the Reno area of Nevada. According to USDA reports, 65% of topsoil moisture was short to very short, and 87% of winter wheat was in poor to very poor condition, in New Mexico. In northeastern New Mexico, “wheat was stressed from the lack of moisture.” But precipitation this week and previous weeks has lessened deficits in the Great Basin to southern Rockies, resulting in pullback of D0 in western Utah and deletion of D2 in east-central Utah and north central New Mexico.

**Hawaii, Alaska, and Puerto Rico:** This week was wetter than normal in the panhandle of southeastern Alaska, but drier than normal across the rest of the state. Dry conditions in the south central area, around Cook Inlet and Anchorage, were evident in the SPI for the last 1 to 6 months, and SWE values were in the tenth percentile or drier, so a new area of D0 was added here. In Hawaii, continued improvement of vegetation and pastures prompted pullback of D0-D2 on Molokai, elimination of the D3 on Maui, and a 1-category improvement on Kahoolawe. Above-normal rain fell across southern and eastern Puerto Rico this week. With wet conditions for the last 1 to 2 months, D0 was pulled back in eastern Puerto Rico, with the remaining D0 reflecting dryness at the 3 to 6-month time scales here.

**Looking Ahead:** A low pressure system brought precipitation to the southern Plains during Tuesday, January 28, after the cutoff time for this week’s USDM, and it moved across the Southeast on Wednesday, January 29, while another Pacific system brought precipitation to the Pacific Northwest. During the next 2 weeks, Pacific weather systems will continue to cross the CONUS in a westerly jet stream flow, with low pressure systems also developing along the Gulf of Mexico coast. For January 30-February 3, 3 or more inches of additional precipitation are forecast for coastal Oregon and Washington, with an inch or more across the northern Rockies and 0.25 inch or more for the rest of the Pacific Northwest to northern High Plains, Great Basin to central Rockies, and east-central Arizona. Most of California, southern Nevada, and Arizona to New Mexico are forecast to be dry. Little to no precipitation is also predicted for much of the Plains. Half an inch or more is expected from eastern Texas to the Lower Mississippi Valley and the central Gulf Coast, with an inch or more widespread from Georgia to North Carolina and across southern Florida. Half an inch or less of precipitation is predicted for the rest of the
country from the Mississippi River eastward. Temperatures are predicted to be warmer than normal across most of the CONUS, with some below-normal maximum temperatures in the Southwest. For February 4-8, odds favor below-normal precipitation from California to Utah, and across most of Texas to Oklahoma, while above-normal precipitation is favored across Alaska and most of the rest of the CONUS. The outlook calls for warmer-than-normal temperatures from the Mississippi River to East Coast and the Alaska panhandle, and colder-than-normal temperatures in the Southwest and much of Alaska.

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Dryness Categories

D0 ... Abnormally Dry ... used for areas showing dryness but not yet in drought or for areas recovering from drought.

Drought Intensity Categories

D1 ... Moderate Drought
D2 ... Severe Drought
D3 ... Extreme Drought
D4 ... Exceptional Drought

Drought or Dryness Types

S ... Short-term
L ... Long-term

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