

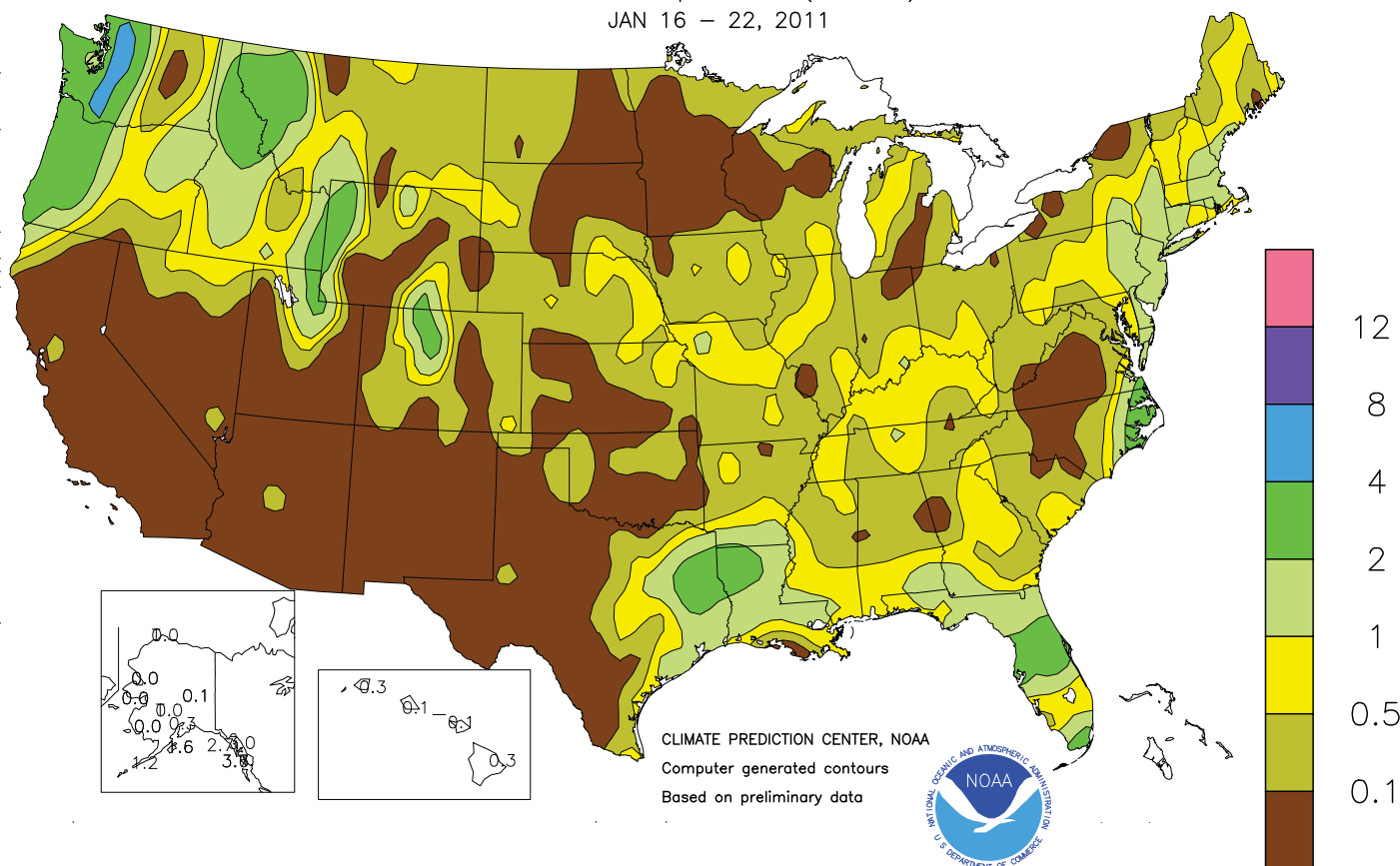
# WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE  
National Agricultural Statistics Service  
and World Agricultural Outlook Board

Total Precipitation (Inches)

JAN 16 - 22, 2011



## HIGHLIGHTS

**January 16 - 22, 2011**

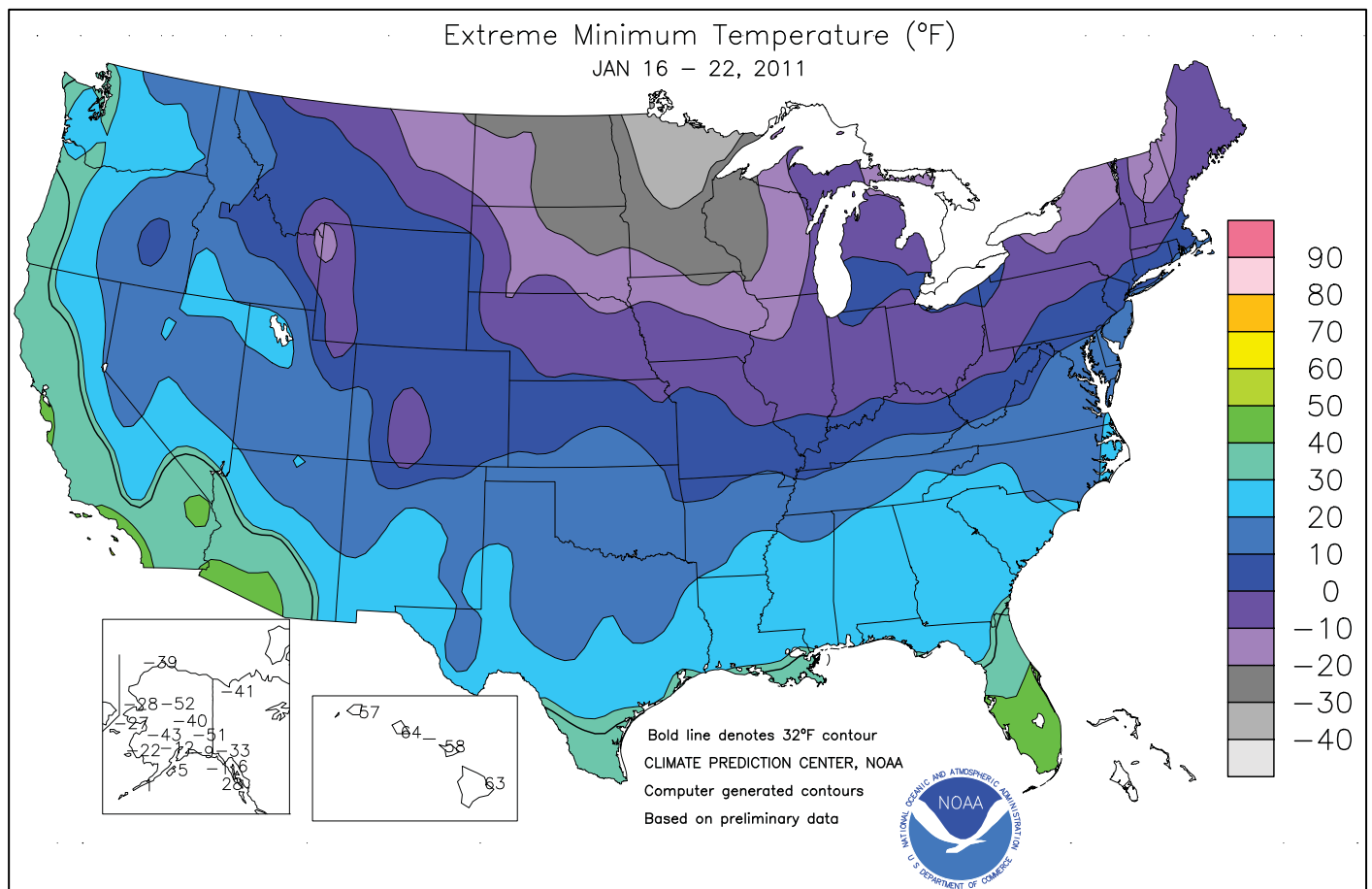
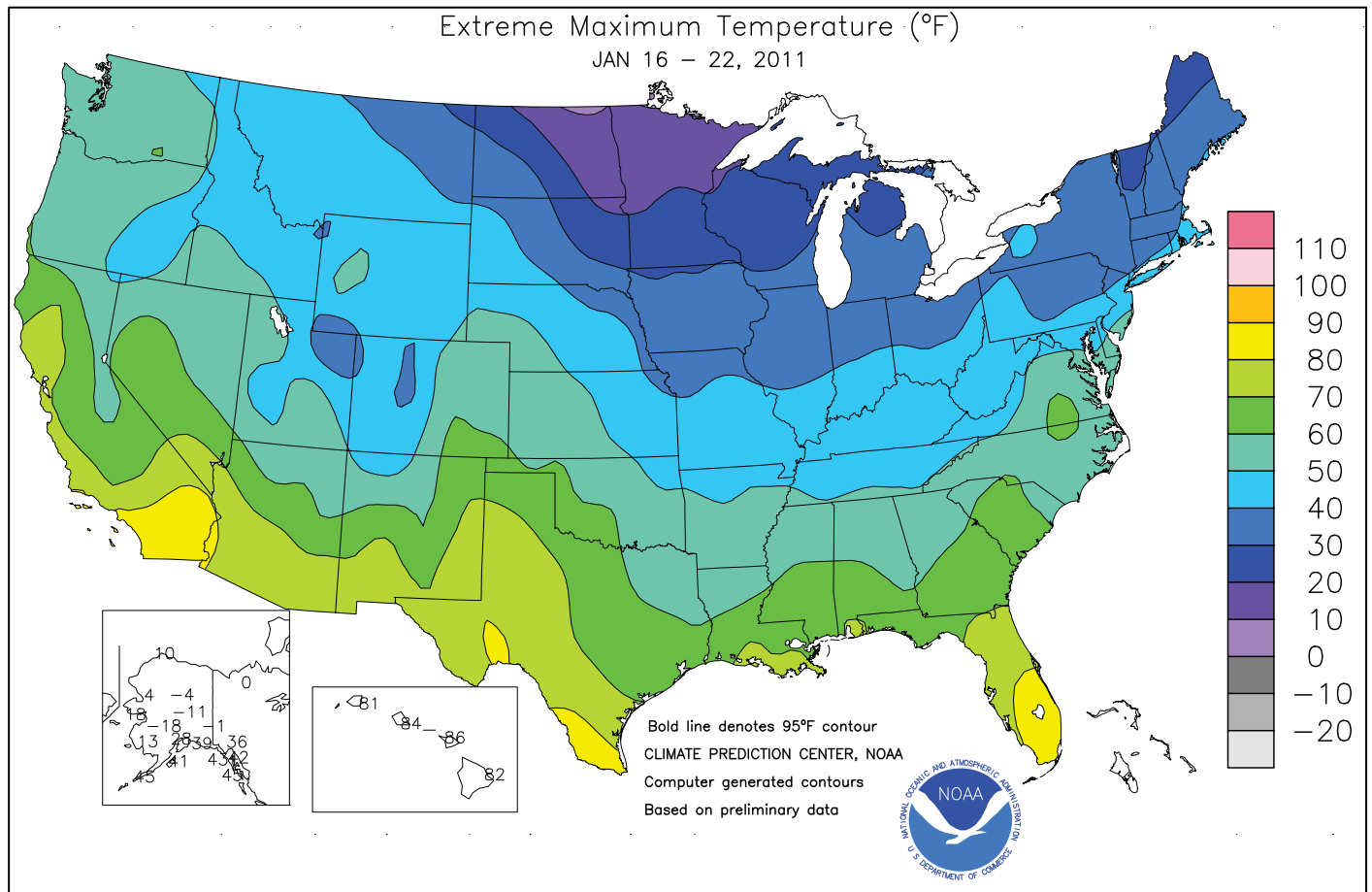
*Highlights provided by USDA/WAOB*

**W**et weather and flooding gradually subsided in the **Northwest**, while warm, dry conditions promoted winter fieldwork from **California into the Southwest**. Meanwhile, generally light precipitation fell across the **nation's mid-section**, except for some heavy snow on the **east-central Plains**. Drought and exposure to potential weather extremes remained a concern with respect to winter wheat across the **southwestern half of the Plains**. Farther east, extremely cold weather gripped the **upper Midwest**, while snow blanketed the remainder of the **Corn**

*(Continued on page 3)*

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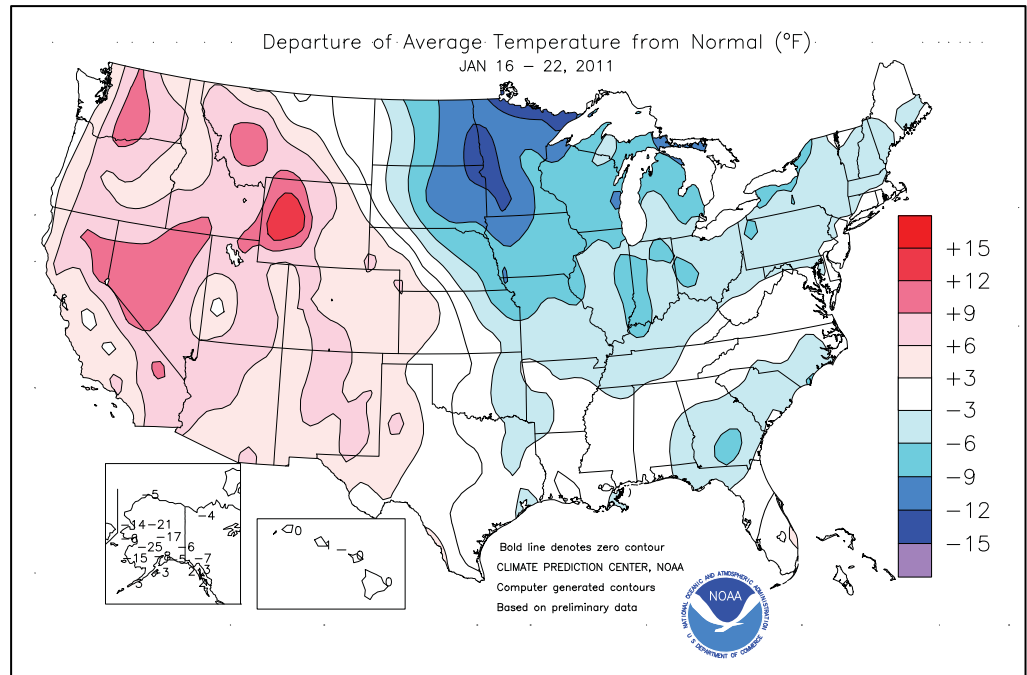


(Continued from front cover)

**Belt** and parts of the **Mid-South**. Fresh snow provided **Midwestern** winter wheat with some protection from a late-week cold snap. Elsewhere, drought-easing rain fell from **eastern Texas to Florida**, while two more rounds of wintry weather affected the **Northeast**. Cold weather from the **eastern Plains to the East Coast** contrasted with mostly above-normal temperatures in the **West**. Weekly temperatures averaged more than 10°F below normal in parts of the **upper Midwest**, but were at least 10°F above normal at several locations in the **Great Basin** and **interior Northwest**. Sub-zero readings were noted as far south as **Nebraska** on January 20, the **middle Mississippi Valley** on January 21, and the **middle and upper Ohio Valley** on January 22.

Early in the week, heavy precipitation and flooding persisted in the **Pacific Northwest**. Numerous basins in **western Washington**, including the **Snohomish River at Snohomish** (5.87 feet above flood stage on January 18) and the **Snoqualmie River near Carnation** (5.33 feet above flood stage on January 17), achieved their highest water levels since the major flood of early-January 2009. Meanwhile, warmth covered the **West**. **Yakima, WA**, opened the week with consecutive daily-record highs (60 and 61°F). Consecutive records were also established on January 16-17 in locations such as **Reno, NV** (67 and 66°F), and **Markleeville, CA** (69°F both days). Farther south, daily-record highs topped 85°F on January 17 in locations such as **Palm Springs, CA** (89°F), and **Yuma, AZ** (86°F). By January 18, warmth spread into the **south-central U.S.**, where **McAllen, TX** (89°F), posted a daily-record high. Meanwhile, the coldest air of the season swept into the **north-central and northeastern U.S.** **Caribou, ME** (-7°F on January 17), reported a sub-zero reading for the first time this winter. **Caribou's** previous latest occurrence of the season's first sub-zero temperature was January 4, 2002. By January 21, daily-record lows included -46°F in **International Falls, MN**, and -11°F in **Zanesville, OH**. It was **International Falls'** lowest reading in more than a century, since the temperature plunged to -48°F on February 8, 1909. **Green Bay, WI** (-15°F on January 21), recorded its lowest temperature since January 27, 2009, when it was -16°F. In contrast, warmth returned to the **West** at week's end. On January 22, **Yakima** (55°F) collected another daily-record high. Other record highs for January 22 included 71°F in **Sacramento, CA**, and 56°F in **The Dalles, OR**.

Snow developed early in the week across the **northern Plains** and **upper Midwest**, while rain spread across the **South**. Daily-record snowfall totals for January 17 included 4.8 inches in **Milwaukee, WI**, and 4.1 inches in **Waterloo, IA**. Meanwhile, record-setting rainfall totals in **Florida** for January 17 reached 2.17 inches in **Tampa** and 2.03 inches in **Orlando**. On January



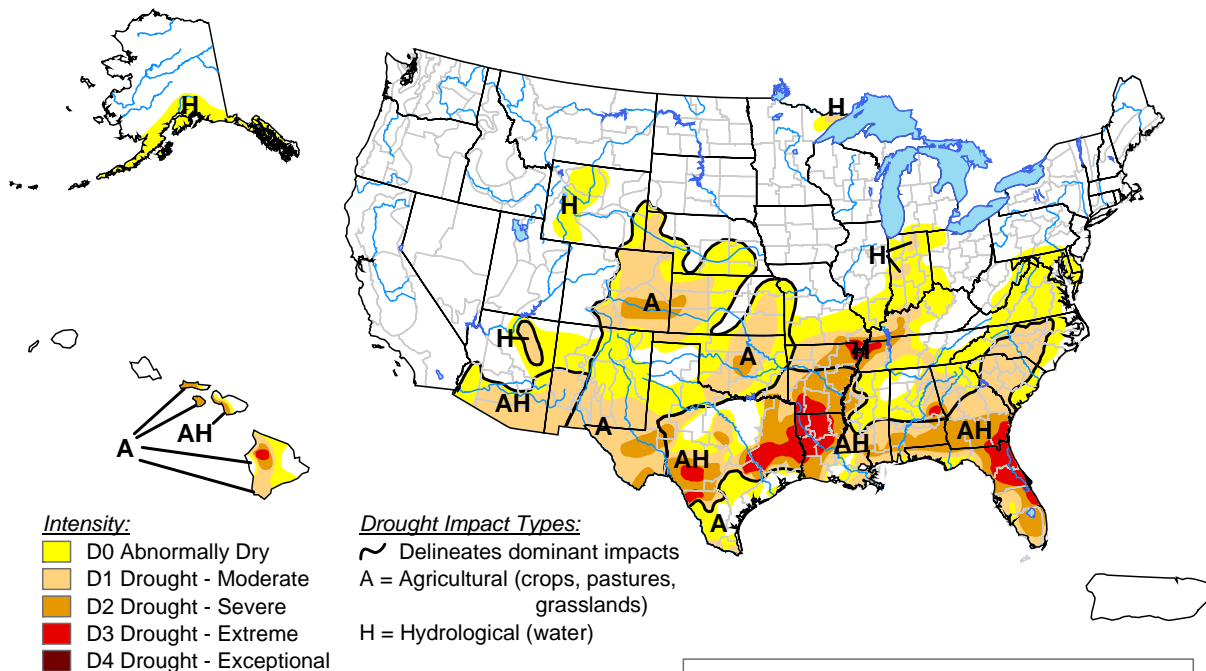
17-18, a variety of precipitation types affected the **East**. For example, **New York's LaGuardia Airport** received a daily-record precipitation total of 1.12 inches in the form of rain, freezing rain, and 1.3 inches of snow and sleet. Farther west, snow returned to the **Plains** at mid-week. Daily-record snowfall amounts for January 19 totaled 8.7 inches in **Topeka, KS**; 7.0 inches in **Kansas City, MO**; and 6.3 inches in **North Platte, NE**. Snow shifted into the **Mid-South** and **Midwest** by January 20, when totals reached 5.6 inches in **Cincinnati, OH**; 3.5 inches in **Springfield, IL**; and 1.4 inches in **North Little Rock, AR**. **Columbia, MO**, experienced its third-snowiest 24-hour period on record in January (8.7 inches on January 19-20), behind only 19.7 inches on January 18-19, 1995, and 10.3 inches on January 21-22, 1958. Late in the week, rain returned to **Florida**, while heavy snow affected the **northern Atlantic coastal plain**. January 21 featured another round of daily-record rainfall totals in **Tampa** (1.42 inches) and **Orlando** (2.19 inches), and daily-record snowfall amounts in **Bangor, ME** (17.3 inches); **Boston, MA** (7.3 inches); and **Newark, NJ** (4.5 inches). Snow lingered in the **Great Lakes region**, where **Muskegon, MI** (10.7 inches), measured a daily-record sum for January 22. At week's end, snow also fell along the immediate **southern Mid-Atlantic Coast**, where as much as 6 inches of snow blanketed **North Carolina's Outer Banks** on January 22.

Cold, mostly dry conditions prevailed across the **Alaskan mainland**, where temperatures averaged as much as 25°F below normal. Readings fell below -50°F at several **interior Alaskan** locations, including **Bettles** and **Fort Yukon**. **McGrath** dipped to -40°F or below on January 16-19 and 22-23. Meanwhile, wet weather covered **Alaska's southern tier**. Daily-record snowfall amounts were measured on January 19 in **Petersburg** (10.0 inches), **Juneau** (8.1 inches), and **Kodiak** (6.6 inches). Farther south, tranquil weather returned to **Hawaii**. One exception occurred on the western islands on January 16-17, when 24-hour totals on **Kauai** reached 3.81 inches in **Kokee** and 3.69 inches in **Wainiha**.

# U.S. Drought Monitor

January 18, 2011

Valid 8 a.m. EST



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Released Thursday, January 20, 2011

Author: Brian Fuchs, National Drought Mitigation Center

<http://drought.unl.edu/dm>

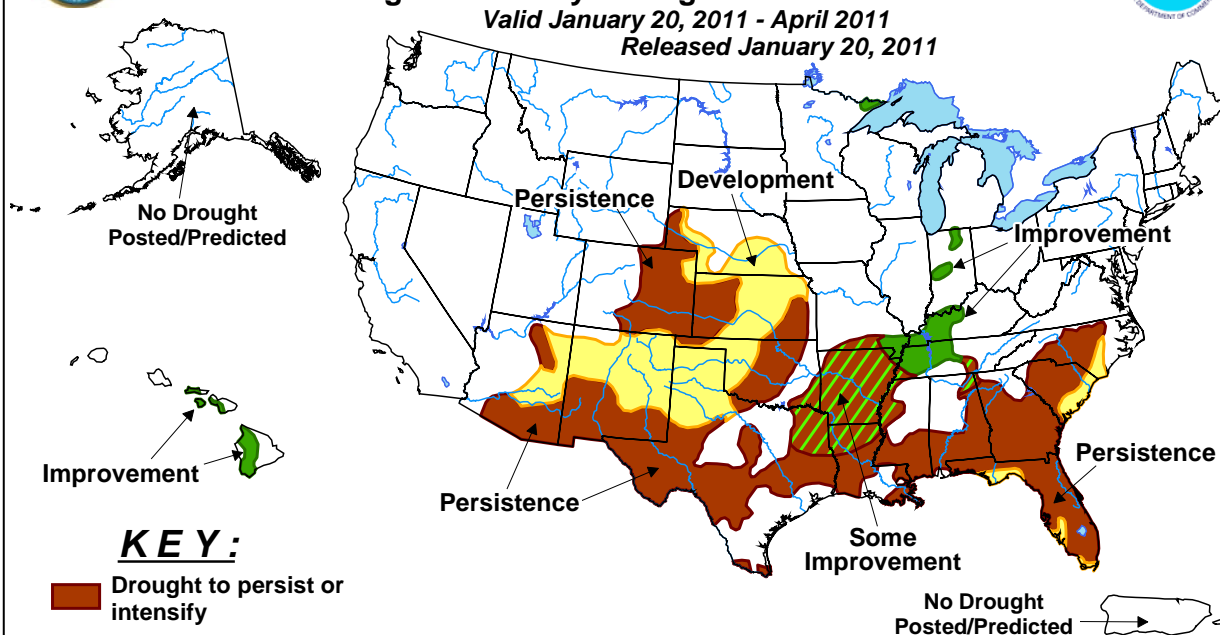


## U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid January 20, 2011 - April 2011

Released January 20, 2011



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.



## National Weather Data for Selected Cities

Weather Data for the Week Ending January 22, 2011

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

| STATES<br>AND<br>STATIONS |                 | TEMPERATURE °F     |                    |                 |                |         |                          | PRECIPITATION        |                          |                             |                           |                            |                           |                            | RELATIVE<br>HUMIDITY<br>PERCENT |                    | NUMBER OF DAYS |              |                     |                     |
|---------------------------|-----------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------------|--------------------|----------------|--------------|---------------------|---------------------|
|                           |                 | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL IN.,<br>SINCE DEC 1 | PCT. NORMAL<br>SINCE DEC 1 | TOTAL IN.,<br>SINCE JAN 1 | PCT. NORMAL<br>SINCE JAN 1 | AVERAGE<br>MAXIMUM              | AVERAGE<br>MINIMUM | TEMP. °F       |              | PRECIP              |                     |
|                           |                 |                    |                    |                 |                |         |                          |                      |                          |                             |                           |                            |                           |                            |                                 |                    | 90 AND ABOVE   | 32 AND BELOW | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |
| AL                        | BIRMINGHAM      | 49                 | 32                 | 57              | 22             | 41      | -1                       | 0.05                 | -1.22                    | 0.04                        | 4.04                      | 51                         | 2.67                      | 76                         | 88                              | 53                 | 0              | 3            | 2                   | 0                   |
|                           | HUNTSVILLE      | 44                 | 30                 | 52              | 22             | 37      | -2                       | 0.35                 | -0.90                    | 0.30                        | 7.42                      | 81                         | 5.19                      | 144                        | 86                              | 67                 | 0              | 4            | 2                   | 0                   |
|                           | MOBILE          | 61                 | 38                 | 73              | 25             | 50      | 0                        | 1.21                 | -0.14                    | 1.17                        | 4.09                      | 49                         | 2.70                      | 74                         | 87                              | 46                 | 0              | 2            | 3                   | 1                   |
| AK                        | MONTGOMERY      | 54                 | 33                 | 61              | 23             | 44      | -2                       | 0.30                 | -0.83                    | 0.27                        | 2.59                      | 32                         | 1.56                      | 50                         | 90                              | 50                 | 0              | 3            | 2                   | 0                   |
|                           | ANCHORAGE       | 14                 | 3                  | 28              | -12            | 8       | -8                       | 0.33                 | 0.20                     | 0.23                        | 1.09                      | 74                         | 0.36                      | 84                         | 85                              | 71                 | 0              | 7            | 2                   | 0                   |
|                           | BARROW          | -11                | -27                | 10              | -39            | -19     | -5                       | 0.02                 | 0.02                     | 0.02                        | 0.35                      | 269                        | 0.21                      | 2100                       | 86                              | 72                 | 0              | 7            | 1                   | 0                   |
|                           | FAIRBANKS       | -19                | -36                | -11             | -40            | -27     | -17                      | 0.05                 | -0.06                    | 0.04                        | 0.43                      | 39                         | 0.16                      | 43                         | ***                             | ***                | 0              | 7            | 2                   | 0                   |
|                           | JUNEAU          | 33                 | 23                 | 42              | 6              | 28      | 3                        | 3.00                 | 1.94                     | 1.20                        | 6.22                      | 72                         | 4.37                      | 137                        | 94                              | 86                 | 0              | 5            | 7                   | 3                   |
|                           | KODIAK          | 34                 | 19                 | 41              | 5              | 26      | -4                       | 1.56                 | -0.29                    | 1.06                        | 8.65                      | 66                         | 5.52                      | 103                        | 92                              | 83                 | 0              | 7            | 4                   | 1                   |
| AZ                        | NOME            | 7                  | -7                 | 18              | -27            | 0       | -6                       | 0.00                 | -0.19                    | 0.00                        | 2.29                      | 146                        | 0.83                      | 148                        | 68                              | 55                 | 0              | 7            | 0                   | 0                   |
|                           | FLAGSTAFF       | 52                 | 20                 | 59              | 14             | 36      | 6                        | 0.00                 | -0.48                    | 0.00                        | 3.40                      | 113                        | 0.00                      | 0                          | 86                              | 29                 | 0              | 7            | 0                   | 0                   |
|                           | PHOENIX         | 73                 | 47                 | 75              | 43             | 60      | 6                        | 0.00                 | -0.17                    | 0.00                        | 1.08                      | 73                         | 0.01                      | 2                          | 55                              | 33                 | 0              | 0            | 0                   | 0                   |
|                           | PRESCOTT        | 62                 | 29                 | 69              | 24             | 46      | 9                        | 0.00                 | -0.35                    | 0.00                        | 3.01                      | 135                        | 0.00                      | 0                          | 76                              | 22                 | 0              | 5            | 0                   | 0                   |
|                           | TUCSON          | 74                 | 42                 | 78              | 38             | 58      | 6                        | 0.00                 | -0.20                    | 0.00                        | 1.06                      | 63                         | 0.60                      | 92                         | 53                              | 30                 | 0              | 0            | 0                   | 0                   |
|                           | FORT SMITH      | 43                 | 26                 | 51              | 12             | 35      | -3                       | 0.31                 | -0.21                    | 0.27                        | 2.55                      | 52                         | 0.41                      | 27                         | 89                              | 64                 | 0              | 4            | 2                   | 0                   |
| CA                        | LITTLE ROCK     | 43                 | 31                 | 52              | 20             | 37      | -3                       | 0.34                 | -0.46                    | 0.20                        | 2.63                      | 37                         | 0.55                      | 24                         | 94                              | 67                 | 0              | 3            | 4                   | 0                   |
|                           | BAKERSFIELD     | 57                 | 41                 | 64              | 36             | 49      | 1                        | 0.00                 | -0.26                    | 0.00                        | 5.98                      | 404                        | 0.16                      | 22                         | 91                              | 82                 | 0              | 0            | 0                   | 0                   |
|                           | FRESNO          | 56                 | 44                 | 63              | 37             | 50      | 4                        | 0.00                 | -0.49                    | 0.00                        | 7.44                      | 281                        | 1.52                      | 116                        | 91                              | 86                 | 0              | 0            | 0                   | 0                   |
|                           | LOS ANGELES     | 74                 | 53                 | 80              | 50             | 64      | 7                        | 0.00                 | -0.68                    | 0.00                        | 9.48                      | 266                        | 0.65                      | 37                         | 72                              | 46                 | 0              | 0            | 0                   | 0                   |
|                           | REDDING         | 69                 | 42                 | 77              | 34             | 55      | 10                       | 0.00                 | -1.50                    | 0.00                        | 9.71                      | 111                        | 1.03                      | 25                         | 84                              | 53                 | 0              | 0            | 0                   | 0                   |
|                           | SACRAMENTO      | 60                 | 41                 | 71              | 35             | 51      | 5                        | 0.00                 | -0.89                    | 0.00                        | 6.53                      | 137                        | 0.98                      | 42                         | 100                             | 60                 | 0              | 0            | 0                   | 0                   |
|                           | SAN DIEGO       | 73                 | 54                 | 82              | 50             | 64      | 6                        | 0.00                 | -0.52                    | 0.00                        | 5.28                      | 195                        | 0.28                      | 20                         | 67                              | 50                 | 0              | 0            | 0                   | 0                   |
|                           | SAN FRANCISCO   | 61                 | 46                 | 67              | 43             | 53      | 4                        | 0.00                 | -1.03                    | 0.00                        | 6.66                      | 119                        | 0.66                      | 24                         | 89                              | 78                 | 0              | 0            | 0                   | 0                   |
|                           | STOCKTON        | 57                 | 41                 | 63              | 35             | 49      | 3                        | 0.01                 | -0.61                    | 0.01                        | 4.81                      | 139                        | 0.58                      | 35                         | 99                              | 95                 | 0              | 0            | 1                   | 0                   |
| CO                        | ALAMOSA         | 44                 | 5                  | 53              | -1             | 24      | 9                        | 0.00                 | -0.04                    | 0.00                        | 0.42                      | 86                         | 0.04                      | 25                         | 80                              | 45                 | 0              | 7            | 0                   | 0                   |
|                           | CO SPRINGS      | 46                 | 22                 | 57              | 10             | 34      | 6                        | 0.00                 | -0.04                    | 0.00                        | 0.16                      | 26                         | 0.09                      | 47                         | 73                              | 32                 | 0              | 6            | 0                   | 0                   |
|                           | DENVER INTL     | 47                 | 22                 | 57              | 6              | 35      | 7                        | 0.05                 | 0.01                     | 0.04                        | 0.78                      | 159                        | 0.56                      | 311                        | 73                              | 40                 | 0              | 6            | 2                   | 0                   |
|                           | GRAND JUNCTION  | 39                 | 26                 | 43              | 20             | 32      | 6                        | 0.00                 | -0.13                    | 0.00                        | 0.73                      | 79                         | 0.09                      | 23                         | ***                             | ***                | 0              | 6            | 0                   | 0                   |
|                           | PUEBLO          | 49                 | 18                 | 63              | 5              | 34      | 5                        | 0.11                 | 0.05                     | 0.11                        | 0.63                      | 103                        | 0.19                      | 86                         | 86                              | 50                 | 0              | 7            | 1                   | 0                   |
|                           | BRIDGEPORT      | 33                 | 21                 | 40              | 9              | 27      | -3                       | 1.28                 | 0.43                     | 0.86                        | 6.64                      | 113                        | 2.55                      | 105                        | 77                              | 54                 | 0              | 6            | 4                   | 1                   |
| CT                        | HARTFORD        | 30                 | 16                 | 39              | 1              | 23      | -3                       | 1.20                 | 0.32                     | 0.81                        | 8.72                      | 143                        | 2.57                      | 103                        | 79                              | 57                 | 0              | 7            | 4                   | 1                   |
|                           | WASHINGTON      | 39                 | 28                 | 53              | 17             | 34      | 0                        | 0.46                 | -0.27                    | 0.31                        | 2.45                      | 47                         | 0.67                      | 32                         | 78                              | 45                 | 0              | 5            | 4                   | 0                   |
|                           | WILMINGTON      | 34                 | 23                 | 44              | 11             | 29      | -2                       | 0.88                 | 0.10                     | 0.50                        | 4.01                      | 71                         | 1.60                      | 71                         | 89                              | 57                 | 0              | 6            | 5                   | 1                   |
| DE                        | DAYTONA BEACH   | 66                 | 47                 | 74              | 34             | 57      | -1                       | 2.19                 | 1.47                     | 1.10                        | 3.87                      | 82                         | 3.49                      | 174                        | 96                              | 62                 | 0              | 0            | 3                   | 2                   |
|                           | JACKSONVILLE    | 62                 | 40                 | 71              | 30             | 51      | -2                       | 1.06                 | 0.21                     | 0.65                        | 3.45                      | 70                         | 3.11                      | 135                        | 95                              | 56                 | 0              | 1            | 3                   | 1                   |
|                           | KEY WEST        | 76                 | 65                 | 77              | 55             | 71      | 1                        | 2.03                 | 1.53                     | 1.91                        | 2.86                      | 79                         | 2.28                      | 155                        | 95                              | 78                 | 0              | 0            | 2                   | 1                   |
| FL                        | MIAMI           | 79                 | 61                 | 85              | 47             | 70      | 2                        | 1.90                 | 1.50                     | 1.06                        | 3.13                      | 95                         | 1.92                      | 170                        | 95                              | 62                 | 0              | 0            | 5                   | 1                   |
|                           | ORLANDO         | 73                 | 51                 | 81              | 41             | 62      | 1                        | 4.25                 | 3.70                     | 2.19                        | 5.42                      | 141                        | 4.64                      | 301                        | 94                              | 63                 | 0              | 0            | 3                   | 2                   |
|                           | PENSACOLA       | 61                 | 41                 | 71              | 27             | 51      | -1                       | 0.38                 | -0.86                    | 0.34                        | 4.73                      | 64                         | 3.25                      | 96                         | 85                              | 47                 | 0              | 1            | 3                   | 0                   |
|                           | TALLAHASSEE     | 59                 | 36                 | 66              | 24             | 48      | -4                       | 0.98                 | -0.26                    | 0.57                        | 5.33                      | 71                         | 3.85                      | 111                        | 92                              | 65                 | 0              | 2            | 3                   | 1                   |
|                           | TAMPA           | 69                 | 52                 | 76              | 41             | 60      | -1                       | 3.63                 | 3.14                     | 2.15                        | 5.41                      | 147                        | 4.86                      | 355                        | 95                              | 62                 | 0              | 0            | 4                   | 2                   |
|                           | WEST PALM BEACH | 80                 | 60                 | 85              | 46             | 70      | 4                        | 0.71                 | -0.18                    | 0.63                        | 2.40                      | 44                         | 1.10                      | 47                         | 96                              | 61                 | 0              | 0            | 2                   | 1                   |
| GA                        | ATHENS          | 50                 | 30                 | 57              | 26             | 40      | -2                       | 0.17                 | -0.90                    | 0.17                        | 4.22                      | 63                         | 2.30                      | 78                         | 82                              | 52                 | 0              | 5            | 1                   | 0                   |
|                           | ATLANTA         | 47                 | 32                 | 54              | 25             | 40      | -2                       | 0.04                 | -1.13                    | 0.02                        | 3.49                      | 50                         | 1.87                      | 60                         | 81                              | 58                 | 0              | 4            | 2                   | 0                   |
|                           | AUGUSTA         | 54                 | 27                 | 63              | 20             | 41      | -4                       | 0.53                 | -0.50                    | 0.30                        | 2.79                      | 47                         | 1.63                      | 58                         | 91                              | 52                 | 0              | 5            | 3                   | 0                   |
|                           | COLUMBUS        | 52                 | 34                 | 59              | 28             | 43      | -4                       | 0.43                 | -0.64                    | 0.24                        | 4.30                      | 58                         | 2.74                      | 90                         | 91                              | 50                 | 0              | 4            | 3                   | 0                   |
|                           | MACON           | 52                 | 29                 | 62              | 23             | 41      | -4                       | 0.66                 | -0.49                    | 0.44                        | 3.31                      | 47                         | 2.23                      | 71                         | 93                              | 53                 | 0              | 5            | 3                   | 0                   |
|                           | SAVANNAH        | 57                 | 33                 | 65              | 25             | 45      | -4                       | 0.39                 | -0.52                    | 0.26                        | 2.82                      | 53                         | 1.19                      | 47                         | 86                              | 60                 | 0              | 3            | 2                   | 0                   |
| HI                        | HILO            | 79                 | 64                 | 82              | 63             | 72      | 1                        | 0.35                 | -1.91                    | 0.27                        | 9.88                      | 59                         | 2.75                      | 45                         | 87                              | 73                 | 0              | 0            | 4                   | 0                   |
|                           | HONOLULU        | 80                 | 67                 | 84              | 64             | 74      | 1                        | 0.08                 | -0.51                    | 0.08                        | 14.54                     | 315                        | 2.81                      | 160                        | 81                              | 69                 | 0              | 0            | 1                   | 0                   |
|                           | KAHULUI         | 81                 | 63                 | 86              | 58             | 72      | 0                        | 0.12                 | -0.73                    | 0.12                        | 7.16                      | 130                        | 3.54                      | 145                        | 83                              | 74                 | 0              | 0            | 1                   | 0                   |
|                           | LIHUE           | 78                 | 65                 | 81              | 57             | 72      | 0                        | 0.28                 | -0.76                    | 0.28                        | 13.86                     | 177                        | 3.86                      | 126                        | 85                              | 75                 | 0              | 0            | 1                   | 0                   |
|                           | BOISE           | 44                 | 30                 | 55              | 24             | 37      | 7                        | 0.97                 | 0.67                     | 0.78                        | 4.56                      | 202                        | 1.31                      | 149                        | 90                              | 73                 | 0              | 5            | 5                   | 1                   |
|                           | LEWISTON        | 48                 | 35                 | 56              | 27             | 41      | 8                        | 0.75                 | 0.50                     | 0.50                        | 2.64                      | 151                        | 0.94                      | 134                        | 77                              | 69                 | 0              | 2            | 3                   | 1                   |
| ID                        | POCATELLO       | 38                 | 26                 | 45              | 15             | 32      | 8                        | 0.60                 | 0.35                     | 0.24                        | 2.76                      | 152                        | 0.79                      | 110                        | 88                              | 79                 | 0              | 5            | 3                   | 0                   |
|                           | CHICAGO/O'HARE  | 22                 | 9                  | 32              | -4             | 16      | -6                       | 0.42                 | 0.06                     | 0.30                        | 3.06                      | 86                         | 0.72                      | 65                         | 83                              | 70                 | 0              | 7            | 3                   | 0                   |
|                           | MOLINE          | 23                 | 8                  | 35              | -8             | 16      | -5                       | 0.59                 | 0.26                     | 0.55                        | 2.46                      | 76                         | 0.78                      | 76                         | 83                              | 73                 | 0              | 7            | 2                   | 1                   |
|                           | PEORIA          | 25                 | 10                 | 36              | -6             | 17      | -5                       | 0.20                 | -0.10                    | 0.11                        | 4.31                      | 128                        | 0.54                      | 56                         | 87                              | 68                 | 0              | 7            | 5                   | 0                   |
|                           | ROCKFORD        | 21                 | 7                  | 34              | -9             | 14      | -5                       | 0.41                 | 0.11                     | 0.38                        | 2.36                      | 80                         | 0.63                      | 71                         | 75                              | 62                 | 0              | 7            | 4                   | 0                   |
|                           | SPRINGFIELD     | 26                 | 12                 | 38              | -10            | 19      | -6                       | 0.29                 | -0.04                    | 0.17                        | 2.23                      | 62                         | 0.56                      | 52                         | 90                              | 69                 | 0              | 7            | 5                   | 0                   |
| IN                        | EVANSVILLE      | 33                 | 18                 | 45              | 4              | 25      | -6                       | 0.57                 | -0.06                    | 0.30                        | 3.12                      | 58                         | 1.32                      | 73                         | 81                              | 73                 | 0              | 6            | 3                   | 0                   |
|                           | FORT WAYNE      | 25                 | 9                  | 36              | -5             | 17      | -6                       | 0.28                 | -0.16                    | 0.17                        | 2.26                      | 55                         | 1.18                      | 89                         | 89                              | 72                 | 0              | 7            | 3                   | 0                   |
|                           | INDIANAPOLIS    | 28                 | 14                 | 41              | -3             | 21      | -5                       | 0.51                 | -0.04                    | 0.26                        | 3.23                      | 70                         | 1.37                      | 86                         | 85                              | 69                 | 0              | 7            | 3                   | 0                   |
|                           | SOUTH BEND      | 25                 | 12                 | 36              | -1             | 18      | -5                       | 0.28                 | -0.21                    | 0.12                        | 3.15                      | 69                         | 1.52                      | 103                        | 83                              | 73                 | 0              | 7            | 6                   | 0                   |
|                           | BURLINGTON      | 23                 | 7                  | 35              | -6             | 15      | -8                       | 0.38                 | 0.10                     | 0.37                        | 1.30                      | 44                         | 0.48                      | 56                         | 92                              | 70                 | 0              | 7            | 2                   | 0                   |
|                           | CEDAR RAPIDS    | 19                 | 2                  | 32              | -16            | 10      | -8                       | 0.20                 | -0.02                    | 0.20                        | 1.16                      | 55                         | 0                         |                            |                                 |                    |                |              |                     |                     |

## Weather Data for the Week Ending January 22, 2011

| STATES<br>AND<br>STATIONS |               | TEMPERATURE °F     |                    |                 |                |         |                          | PRECIPITATION        |                          |                             |                           |                            |                           |                            | RELATIVE<br>HUMIDITY<br>PERCENT |                    | NUMBER OF DAYS |              |                     |                     |
|---------------------------|---------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------------|--------------------|----------------|--------------|---------------------|---------------------|
|                           |               | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL IN.,<br>SINCE DEC 1 | PCT. NORMAL<br>SINCE DEC 1 | TOTAL IN.,<br>SINCE JAN01 | PCT. NORMAL<br>SINCE JAN01 | AVERAGE<br>MAXIMUM              | AVERAGE<br>MINIMUM | TEMP. °F       |              | PRECIP              |                     |
|                           |               |                    |                    |                 |                |         |                          |                      |                          |                             |                           |                            |                           |                            |                                 |                    | 90 AND ABOVE   | 32 AND BELOW | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |
| KY                        | WICHITA       | 39                 | 20                 | 49              | 13             | 29      | -1                       | 0.02                 | -0.15                    | 0.02                        | 0.46                      | 24                         | 0.34                      | 58                         | 84                              | 69                 | 0              | 7            | 1                   | 0                   |
|                           | JACKSON       | 37                 | 23                 | 44              | 8              | 30      | -4                       | 0.59                 | -0.18                    | 0.32                        | 4.49                      | 69                         | 1.52                      | 67                         | 89                              | 63                 | 0              | 6            | 4                   | 0                   |
|                           | LEXINGTON     | 33                 | 20                 | 44              | -2             | 26      | -6                       | 0.75                 | 0.02                     | 0.40                        | 3.84                      | 62                         | 1.35                      | 61                         | 80                              | 72                 | 0              | 6            | 4                   | 0                   |
|                           | LOUISVILLE    | 34                 | 22                 | 46              | 6              | 28      | -5                       | 0.71                 | -0.01                    | 0.38                        | 3.01                      | 52                         | 1.35                      | 64                         | 83                              | 66                 | 0              | 6            | 4                   | 0                   |
| LA                        | PADUCAH       | 35                 | 20                 | 46              | 10             | 28      | -4                       | 0.62                 | -0.13                    | 0.28                        | 3.26                      | 50                         | 1.04                      | 49                         | 90                              | 65                 | 0              | 7            | 3                   | 0                   |
|                           | BATON ROUGE   | 59                 | 40                 | 67              | 25             | 50      | 0                        | 1.23                 | -0.19                    | 1.12                        | 7.76                      | 85                         | 3.17                      | 81                         | 96                              | 53                 | 0              | 2            | 3                   | 1                   |
|                           | LAKE CHARLES  | 60                 | 41                 | 68              | 26             | 50      | -1                       | 1.08                 | -0.21                    | 0.91                        | 6.30                      | 77                         | 3.02                      | 84                         | 92                              | 65                 | 0              | 2            | 4                   | 1                   |
|                           | NEW ORLEANS   | 60                 | 41                 | 73              | 32             | 51      | -1                       | 0.95                 | -0.39                    | 0.95                        | 4.79                      | 56                         | 2.62                      | 74                         | 83                              | 55                 | 0              | 1            | 1                   | 1                   |
| ME                        | SHREVEPORT    | 51                 | 37                 | 55              | 23             | 44      | -2                       | 2.57                 | 1.55                     | 2.33                        | 4.07                      | 55                         | 3.66                      | 127                        | 92                              | 67                 | 0              | 3            | 4                   | 1                   |
|                           | CARIBOU       | 18                 | -2                 | 29              | -8             | 8       | -1                       | 0.67                 | 0.01                     | 0.29                        | 6.33                      | 122                        | 1.13                      | 57                         | 87                              | 65                 | 0              | 7            | 3                   | 0                   |
| MD                        | PORTLAND      | 28                 | 10                 | 40              | 0              | 19      | -2                       | 1.32                 | 0.40                     | 0.68                        | 6.18                      | 89                         | 2.15                      | 81                         | 88                              | 54                 | 0              | 7            | 3                   | 1                   |
|                           | BALTIMORE     | 37                 | 24                 | 50              | 12             | 31      | -1                       | 0.55                 | -0.23                    | 0.23                        | 2.73                      | 49                         | 0.77                      | 34                         | 80                              | 50                 | 0              | 7            | 4                   | 0                   |
| MA                        | BOSTON        | 32                 | 21                 | 40              | 14             | 26      | -3                       | 1.37                 | 0.49                     | 0.95                        | 5.67                      | 91                         | 2.06                      | 82                         | 80                              | 54                 | 0              | 7            | 3                   | 1                   |
|                           | WORCESTER     | 27                 | 14                 | 35              | 6              | 20      | -3                       | 1.29                 | 0.36                     | 0.83                        | 7.49                      | 116                        | 2.41                      | 90                         | 87                              | 55                 | 0              | 7            | 3                   | 1                   |
| MI                        | ALPENA        | 18                 | 0                  | 27              | -6             | 9       | -9                       | 0.58                 | 0.19                     | 0.21                        | 2.53                      | 84                         | 1.20                      | 103                        | 86                              | 66                 | 0              | 7            | 6                   | 0                   |
|                           | GRAND RAPIDS  | 24                 | 13                 | 34              | 5              | 19      | -3                       | 0.26                 | -0.18                    | 0.12                        | 2.64                      | 66                         | 0.86                      | 67                         | 80                              | 63                 | 0              | 7            | 4                   | 0                   |
|                           | HOUGHTON LAKE | 17                 | 4                  | 26              | -2             | 11      | -7                       | 0.52                 | 0.16                     | 0.26                        | 2.09                      | 75                         | 0.97                      | 93                         | 84                              | 70                 | 0              | 7            | 4                   | 0                   |
|                           | LANSING       | 23                 | 9                  | 34              | 2              | 16      | -5                       | 0.14                 | -0.21                    | 0.13                        | 2.22                      | 70                         | 0.57                      | 58                         | 85                              | 69                 | 0              | 7            | 2                   | 0                   |
| MN                        | MUSKEGON      | 25                 | 14                 | 34              | 3              | 19      | -4                       | 0.87                 | 0.37                     | 0.43                        | 3.88                      | 95                         | 2.01                      | 140                        | 78                              | 65                 | 0              | 7            | 6                   | 0                   |
|                           | TRAVERSE CITY | 20                 | 8                  | 30              | -4             | 14      | -7                       | 0.13                 | -0.56                    | 0.11                        | 2.60                      | 57                         | 0.38                      | 20                         | 87                              | 66                 | 0              | 7            | 3                   | 0                   |
|                           | DULUTH        | 6                  | -8                 | 17              | -25            | -1      | -9                       | 0.14                 | -0.12                    | 0.09                        | 2.68                      | 168                        | 0.60                      | 91                         | 77                              | 66                 | 0              | 7            | 5                   | 0                   |
|                           | INT'L FALLS   | 3                  | -29                | 12              | -46            | -13     | -15                      | 0.23                 | 0.04                     | 0.12                        | 2.39                      | 201                        | 0.82                      | 167                        | 82                              | 64                 | 0              | 7            | 4                   | 0                   |
| MS                        | MINNEAPOLIS   | 13                 | -1                 | 25              | -16            | 6       | -7                       | 0.12                 | -0.10                    | 0.08                        | 3.52                      | 216                        | 0.73                      | 116                        | 76                              | 64                 | 0              | 7            | 5                   | 0                   |
|                           | ROCHESTER     | 14                 | -3                 | 28              | -22            | 5       | -6                       | 0.14                 | -0.08                    | 0.11                        | 4.29                      | 270                        | 0.61                      | 107                        | 79                              | 72                 | 0              | 7            | 3                   | 0                   |
|                           | ST. CLOUD     | 9                  | -8                 | 22              | -29            | 1       | -7                       | 0.08                 | -0.09                    | 0.03                        | 3.08                      | 268                        | 0.63                      | 137                        | 86                              | 62                 | 0              | 7            | 4                   | 0                   |
|                           | JACKSON       | 53                 | 38                 | 62              | 26             | 46      | 1                        | 0.58                 | -0.72                    | 0.33                        | 5.35                      | 59                         | 1.47                      | 40                         | 90                              | 57                 | 0              | 2            | 4                   | 0                   |
| MO                        | MERIDIAN      | 54                 | 37                 | 63              | 25             | 45      | -1                       | 0.28                 | -1.07                    | 0.16                        | 3.37                      | 37                         | 2.26                      | 60                         | 89                              | 54                 | 0              | 2            | 2                   | 0                   |
|                           | TUPELO        | 45                 | 30                 | 51              | 19             | 38      | -2                       | 0.17                 | -0.96                    | 0.09                        | 3.82                      | 40                         | 1.59                      | 46                         | 89                              | 73                 | 0              | 4            | 3                   | 0                   |
|                           | COLUMBIA      | 29                 | 16                 | 42              | 2              | 23      | -5                       | 0.85                 | 0.49                     | 0.46                        | 3.47                      | 99                         | 1.19                      | 113                        | 88                              | 71                 | 0              | 7            | 4                   | 0                   |
|                           | KANSAS CITY   | 29                 | 13                 | 40              | 4              | 21      | -6                       | 0.70                 | 0.45                     | 0.62                        | 1.71                      | 72                         | 1.19                      | 161                        | 90                              | 70                 | 0              | 7            | 4                   | 1                   |
| MT                        | SAINT LOUIS   | 31                 | 18                 | 42              | 0              | 25      | -4                       | 0.67                 | 0.20                     | 0.38                        | 2.23                      | 53                         | 0.93                      | 69                         | 81                              | 68                 | 0              | 7            | 4                   | 0                   |
|                           | SPRINGFIELD   | 36                 | 19                 | 43              | 7              | 27      | -4                       | 0.14                 | -0.32                    | 0.08                        | 1.00                      | 22                         | 0.26                      | 20                         | 92                              | 78                 | 0              | 7            | 3                   | 0                   |
|                           | BILLINGS      | 42                 | 21                 | 50              | 13             | 32      | 8                        | 0.07                 | -0.10                    | 0.04                        | 1.12                      | 94                         | 0.17                      | 33                         | 83                              | 52                 | 0              | 6            | 3                   | 0                   |
|                           | BUTTE         | 36                 | 18                 | 43              | -4             | 27      | 9                        | 0.22                 | -0.11                    | 0.14                        | 0.87                      | 101                        | 0.23                      | 70                         | 89                              | 49                 | 0              | 6            | 5                   | 0                   |
| NE                        | CUT BANK      | 32                 | 10                 | 45              | -3             | 21      | 2                        | 0.00                 | -0.08                    | 0.00                        | 0.01                      | 2                          | 0.00                      | 0                          | 83                              | 62                 | 0              | 7            | 0                   | 0                   |
|                           | GLASGOW       | 19                 | 1                  | 33              | -14            | 10      | 0                        | 0.59                 | 0.53                     | 0.25                        | 2.93                      | 497                        | 1.47                      | 668                        | 89                              | 82                 | 0              | 7            | 5                   | 0                   |
|                           | GREAT FALLS   | 41                 | 19                 | 49              | 6              | 30      | 8                        | 0.06                 | -0.08                    | 0.05                        | 1.74                      | 154                        | 0.18                      | 39                         | 84                              | 53                 | 0              | 6            | 2                   | 0                   |
|                           | HAVRE         | 23                 | 2                  | 41              | -16            | 12      | -2                       | 0.52                 | 0.43                     | 0.19                        | 1.73                      | 211                        | 0.70                      | 226                        | 85                              | 76                 | 0              | 7            | 6                   | 0                   |
| NV                        | MISSOULA      | 38                 | 28                 | 45              | 12             | 33      | 9                        | 0.70                 | 0.51                     | 0.40                        | 2.57                      | 142                        | 1.29                      | 195                        | 87                              | 73                 | 0              | 3            | 3                   | 0                   |
|                           | GRAND ISLAND  | 26                 | 8                  | 43              | -4             | 17      | -5                       | 0.48                 | 0.37                     | 0.38                        | 1.70                      | 172                        | 1.46                      | 442                        | 85                              | 78                 | 0              | 7            | 5                   | 0                   |
|                           | LINCOLN       | 24                 | 8                  | 44              | -4             | 16      | -6                       | 0.44                 | 0.30                     | 0.22                        | 1.24                      | 94                         | 1.00                      | 217                        | 84                              | 72                 | 0              | 7            | 4                   | 0                   |
|                           | NORFOLK       | 22                 | 4                  | 42              | -5             | 13      | -7                       | 0.66                 | 0.55                     | 0.37                        | 1.95                      | 199                        | 1.53                      | 464                        | 82                              | 74                 | 0              | 7            | 5                   | 0                   |
| NH                        | NORTH PLATTE  | 35                 | 10                 | 49              | -11            | 23      | 0                        | 0.55                 | 0.47                     | 0.47                        | 1.46                      | 225                        | 1.02                      | 408                        | 92                              | 75                 | 0              | 7            | 4                   | 0                   |
|                           | OMAHA         | 22                 | 8                  | 39              | -1             | 15      | -7                       | 0.41                 | 0.24                     | 0.21                        | 1.56                      | 111                        | 1.02                      | 213                        | 81                              | 75                 | 0              | 7            | 5                   | 0                   |
|                           | SCOTTSBLUFF   | 43                 | 18                 | 55              | 1              | 31      | 7                        | 0.27                 | 0.16                     | 0.24                        | 1.22                      | 137                        | 0.29                      | 88                         | 91                              | 66                 | 0              | 6            | 3                   | 0                   |
|                           | VALENTINE     | 27                 | 4                  | 42              | -6             | 16      | -5                       | 0.34                 | 0.28                     | 0.15                        | 1.50                      | 300                        | 0.64                      | 376                        | 88                              | 79                 | 0              | 7            | 5                   | 0                   |
| NJ                        | ELY           | 44                 | 20                 | 53              | 8              | 32      | 7                        | 0.02                 | -0.15                    | 0.01                        | 3.36                      | 350                        | 0.02                      | 4                          | 84                              | 64                 | 0              | 6            | 2                   | 0                   |
|                           | LAS VEGAS     | 67                 | 44                 | 74              | 39             | 56      | 9                        | 0.00                 | -0.12                    | 0.00                        | 1.78                      | 244                        | 0.01                      | 3                          | 49                              | 31                 | 0              | 0            | 0                   | 0                   |
|                           | RENO          | 58                 | 31                 | 67              | 24             | 45      | 12                       | 0.00                 | -0.22                    | 0.00                        | 1.46                      | 97                         | 0.07                      | 11                         | 74                              | 55                 | 0              | 3            | 0                   | 0                   |
|                           | WINNEMUCCA    | 51                 | 27                 | 58              | 21             | 39      | 9                        | 0.96                 | 0.79                     | 0.96                        | 2.86                      | 212                        | 1.27                      | 235                        | 84                              | 60                 | 0              | 6            | 1                   | 1                   |
| NM                        | CONCORD       | 27                 | 7                  | 36              | -7             | 17      | -3                       | 1.49                 | 0.83                     | 0.93                        | 6.24                      | 128                        | 2.66                      | 140                        | 90                              | 56                 | 0              | 7            | 3                   | 1                   |
|                           | NEWARK        | 35                 | 24                 | 43              | 12             | 30      | -1                       | 1.46                 | 0.54                     | 0.91                        | 6.16                      | 100                        | 2.28                      | 88                         | 75                              | 53                 | 0              | 6            | 4                   | 1                   |
|                           | ALBUQUERQUE   | 55                 | 30                 | 63              | 23             | 43      | 7                        | 0.00                 | -0.09                    | 0.00                        | 1.07                      | 134                        | 0.00                      | 0                          | 55                              | 24                 | 0              | 4            | 0                   | 0                   |
|                           | ALBANY        | 26                 | 10                 | 31              | 2              | 18      | -4                       | 1.21                 | 0.66                     | 0.77                        | 5.24                      | 123                        | 2.29                      | 144                        | 87                              | 62                 | 0              | 7            | 4                   | 1                   |
| NY                        | BINGHAMTON    | 24                 | 10                 | 32              | 0              | 17      | -5                       | 0.72                 | 0.16                     | 0.30                        | 3.57                      | 77                         | 1.53                      | 96                         | 86                              | 66                 | 0              | 7            | 6                   | 0                   |
|                           | BUFFALO       | 26                 | 10                 | 42              | -1             | 18      | -6                       | 0.45                 | -0.25                    | 0.18                        | 4.46                      | 76                         | 1.74                      | 84                         | 88                              | 63                 | 0              | 7            | 5                   | 0                   |
|                           | ROCHESTER     | 27                 | 11                 | 43              | -7             | 19      | -5                       | 0.35                 | -0.17                    | 0.10                        | 3.77                      | 89                         | 1.13                      | 75                         | 87                              | 66                 | 0              | 7            | 6                   | 0                   |
|                           | SYRACUSE      | 25                 | 11                 | 31              | -4             | 18      | -4                       | 0.56                 | -0.02                    | 0.24                        | 5.76                      | 120                        | 3.34                      | 200                        | 91                              | 60                 | 0              | 7            | 6                   | 0                   |
| NC                        | ASHEVILLE     | 43                 | 26                 | 51              | 18             | 34      | -1                       | 0.07                 | -0.86                    | 0.07                        | 2.56                      | 43                         | 1.30                      | 51                         | 85                              | 59                 | 0              | 6            | 1                   | 0                   |
|                           | CHARLOTTE     | 48                 | 28                 | 60              | 21             | 38      | -3                       | 0.05                 | -0.86                    | 0.03                        | 2.71                      | 47                         | 0.97                      | 38                         | 78                              | 44                 | 0              | 5            | 2                   | 0                   |
|                           | GREENSBORO    | 44                 | 28                 | 58              | 19             | 36      | -1                       | 0.07                 | -0.73                    | 0.07                        | 2.87                      | 54                         | 0.67                      | 30                         | 79                              | 45                 | 0              | 6            | 1                   | 0                   |
|                           | HATTERAS      | 53                 | 39                 | 61              | 28             | 46      | 0                        | 2.22                 | 0.86                     | 0.78                        | 5.79                      | 69                         | 2.32                      | 60                         | 92                              | 61                 | 0              | 1            | 5                   | 3                   |
| ND                        | RALEIGH       | 48                 | 28                 | 61              | 17             | 38      | -1                       | 0.03                 | -0.90                    | 0.03                        | 3.24                      | 58                         | 0.85                      | 33                         | 80                              | 48                 | 0              | 6            | 1                   | 0                   |
|                           | WILMINGTON    | 48                 | 30                 | 54              | 20             | 39      | -7                       | 0.49                 | -0.56                    | 0.40                        | 4.82                      | 72                         | 1.19                      | 41                         | 93                              | 61                 | 0              | 5            | 3                   | 0                   |
|                           | BISMARCK      | 16                 | -9                 | 30              | -24            | 3       | -7                       | 0.23                 | 0.15                     | 0.07                        | 2.15                      | 312                        | 0.75                      | 300                        | 81                              | 73                 | 0              | 7            | 5                   | 0                   |
|                           | DICKINSON     | 22                 | 0                  | 34              | -15            | 11      | -3                       | 0.09                 | 0.02                     | 0.03                        | 0.58                      | 112                        | 0.36                      | 200                        | 93                              | 75                 | 0              | 7            | 4                   | 0                   |
| OH                        | FARGO         | 4                  | -18                | 16              | -27            | -7      | -13                      | 0.11                 | -0.06                    | 0.08                        | 3.05                      | 290                        | 1.30                      | 271                        | 77                              | 69                 | 0              | 7            | 3                   | 0                   |
|                           | GRAND FORKS   | 4                  | -20                | 13              | -30            | -8      | -13                      | 0.20                 | 0.06                     | 0.11                        | 1.48                      | 154                        | 0.76                      | 185                        | 91                              | 72                 | 0              | 7            | 4                   | 0                   |
|                           | JAMESTOWN     | 11                 | -14                | 18              | -20            | -2      | -10                      | 0.07                 | -0.07                    | 0.                          |                           |                            |                           |                            |                                 |                    |                |              |                     |                     |

## Weather Data for the Week Ending January 22, 2011

| STATES<br>AND<br>STATIONS |                | TEMPERATURE °F     |                    |                 |                |         |                          | PRECIPITATION        |                          |                             |                           |                            |                           |                            | RELATIVE<br>HUMIDITY<br>PERCENT |                    | NUMBER OF DAYS |              |                     |                     |
|---------------------------|----------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------------|--------------------|----------------|--------------|---------------------|---------------------|
|                           |                | AVERAGE<br>MAXIMUM | AVERAGE<br>MINIMUM | EXTREME<br>HIGH | EXTREME<br>LOW | AVERAGE | DEPARTURE<br>FROM NORMAL | WEEKLY<br>TOTAL, IN. | DEPARTURE<br>FROM NORMAL | GREATEST IN<br>24-HOUR, IN. | TOTAL IN.,<br>SINCE DEC 1 | PCT. NORMAL<br>SINCE DEC 1 | TOTAL IN.,<br>SINCE JAN01 | PCT. NORMAL<br>SINCE JAN01 | AVERAGE<br>MAXIMUM              | AVERAGE<br>MINIMUM | TEMP. °F       |              | PRECIP              |                     |
|                           |                |                    |                    |                 |                |         |                          |                      |                          |                             |                           |                            |                           |                            |                                 |                    | 90 AND ABOVE   | 32 AND BELOW | .01 INCH<br>OR MORE | .50 INCH<br>OR MORE |
| OK                        | TOLEDO         | 26                 | 12                 | 37              | -1             | 19      | -5                       | 0.24                 | -0.17                    | 0.15                        | 3.20                      | 83                         | 1.76                      | 143                        | 83                              | 68                 | 0              | 7            | 3                   | 0                   |
|                           | YOUNGSTOWN     | 26                 | 12                 | 39              | -1             | 19      | -6                       | 0.32                 | -0.20                    | 0.11                        | 5.61                      | 126                        | 1.80                      | 119                        | 91                              | 70                 | 0              | 7            | 4                   | 0                   |
|                           | OKLAHOMA CITY  | 48                 | 24                 | 59              | 12             | 36      | 0                        | 0.02                 | -0.24                    | 0.02                        | 0.18                      | 6                          | 0.05                      | 6                          | 87                              | 46                 | 0              | 7            | 1                   | 0                   |
| OR                        | TULSA          | 40                 | 21                 | 48              | 14             | 31      | -5                       | 0.35                 | 0.02                     | 0.31                        | 0.96                      | 28                         | 0.41                      | 40                         | 87                              | 69                 | 0              | 7            | 3                   | 0                   |
|                           | ASTORIA        | 47                 | 38                 | 53              | 28             | 43      | 1                        | 4.11                 | 1.93                     | 1.94                        | 22.08                     | 133                        | 10.71                     | 173                        | 98                              | 93                 | 0              | 2            | 5                   | 2                   |
|                           | BURNS          | 38                 | 19                 | 44              | 5              | 29      | 5                        | 0.13                 | -0.12                    | 0.07                        | 4.31                      | 210                        | 0.67                      | 89                         | 88                              | 80                 | 0              | 6            | 4                   | 0                   |
| PA                        | EUGENE         | 50                 | 40                 | 58              | 33             | 45      | 5                        | 0.77                 | -0.96                    | 0.49                        | 8.81                      | 67                         | 2.03                      | 42                         | 96                              | 90                 | 0              | 0            | 5                   | 0                   |
|                           | MEDFORD        | 52                 | 36                 | 59              | 30             | 44      | 5                        | 0.52                 | -0.03                    | 0.52                        | 5.87                      | 131                        | 1.56                      | 98                         | 99                              | 79                 | 0              | 2            | 1                   | 1                   |
|                           | PENDLETON      | 50                 | 36                 | 60              | 28             | 43      | 9                        | 0.76                 | 0.44                     | 0.31                        | 4.49                      | 189                        | 1.36                      | 151                        | 85                              | 70                 | 0              | 2            | 3                   | 0                   |
|                           | PORTLAND       | 49                 | 41                 | 58              | 33             | 45      | 5                        | 2.03                 | 0.90                     | 0.73                        | 13.08                     | 146                        | 4.73                      | 146                        | 93                              | 85                 | 0              | 0            | 4                   | 3                   |
|                           | SALEM          | 50                 | 39                 | 58              | 31             | 44      | 4                        | 1.28                 | -0.02                    | 0.65                        | 13.19                     | 130                        | 3.24                      | 88                         | 91                              | 85                 | 0              | 2            | 4                   | 1                   |
|                           | ALLENTOWN      | 31                 | 18                 | 40              | 2              | 25      | -2                       | 1.11                 | 0.31                     | 0.65                        | 4.59                      | 81                         | 1.67                      | 74                         | 84                              | 61                 | 0              | 6            | 5                   | 1                   |
|                           | ERIE           | 27                 | 16                 | 40              | 6              | 22      | -5                       | 0.37                 | -0.17                    | 0.15                        | 4.15                      | 77                         | 1.91                      | 115                        | 82                              | 66                 | 0              | 7            | 5                   | 0                   |
|                           | MIDDLETOWN     | 32                 | 20                 | 40              | 6              | 26      | -2                       | 0.71                 | 0.09                     | 0.37                        | 3.08                      | 62                         | 1.11                      | 63                         | 89                              | 56                 | 0              | 7            | 5                   | 0                   |
|                           | PHILADELPHIA   | 35                 | 25                 | 44              | 14             | 30      | -2                       | 0.98                 | 0.18                     | 0.62                        | 4.98                      | 89                         | 1.74                      | 76                         | 67                              | 52                 | 0              | 6            | 4                   | 1                   |
|                           | PITTSBURGH     | 30                 | 16                 | 44              | -1             | 23      | -4                       | 0.43                 | -0.18                    | 0.31                        | 3.04                      | 66                         | 1.48                      | 86                         | 85                              | 58                 | 0              | 7            | 4                   | 0                   |
| RI                        | WILKES-BARRE   | 28                 | 15                 | 35              | 1              | 21      | -5                       | 0.72                 | 0.17                     | 0.37                        | 3.70                      | 91                         | 1.25                      | 82                         | 90                              | 59                 | 0              | 7            | 5                   | 0                   |
|                           | WILLIAMSPORT   | 30                 | 16                 | 39              | 0              | 23      | -2                       | 0.59                 | -0.05                    | 0.18                        | 5.04                      | 107                        | 1.01                      | 57                         | 85                              | 58                 | 0              | 7            | 5                   | 0                   |
|                           | PROVIDENCE     | 32                 | 20                 | 41              | 9              | 26      | -3                       | 1.46                 | 0.47                     | 1.10                        | 6.87                      | 99                         | 2.83                      | 101                        | 80                              | 58                 | 0              | 6            | 2                   | 1                   |
| SC                        | BEAUFORT       | 57                 | 33                 | 65              | 26             | 45      | -3                       | 0.40                 | -0.54                    | 0.26                        | 1.93                      | 34                         | 0.93                      | 35                         | 88                              | 47                 | 0              | 3            | 3                   | 0                   |
|                           | CHARLESTON     | 56                 | 34                 | 65              | 26             | 45      | -3                       | 0.40                 | -0.54                    | 0.20                        | 3.98                      | 68                         | 1.50                      | 57                         | 94                              | 52                 | 0              | 2            | 3                   | 0                   |
|                           | COLUMBIA       | 53                 | 30                 | 62              | 22             | 42      | -2                       | 0.30                 | -0.77                    | 0.17                        | 2.74                      | 43                         | 1.34                      | 45                         | 87                              | 52                 | 0              | 5            | 3                   | 0                   |
| SD                        | GREENVILLE     | 49                 | 30                 | 61              | 22             | 40      | -1                       | 0.15                 | -0.84                    | 0.14                        | 2.85                      | 43                         | 1.69                      | 60                         | 84                              | 46                 | 0              | 5            | 2                   | 0                   |
|                           | ABERDEEN       | 12                 | -11                | 22              | -24            | 0       | -10                      | 0.09                 | -0.01                    | 0.04                        | 2.56                      | 371                        | 0.79                      | 255                        | 80                              | 72                 | 0              | 7            | 4                   | 0                   |
|                           | HURON          | 14                 | -9                 | 24              | -22            | 3       | -11                      | 0.06                 | -0.05                    | 0.05                        | 2.20                      | 319                        | 0.82                      | 273                        | 85                              | 72                 | 0              | 7            | 2                   | 0                   |
| TN                        | RAPID CITY     | 32                 | 7                  | 47              | 0              | 19      | -3                       | 0.33                 | 0.27                     | 0.16                        | 1.11                      | 179                        | 0.50                      | 227                        | 95                              | 75                 | 0              | 7            | 4                   | 0                   |
|                           | SIOUX FALLS    | 14                 | -6                 | 29              | -16            | 4       | -10                      | 0.18                 | 0.07                     | 0.09                        | 2.35                      | 283                        | 0.81                      | 261                        | 80                              | 72                 | 0              | 7            | 3                   | 0                   |
|                           | BRISTOL        | 42                 | 27                 | 48              | 17             | 35      | 1                        | 0.28                 | -0.52                    | 0.15                        | 3.54                      | 63                         | 0.98                      | 44                         | 86                              | 51                 | 0              | 6            | 2                   | 0                   |
| TX                        | CHATTANOOGA    | 45                 | 29                 | 52              | 23             | 37      | -2                       | 0.25                 | -0.99                    | 0.23                        | 5.02                      | 61                         | 3.59                      | 105                        | 85                              | 57                 | 0              | 5            | 2                   | 0                   |
|                           | KNOXVILLE      | 43                 | 29                 | 50              | 21             | 36      | -1                       | 0.27                 | -0.77                    | 0.22                        | 4.99                      | 67                         | 2.79                      | 94                         | 85                              | 54                 | 0              | 5            | 3                   | 0                   |
|                           | MEMPHIS        | 43                 | 30                 | 52              | 19             | 37      | -3                       | 0.39                 | -0.52                    | 0.21                        | 3.50                      | 42                         | 0.98                      | 36                         | 90                              | 70                 | 0              | 4            | 3                   | 0                   |
|                           | NASHVILLE      | 39                 | 26                 | 48              | 17             | 33      | -3                       | 0.46                 | -0.42                    | 0.37                        | 3.46                      | 49                         | 1.59                      | 62                         | 87                              | 62                 | 0              | 6            | 3                   | 0                   |
|                           | ABILENE        | 61                 | 28                 | 69              | 18             | 44      | 1                        | 0.00                 | -0.19                    | 0.00                        | 1.31                      | 69                         | 0.11                      | 17                         | 89                              | 53                 | 0              | 5            | 0                   | 0                   |
|                           | AMARILLO       | 57                 | 24                 | 71              | 16             | 41      | 5                        | 0.04                 | -0.09                    | 0.04                        | 0.27                      | 26                         | 0.05                      | 12                         | 90                              | 40                 | 0              | 6            | 1                   | 0                   |
|                           | AUSTIN         | 61                 | 34                 | 67              | 20             | 47      | -3                       | 0.66                 | 0.27                     | 0.66                        | 4.48                      | 121                        | 3.68                      | 294                        | 88                              | 68                 | 0              | 3            | 1                   | 1                   |
|                           | BEAUMONT       | 59                 | 40                 | 63              | 27             | 49      | -3                       | 0.77                 | -0.54                    | 0.48                        | 6.34                      | 70                         | 1.33                      | 35                         | 95                              | 66                 | 0              | 1            | 4                   | 0                   |
|                           | BROWNSVILLE    | 72                 | 49                 | 84              | 39             | 60      | 1                        | 0.52                 | 0.22                     | 0.52                        | 2.38                      | 127                        | 2.37                      | 308                        | 91                              | 64                 | 0              | 0            | 1                   | 1                   |
|                           | CORPUS CHRISTI | 63                 | 44                 | 73              | 33             | 54      | -2                       | 1.17                 | 0.84                     | 1.16                        | 3.98                      | 145                        | 3.36                      | 339                        | 95                              | 80                 | 0              | 0            | 2                   | 1                   |
| UT                        | DEL RIO        | 67                 | 39                 | 78              | 26             | 53      | 2                        | 0.00                 | -0.11                    | 0.00                        | 0.10                      | 10                         | 0.08                      | 28                         | 88                              | 51                 | 0              | 2            | 0                   | 0                   |
|                           | EL PASO        | 67                 | 35                 | 73              | 26             | 51      | 6                        | 0.00                 | -0.08                    | 0.00                        | 0.16                      | 15                         | 0.00                      | 0                          | 49                              | 21                 | 0              | 3            | 0                   | 0                   |
|                           | FORT WORTH     | 53                 | 33                 | 60              | 20             | 43      | -1                       | 0.20                 | -0.18                    | 0.17                        | 3.57                      | 93                         | 1.52                      | 120                        | 91                              | 57                 | 0              | 4            | 2                   | 0                   |
|                           | GALVESTON      | 56                 | 45                 | 65              | 36             | 51      | -5                       | 1.71                 | 0.77                     | 1.66                        | 4.87                      | 79                         | 2.74                      | 105                        | 94                              | 74                 | 0              | 0            | 3                   | 1                   |
|                           | HOUSTON        | 59                 | 41                 | 64              | 30             | 50      | -2                       | 0.89                 | 0.06                     | 0.89                        | 6.07                      | 100                        | 3.03                      | 128                        | 89                              | 78                 | 0              | 2            | 1                   | 1                   |
|                           | LUBBOCK        | 63                 | 27                 | 77              | 20             | 45      | 7                        | 0.00                 | -0.08                    | 0.00                        | 0.00                      | 0                          | 0.00                      | 0                          | 73                              | 38                 | 0              | 5            | 0                   | 0                   |
|                           | MIDLAND        | 66                 | 27                 | 76              | 20             | 47      | 4                        | 0.00                 | -0.11                    | 0.00                        | 0.02                      | 2                          | 0.00                      | 0                          | 71                              | 40                 | 0              | 5            | 0                   | 0                   |
|                           | SAN ANGELO     | 67                 | 29                 | 77              | 18             | 48      | 3                        | 0.00                 | -0.16                    | 0.00                        | 1.28                      | 91                         | 0.29                      | 62                         | 81                              | 44                 | 0              | 3            | 0                   | 0                   |
|                           | SAN ANTONIO    | 62                 | 38                 | 72              | 27             | 50      | 0                        | 0.12                 | -0.24                    | 0.12                        | 3.34                      | 111                        | 2.71                      | 256                        | 91                              | 50                 | 0              | 2            | 1                   | 0                   |
|                           | VICTORIA       | 63                 | 40                 | 69              | 28             | 52      | -1                       | 0.60                 | 0.06                     | 0.58                        | 3.89                      | 96                         | 2.70                      | 171                        | 97                              | 79                 | 0              | 2            | 3                   | 1                   |
| VA                        | WACO           | 56                 | 34                 | 64              | 20             | 45      | -1                       | 0.94                 | 0.55                     | 0.94                        | 4.47                      | 112                        | 3.70                      | 303                        | 88                              | 74                 | 0              | 4            | 1                   | 1                   |
|                           | WICHITA FALLS  | 54                 | 25                 | 64              | 13             | 39      | -1                       | 0.01                 | -0.21                    | 0.01                        | 0.22                      | 9                          | 0.09                      | 13                         | 90                              | 57                 | 0              | 6            | 1                   | 0                   |
|                           | SALT LAKE CITY | 44                 | 28                 | 52              | 22             | 36      | 7                        | 0.30                 | 0.00                     | 0.14                        | 3.56                      | 170                        | 0.52                      | 60                         | 87                              | 55                 | 0              | 6            | 4                   | 0                   |
| WV                        | BURLINGTON     | 23                 | 7                  | 31              | -9             | 15      | -3                       | 0.46                 | -0.04                    | 0.22                        | 5.09                      | 141                        | 1.49                      | 106                        | 90                              | 58                 | 0              | 7            | 4                   | 0                   |
|                           | LYNCHBURG      | 43                 | 25                 | 56              | 12             | 34      | 0                        | 0.06                 | -0.74                    | 0.05                        | 2.63                      | 48                         | 0.47                      | 21                         | 77                              | 44                 | 0              | 7            | 2                   | 0                   |
|                           | NORFOLK        | 45                 | 33                 | 56              | 22             | 39      | -1                       | 2.11                 | 1.20                     | 1.39                        | 5.43                      | 98                         | 2.55                      | 102                        | 87                              | 58                 | 0              | 3            | 2                   | 2                   |
| WI                        | RICHMOND       | 43                 | 28                 | 58              | 13             | 35      | -1                       | 0.34                 | -0.47                    | 0.29                        | 4.19                      | 77                         | 0.93                      | 40                         | 75                              | 52                 | 0              | 6            | 2                   | 0                   |
|                           | ROANOKE        | 43                 | 29                 | 53              | 19             | 36      | 1                        | 0.03                 | -0.70                    | 0.01                        | 2.13                      | 44                         | 0.14                      | 7                          | 64                              | 51                 | 0              | 5            | 2                   | 0                   |
|                           | WASH/DULLES    | 37                 | 24                 | 51              | 9              | 30      | -2                       | 0.35                 | -0.34                    | 0.22                        | 1.97                      | 39                         | 0.50                      | 25                         | 76                              | 49                 | 0              | 6            | 3                   | 0                   |
|                           | OLYMPIA        | 48                 | 37                 | 56              | 27             | 42      | 4                        | 1.62                 | -0.08                    | 1.39                        | 16.01                     | 126                        | 6.66                      | 139                        | 96                              | 89                 | 0              | 3            | 4                   | 1                   |
|                           | QUILLAYUTE     | 47                 | 39                 | 50              | 28             | 43      | 2                        | 4.97                 | 1.91                     | 2.11                        | 33.72                     | 145                        | 14.70                     | 169                        | 99                              | 95                 | 0              | 1            | 5                   | 4                   |
|                           | SEATTLE-TACOMA | 48                 | 40                 | 55              | 33             | 44      | 3                        | 1.08                 | -0.08                    | 0.54                        | 13.05                     | 147                        | 4.37                      | 134                        | 91                              | 83                 | 0              | 0            | 5                   | 1                   |
|                           | SPOKANE        | 40                 | 26                 | 51              | 14             | 33      | 6                        | 0.56                 | 0.17                     | 0.22                        | 5.09                      | 149                        | 1.90                      | 162                        | 95                              | 76                 | 0              | 5            | 5                   | 0                   |
|                           | YAKIMA         | 51                 | 29                 | 61              | 21             | 40      | 11                       | 0.01                 | -0.24                    | 0.01                        | 2.98                      | 139                        | 0.60                      | 79                         | 87                              | 72                 | 0              | 5            | 1                   | 0                   |
|                           | BECKLEY        | 35                 | 22                 | 47              | 4              | 29      | -1                       | 0.30                 | -0.42                    | 0.10                        | 3.24                      | 63                         | 0.96                      | 47                         | 86                              | 69                 | 0              | 7            | 5                   | 0                   |
|                           | CHARLESTON     | 39                 | 24                 | 52              | 9              | 32      | -1                       | 0.53                 | -0.20                    | 0.20                        | 4.20                      | 78                         | 1.77                      | 87                         | 84                              | 55                 | 0              | 7            | 4                   | 0                   |
| WY                        | ELKINS         | 36                 | 17                 | 51              | -2             | 26      | -2                       | 0.14                 | -0.63                    | 0.06                        | 2.32                      | 41                         | 0.47                      | 21                         | 94                              | 53                 | 0              | 7            | 4                   | 0                   |
|                           | HUNTINGTON     | 36                 | 23                 | 44              | 6              | 29      | -3                       | 0.47                 | -0.25                    | 0.23                        | 2.69                      | 50                         | 1.16                      | 56                         | 90                              | 63                 | 0              | 7            | 4                   | 0                   |
|                           | EAU CLAIRE     | 12                 | -5                 | 23              | -25            | 3       | -8                       | 0.00                 | -0.23                    | 0.00                        | 1.92                      | 116                        | 0.09                      | 14                         | 87                              | 60                 | 0              | 7            | 0                   | 0                   |
| WY                        | GREEN BAY      | 16                 | -4                 | 27              | -15            | 6       | -9                       | 0.22                 | -0.06                    | 0.21                        | 2.57                      | 119                        | 0.66                      | 88                         | 80                              | 60                 | 0              | 7            | 2                   | 0                   |
|                           | LA CROSSE      | 16                 | -2                 | 28              | -19            | 7       | -9                       | 0.11                 | -0.16                    | 0.11                        | 2.90                      | 149                        | 0.50                      | 70                         | 84                              | 61                 | 0              | 7            | 1</                 |                     |

## 2010 U.S. Weather Review

*Annual "Weather Review" provided by USDA/WAOB; annual national rankings provided by NCDC*

A rapid transition from El Niño to La Niña and a persistent blocking high-pressure system over the northern Atlantic Ocean were the driving forces behind a number of extreme weather and climate events in 2010. In particular, the North Atlantic block was largely responsible for sustained cold outbreaks in Florida in both January and December 2010. Meanwhile, El Niño played a role in a stormy winter and spring in various parts of the country. Nevertheless, fields dried quickly enough in the Midwest to promote a rapid spring planting pace.

During the spring and summer growing season, above-normal temperatures dominated the nation's major crop production areas, including the central and southern Plains and the Midwest. As a result, most crops developed and matured rapidly, although heat and expanding drought in the eastern Corn Belt and parts of the South reduced yield prospects. In contrast, unfavorably wet weather affected parts of the western Corn Belt, where June flooding washed out some low-lying fields.

Following a warm growing season, Midwestern harvest activities proceeded at a rapid pace. Farther north and west, however, persistently cool, damp weather led to delayed small grain development and harvesting across the northern High Plains and the Northwest. California also experienced developmental and harvest delays for crops such as rice and cotton.

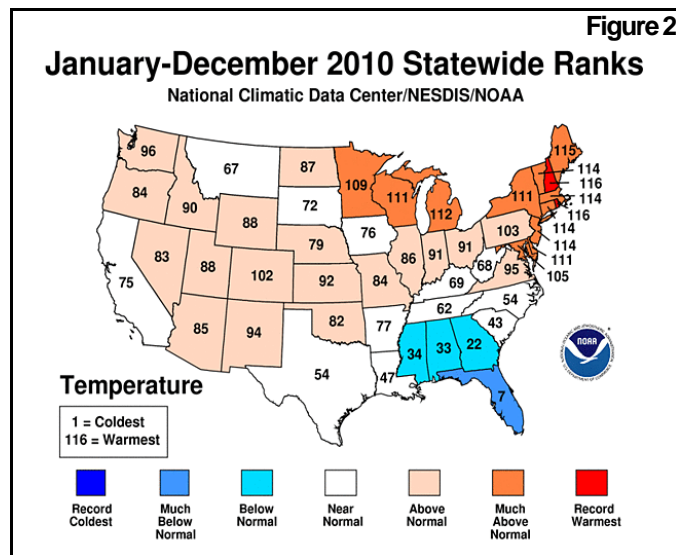
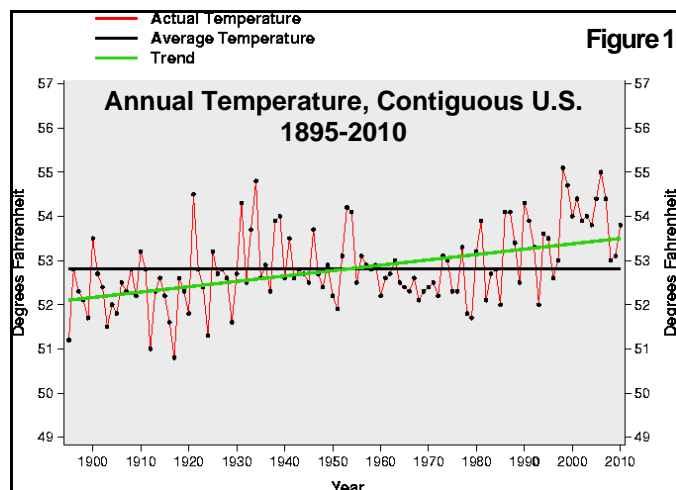
During autumn, signs of a developing La Niña included drought development across the Deep South and drought relief in the eastern Corn Belt. In addition, unfavorable dryness on the central and southern Plains led to a poorly established hard red winter wheat crop. Another late-year sign of La Niña's emerging presence was cold, stormy conditions from the Pacific Northwest to the upper Midwest.

Although 2010 will be remembered as an overall warm, wet year, the Southeast bucked the trend and was generally cool and dry. The nation's annual average temperature of 53.8°F was 1.0°F above the 20<sup>th</sup>-century mean, and represented the 23<sup>rd</sup>-highest value on record (figure 1). State rankings ranged from the seventh-coolest year in Florida to the warmest year on record in New Hampshire and Rhode Island (figure 2). Across the Lower 48 states, annual precipitation averaged 30.16 inches—104 percent of the long-term mean (figure 3). It was the 36<sup>th</sup>-wettest year since 1895. Preliminary state rankings ranged from the fifth-driest year in Louisiana to the wettest year on record in North Dakota (figure 4).

### Winter (December 2009 - February 2010)

With weather patterns governed by El Niño and a persistent high-pressure system over eastern Canada and the northern Atlantic Ocean, cold, stormy conditions dominated the U.S. El Niño supplied the energy for an active storm track across the central and southern U.S., while the high-pressure system acted

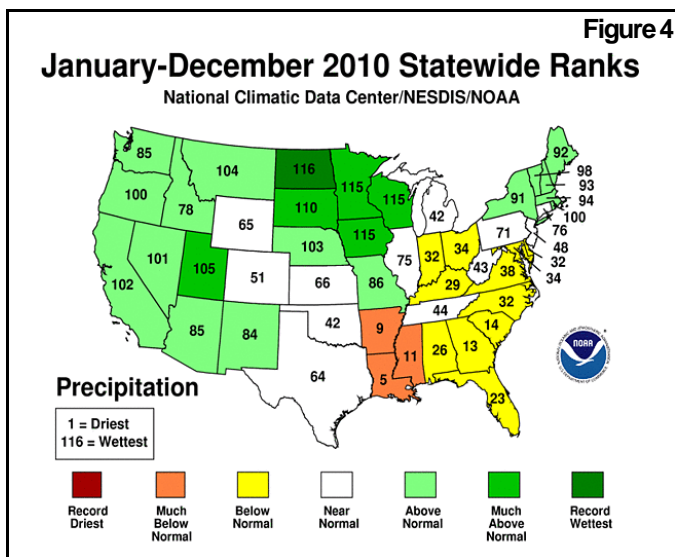
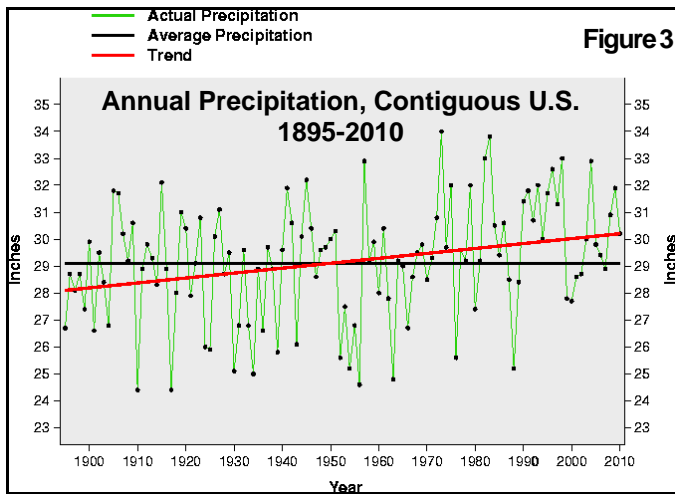
as an atmospheric block that repeatedly forced cold air southeastward across the Plains, Midwest, and Southeast.



According to the National Climatic Data Center (NCDC), the nation experienced its 17<sup>th</sup>-coldest, 15<sup>th</sup>-wettest winter on record. The U.S. winter average temperature of 31.1°F was 1.8°F below the 1901-2000 mean, resulting in the coldest December-February period since 1984-85. It was among the ten coldest winters in nine Southern States from Oklahoma and Texas eastward to South Carolina, Georgia, and Florida (figure 5). Meanwhile, Maine posted its third-warmest winter since 1895-96. Winter precipitation averaged 7.35 inches (114 percent of the long-term mean) across the contiguous U.S. It was among the ten driest winters on record in Wyoming, while top-ten wetness affected Alabama, Iowa, Minnesota, New Mexico, the Dakotas, and seven Atlantic Coast States from Florida to New Jersey (figure 6). Individual monthly highlights included a pair of December blizzards across parts of the Plains and upper Midwest, a severe, early-January freeze in Florida, and record-



setting February snowfall in the Mid-Atlantic States and adjoining areas. The winter of 2009-10 will also be remembered for snow accumulations across the Deep South. In California, key watershed areas received near-normal winter snowfall, following a 3-year drought.

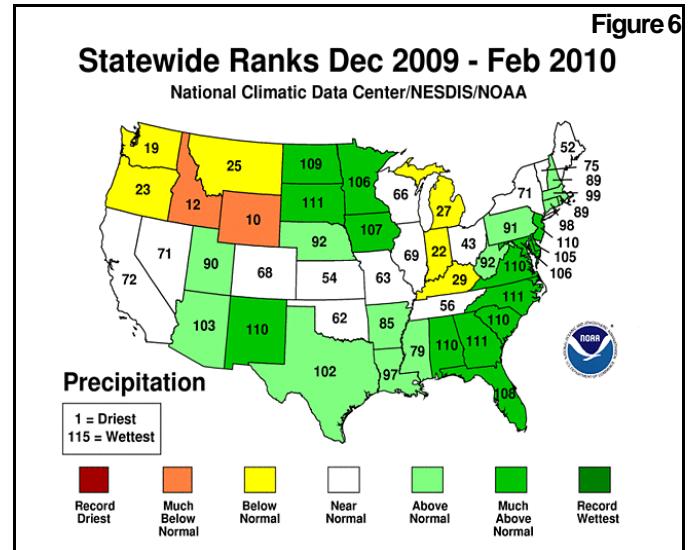
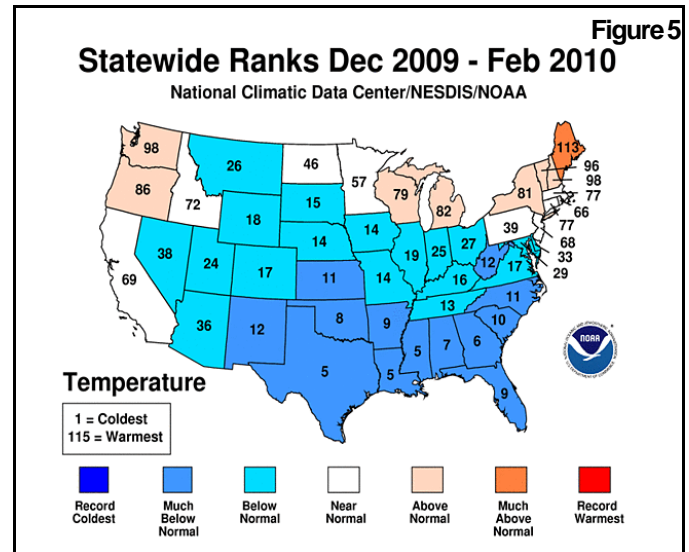


### Spring (March-May)

Cool weather in the West and record-setting warmth from Michigan to Maine highlighted the spring season. A wet spring eased the effects of a dry winter in the Northwest, while a gradual drying trend affected much of the nation's southern tier. Drought persisted through the end of May in parts of the Great Lakes region and developed in parts of the Gulf Coast States.

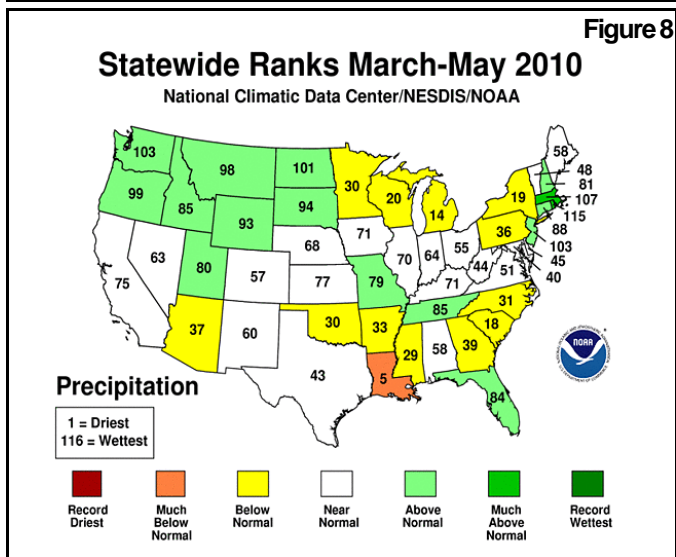
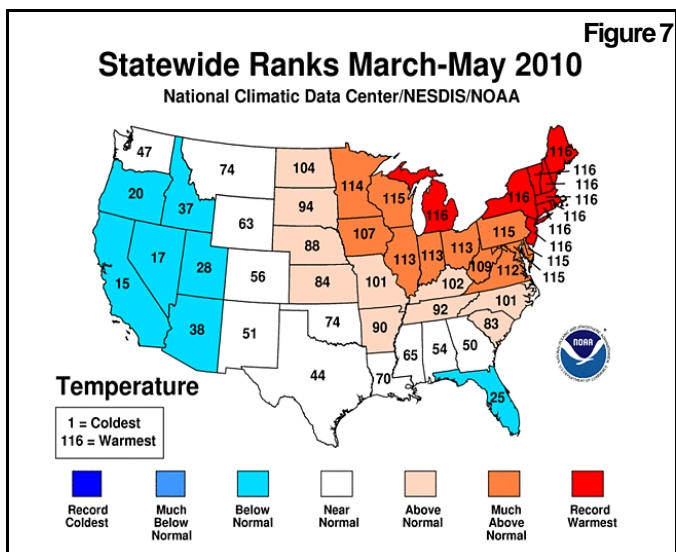
According to NCDC, the nation experienced its 20<sup>th</sup>-warmest, 60<sup>th</sup>-driest spring on record. The U.S. spring average temperature of 53.2°F was 1.4°F above the 1901-2000 mean. It was the warmest spring on record in Michigan, New Jersey, New York and all six New England States, and among the ten warmest in eleven other Midwestern and Eastern States (figure 7). In contrast, California experienced its 14<sup>th</sup>-coolest spring. Spring precipitation averaged 7.58 inches (98 percent of the long-term mean) across the contiguous U.S. State rankings

ranged from the fifth-driest spring in Louisiana to the second-wettest spring in Rhode Island (figure 8). Individual monthly highlights included March flooding in the Northeast, rapid Midwestern planting progress in April, and Southern rainfall extremes during May. For the latter highlight, May opened with historic rains in parts of Kentucky and Tennessee, while drought developed and expanded during the month from eastern Texas into the lower Mississippi Valley.



### Summer (June-August)

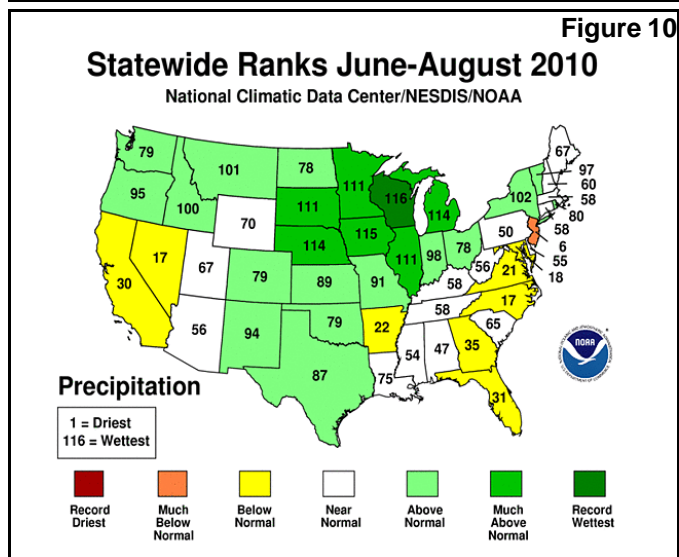
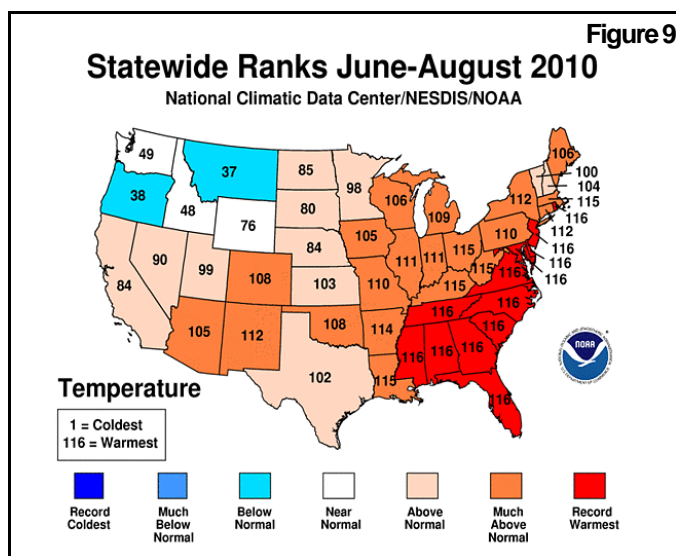
Consistent warmth across the majority of the nation fueled rapid crop development. In fact, record-setting summer warmth affected numerous locations from the Southeast into New England. A major exception to the warm pattern was the Northwest (as far east as Montana), where persistently cool conditions delayed both winter and spring wheat maturation and harvesting. Meanwhile, pockets of drought developed or expanded during the summer months from the Mid-South into the East. Drought development was also noted in the lower Midwest as far north as the Ohio Valley. In contrast, wet conditions plagued portions of the western Corn Belt.



According to NCDC, the nation experienced its fifth-hottest, ninth-wettest summer on record. The U.S. summer average temperature of 74.0°F was 1.9°F above the 1901-2000 mean. Only the summers of 1934, 1936, 2002, and 2006 were hotter. It was the hottest summer on record in twelve Southern and Eastern States (figure 9). In contrast, it was the 37<sup>th</sup>-coolest summer in Montana. Meanwhile, June-August precipitation averaged 9.34 inches, 113 percent of the mean. It was the nation's wettest summer since 2004. State rankings ranged from the sixth-driest June-August period in New Jersey to the wettest summer on record in Wisconsin (figure 10).

Individual monthly highlights included June flooding in parts of the Midwest, along with early-summer heat and dryness from the Delta into the Mid-Atlantic States. Hurricane Alex, which made landfall in northeastern Mexico, contributed to late-June and early-July downpours and flooding in southern Texas. During July, widespread rain maintained generally favorable conditions for Midwestern summer crops, except in areas of excessive wetness. By the end of July, heat began to creep northward into the southern Corn Belt. During August, a broad area of unfavorable dryness stretched from the south-central

U.S. into the Ohio Valley and the lower Great Lakes region. The late-summer dryness, along with a continuation of hot weather, trimmed yield prospects for some rain-fed summer crops.

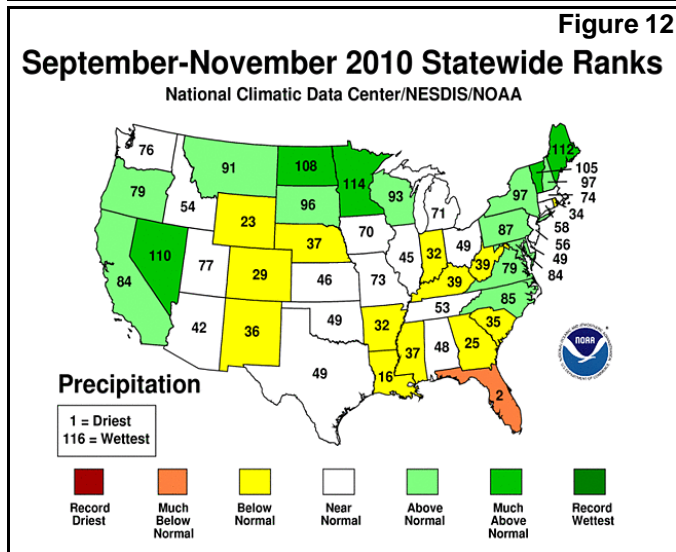
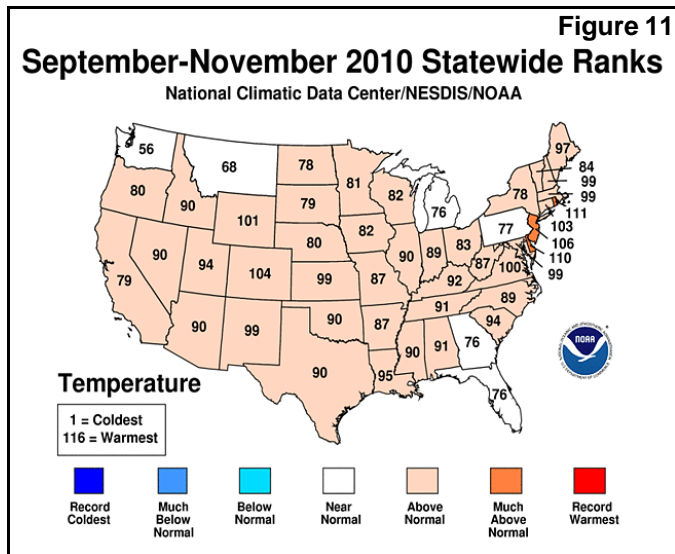


### Autumn (September-November)

The U.S. escaped a busy Atlantic tropical season with no hurricane landfalls and minimal overall impacts. Midwestern harvest activities proceeded at a near-record to record-setting pace, with corn and soybean fieldwork nearly complete by the end of October. Meanwhile, portions of the central and southern Plains did not receive enough moisture to allow for proper establishment of winter wheat. Dry conditions also plagued parts of the eastern Corn Belt, although November precipitation provided drought relief. By the end of autumn, signs of the evolving La Niña included Northwestern wetness and dry conditions in the southern Atlantic region and much of the south-central and southwestern U.S.

According to NCDC, the nation experienced its 14<sup>th</sup>-warmest, 53<sup>rd</sup>-driest autumn on record. The U.S. autumn average

temperature of 55.7°F was 1.5°F above the 1901-2000 mean. State rankings ranged from the 56<sup>th</sup>-coolest autumn in Washington to the sixth-warmest autumn in Rhode Island (figure 11). Meanwhile, autumn precipitation averaged 6.70 inches (virtually equal to the long-term mean) across the contiguous U.S. It was the second-driest September-November period in Florida, but among the ten wettest autumns on record in Maine, Minnesota, North Dakota, and Nevada (figure 12).



## December

During December, two large-scale atmospheric phenomena strongly influenced weather patterns across the United States: La Niña and a blocking high-pressure system over the northern Atlantic Ocean. The result was stormy weather in the western and north-central U.S., along with drier-than-normal conditions from the central and southern Plains into the Southeast. In addition, the North Atlantic block displaced cold air southward,

locking frigid air into place across the Southeast. In contrast, mild weather accompanied the Western storminess.

Western storms were most intense from central and southern California to the western slopes of the central Rockies. In those areas, heavy precipitation bolstered high-elevation snow packs and improved water-supply prospects, but also caused flash flooding and mudslides.

Meanwhile, little precipitation fell from southern sections of Arizona and New Mexico to the central and southern Plains. Between November 28 and January 2, the portion of the winter wheat crop rated in very poor to poor condition climbed from 25 to 33% in Kansas and 8 to 19% in Oklahoma. On the northern Plains, however, a well-established snow cover helped to protect winter wheat from periodic weather extremes.

Farther east, record-setting snowfall accumulated in the upper Midwest, while cold but relatively benign weather covered the central and eastern Corn Belt. The upper Midwestern snow and cold maintained stress on livestock and hampered rural travel. The Northeast also experienced several episodes of bad weather, with a post-holiday storm causing major travel disruptions.

Elsewhere, multiple freezes struck Florida's winter agricultural region, causing extensive damage to some vegetables and requiring growers to employ a variety of measures in an effort to protect citrus, sugarcane, strawberries, ornamentals, and nursery crops. December temperatures were the lowest on record in dozens of communities in Florida and elsewhere in the Southeast, eclipsing standards that had been mostly set in 1935, 1963, or 1989.

According to preliminary information provided by NCDC, the nation experienced its 44<sup>th</sup>-coldest, 54<sup>th</sup>-wettest December during the 116-year period of record. The nation's average temperature of 33.0°F was 0.4°F below normal, while the average precipitation of 2.22 inches was virtually equal to the 1901-2000 mean.

However, there was considerable state-to-state variability in both temperature and precipitation. For example, it was the coldest December on record in Florida and Georgia, but the second-warmest December in New Mexico. Florida's monthly average temperature of 50.3°F (9.3°F below normal) demolished the December 1935 standard of 51.9°F. In addition, December temperatures were among the ten lowest readings in nine states from Alabama and Mississippi northeastward to Ohio, Virginia, and West Virginia, but were among the ten highest values in Arizona, Colorado, Nevada, and Utah. Meanwhile, record-setting December wetness affected Nevada and Utah. Top-ten December wetness was noted in California, Oregon, Maine, Minnesota, and the Dakotas, but top-ten dryness plagued Alabama, Arkansas, Delaware, Kansas, Louisiana, and Mississippi.

## National Weather Data for Selected Cities

2010

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

| STATES AND STATIONS |                 | TEMP., °F |           | PRECIP. |           | STATES AND STATIONS |  | TEMP., °F |           | PRECIP. |           | STATES AND STATIONS |  | TEMP., °F |           | PRECIP. |           |
|---------------------|-----------------|-----------|-----------|---------|-----------|---------------------|--|-----------|-----------|---------|-----------|---------------------|--|-----------|-----------|---------|-----------|
|                     |                 | AVERAGE   | DEPARTURE | TOTAL   | DEPARTURE |                     |  | AVERAGE   | DEPARTURE | TOTAL   | DEPARTURE |                     |  | AVERAGE   | DEPARTURE | TOTAL   | DEPARTURE |
| AL                  | BIRMINGHAM      | 63        | 1         | 47.89   | -6.09     | LEXINGTON           |  | 55        | 0         | 38.04   | -7.86     | COLUMBUS            |  | 54        | 1         | 36.27   | -2.23     |
|                     | HUNTSVILLE      | 62        | 1         | 46.62   | -10.89    | LONDON-CORBIN       |  | 55        | -1        | 46.94   | -0.47     | DAYTON              |  | 53        | 1         | 33.59   | -5.99     |
|                     | MOBILE          | 66        | -1        | 59.86   | -6.43     | LOUISVILLE          |  | 59        | 2         | 38.50   | -6.03     | MANSFIELD           |  | 50        | 1         | 38.26   | -4.97     |
|                     | MONTGOMERY      | 65        | 0         | 38.35   | -16.42    | PADUCAH             |  | 58        | 1         | 36.67   | -12.57    | TOLEDO              |  | 51        | 1         | 34.60   | 1.39      |
| AK                  | ANCHORAGE       | 37        | 1         | 16.32   | 0.26      | LA BATON ROUGE      |  | 67        | 0         | 55.25   | -7.82     | YOUNGSTOWN          |  | 50        | 1         | 38.79   | 0.77      |
|                     | BARROW          | 15        | 4         | 5.47    | 1.32      | LAKE CHARLES        |  | 69        | 1         | 35.85   | -21.33    | OK OKLAHOMA CITY    |  | 61        | 1         | 32.53   | -3.32     |
|                     | COLD BAY        | 37        | -1        | 29.46   | -10.82    | NEW ORLEANS         |  | 69        | 0         | 53.92   | -10.24    | TULSA               |  | 61        | 0         | 34.46   | -7.96     |
|                     | FAIRBANKS       | 29        | 2         | 10.37   | 0.04      | SHREVEPORT          |  | 66        | 0         | 30.72   | -20.58    | OR ASTORIA          |  | 52        | 1         | 79.67   | 12.54     |
|                     | JUNEAU          | 43        | 1         | 53.83   | -4.50     | ME BANGOR           |  | 48        | 3         | 44.52   | 4.95      | BURNS               |  | 45        | 1         | 15.12   | 4.55      |
|                     | KING SALMON     | 33        | -2        | 16.62   | -2.79     | CARIBOU             |  | 44        | 5         | 43.61   | 6.18      | EUGENE              |  | 53        | 1         | 45.48   | -5.43     |
|                     | KODIAK          | 42        | 1         | 67.31   | -8.04     | PORTLAND            |  | 49        | 3         | 52.52   | 6.69      | MEDFORD             |  | 56        | 2         | 21.31   | 2.64      |
|                     | NOME            | 27        | 0         | 14.11   | -2.45     | MD BALTIMORE        |  | 57        | 2         | 43.46   | 1.52      | PENDLETON           |  | 52        | 0         | 18.80   | 6.04      |
| AZ                  | FLAGSTAFF       | 46        | 0         | 27.75   | 4.84      | MA BOSTON           |  | 54        | 2         | 49.67   | 7.14      | PORTLAND            |  | 54        | 0         | 46.29   | 9.22      |
|                     | PHOENIX         | 75        | 2         | 9.14    | 0.85      | WORCESTER           |  | 50        | 3         | 51.33   | 2.28      | SALEM               |  | 54        | 1         | 49.44   | 9.44      |
|                     | TUCSON          | 70        | 1         | 11.12   | -1.05     | MI ALPENA           |  | 46        | 3         | 26.38   | -2.02     | PA ALLENTOWN        |  | 53        | 2         | 50.60   | 5.43      |
| AR                  | FORT SMITH      | 63        | 2         | 35.27   | -8.60     | DETROIT             |  | 52        | 2         | 32.27   | -0.63     | ERIE                |  | 50        | 0         | 40.01   | -2.76     |
|                     | LITTLE ROCK     | 64        | 2         | 36.50   | -14.43    | FLINT               |  | 49        | 2         | 25.56   | -6.05     | MIDDLETOWN          |  | 55        | 2         | 39.43   | -1.07     |
| CA                  | BAKERSFIELD     | 65        | 0         | 12.49   | 6.01      | GRAND RAPIDS        |  | 51        | 3         | 35.86   | -1.26     | PHILADELPHIA        |  | 58        | 3         | 44.46   | 2.42      |
|                     | EUREKA          | 51        | -2        | 53.73   | 15.63     | HOUGHTON LAKE       |  | 46        | 3         | 25.47   | -2.97     | PITTSBURGH          |  | 52        | 1         | 37.84   | -0.01     |
|                     | FRESNO          | 64        | 1         | 16.51   | 5.28      | LANSING             |  | 50        | 3         | 27.73   | -3.80     | WILKES-BARRE        |  | 51        | 1         | 32.30   | -5.25     |
|                     | LOS ANGELES     | 62        | -1        | 20.04   | 6.89      | MUSKEGON            |  | 51        | 4         | 30.69   | -2.18     | WILLIAMSPORT        |  | 53        | 3         | 43.11   | 1.52      |
|                     | REDDING         | 62        | 0         | 39.70   | 6.18      | TRAVERSE CITY       |  | 48        | 2         | 31.08   | -2.39     | PR SAN JUAN         |  | 81        | 1         | 89.60   | 38.84     |
|                     | SACRAMENTO      | 61        | 0         | 22.85   | 4.92      | MN DULUTH           |  | 42        | 3         | 36.37   | 5.37      | RI PROVIDENCE       |  | 54        | 3         | 53.53   | 7.07      |
|                     | SAN DIEGO       | 63        | -1        | 16.27   | 5.50      | INTL FALLS          |  | 39        | 1         | 32.77   | 8.83      | SC CHARLESTON       |  | 65        | 0         | 57.56   | 6.03      |
|                     | SAN FRANCISCO   | 59        | 2         | 24.15   | 4.05      | MINNEAPOLIS         |  | 48        | 3         | 32.91   | 3.50      | COLUMBIA            |  | 64        | 0         | 35.48   | -12.79    |
|                     | STOCKTON        | 61        | -1        | 18.74   | 4.90      | ROCHESTER           |  | 46        | 2         | 39.87   | 8.46      | FLORENCE            |  | 63        | -1        | 44.54   | -0.22     |
| CO                  | ALAMOSA         | 43        | 2         | 5.99    | -1.26     | ST. CLOUD           |  | 45        | 3         | 33.84   | 6.71      | GREENVILLE          |  | 61        | 1         | 42.73   | -7.49     |
|                     | CO SPRINGS      | 51        | 3         | 9.37    | -8.02     | MS JACKSON          |  | 65        | 1         | 47.22   | -8.72     | MYRTLE BEACH        |  | 63        | -1        | 41.39   | -4.32     |
|                     | DENVER          | 51        | 2         | 12.86   | -0.76     | MERIDIAN            |  | 63        | -2        | 41.56   | -17.09    | SD ABERDEEN         |  | 44        | 0         | 27.22   | 7.00      |
|                     | GRAND JUNCTION  | 53        | 1         | 8.81    | -0.17     | TUPELO              |  | 62        | 1         | 47.94   | -7.92     | HURON               |  | 46        | 1         | 30.89   | 10.00     |
|                     | PUEBLO          | 53        | 1         | 11.61   | -0.78     | MO COLUMBIA         |  | 55        | 1         | 45.88   | 5.60      | RAPID CITY          |  | 46        | -1        | 19.24   | 2.61      |
| CT                  | BRIDGEPORT      | 54        | 2         | 45.94   | 1.79      | JOPLIN              |  | 58        | 0         | 43.09   | -2.98     | SIOUX FALLS         |  | 46        | 1         | 38.26   | 13.57     |
|                     | HARTFORD        | 53        | 3         | 44.35   | -1.81     | KANSAS CITY         |  | 55        | 1         | 41.92   | 3.93      | TN BRISTOL          |  | 56        | 1         | 37.28   | -4.04     |
| DC                  | WASHINGTON      | 60        | 2         | 34.78   | -4.57     | SPRINGFIELD         |  | 56        | 0         | 46.15   | 1.18      | CHATTANOOGA         |  | 61        | 1         | 41.91   | -12.61    |
| DE                  | WILMINGTON      | 56        | 2         | 43.96   | 1.15      | ST JOSEPH           |  | 53        | -1        | 39.49   | 4.25      | JACKSON             |  | 60        | 0         | 56.19   | 1.41      |
| FL                  | DAYTONA BEACH   | 69        | -2        | 39.38   | -9.91     | ST LOUIS            |  | 58        | 2         | 39.04   | 0.29      | KNOXVILLE           |  | 59        | 1         | 45.65   | -2.57     |
|                     | FT LAUDERDALE   | 75        | -1        | 59.43   | -4.77     | MT BILLINGS         |  | 47        | 0         | 18.75   | 3.99      | MEMPHIS             |  | 64        | 2         | 47.90   | -6.75     |
|                     | FT MYERS        | 73        | -2        | 53.08   | -1.11     | BUTTE               |  | 39        | -1        | 15.38   | 2.60      | NASHVILLE           |  | 60        | 1         | 59.07   | 10.96     |
|                     | JACKSONVILLE    | 67        | -1        | 33.41   | -18.93    | GLASGOW             |  | 41        | -2        | 18.05   | 6.82      | TX ABILENE          |  | 65        | 1         | 27.79   | 4.02      |
|                     | KEY WEST        | 76        | -2        | 39.32   | 0.38      | GREAT FALLS         |  | 44        | 0         | 19.36   | 4.47      | AMARILLO            |  | 58        | 1         | 26.56   | 6.84      |
|                     | MELBOURNE       | 71        | -1        | 35.71   | -12.58    | HELENA              |  | 44        | 0         | 12.98   | 1.66      | AUSTIN              |  | 67        | -2        | 28.43   | -5.22     |
|                     | MIAMI           | 76        | -1        | 65.09   | 6.56      | KALISPELL           |  | 44        | 1         | 20.61   | 3.40      | BEAUMONT            |  | 68        | -1        | 46.47   | -13.42    |
|                     | ORLANDO         | 71        | -2        | 45.72   | -2.63     | MILES CITY          |  | 45        | -1        | 17.83   | 4.34      | BROWNSVILLE         |  | 75        | 2         | 36.56   | 9.01      |
|                     | PENSACOLA       | 67        | -1        | 62.96   | -1.32     | MISSOULA            |  | 45        | 0         | 16.11   | 2.29      | COLLEGE STATION     |  | 69        | 0         | 29.50   | -10.17    |
|                     | ST PETERSBURG   | 71        | -3        | 43.40   | -6.18     | NE GRAND ISLAND     |  | 51        | 1         | 29.28   | 3.39      | CORPUS CHRISTI      |  | 71        | -1        | 43.92   | 11.67     |
|                     | TALLAHASSEE     | 67        | -1        | 58.53   | -4.67     | HASTINGS            |  | 51        | 0         | 26.80   | -1.14     | DALLAS/FT WORTH     |  | 67        | 1         | 31.70   | -3.03     |
|                     | TAMPA           | 72        | -1        | 40.34   | -4.42     | LINCOLN             |  | 51        | 0         | 34.41   | 6.04      | DEL RIO             |  | 70        | 0         | 29.79   | 11.56     |
|                     | WEST PALM BEACH | 74        | -1        | 53.39   | -8.00     | MCCOOK              |  | 52        | 1         | 22.08   | 0.46      | EL PASO             |  | 66        | 1         | 6.67    | -2.76     |
| GA                  | ATHENS          | 62        | 0         | 47.72   | -0.10     | NORFOLK             |  | 49        | 0         | 29.30   | 2.64      | GALVESTON           |  | 70        | -1        | 33.13   | -10.71    |
|                     | ATLANTA         | 62        | 0         | 48.13   | -2.06     | NORTH PLATTE        |  | 49        | 0         | 23.19   | 3.53      | HOUSTON             |  | 69        | 0         | 42.73   | -5.11     |
|                     | AUGUSTA         | 63        | 0         | 28.61   | -15.98    | OMAHA/EPFLEY        |  | 52        | 1         | 35.00   | 4.78      | LUBBOCK             |  | 61        | 1         | 26.46   | 7.78      |
|                     | COLUMBUS        | 65        | 0         | 37.27   | -11.30    | SCOTTSBLUFF         |  | 50        | 2         | 16.19   | -0.14     | MIDLAND             |  | 64        | 0         | 16.06   | 1.26      |
|                     | MACON           | 64        | 0         | 44.08   | -0.91     | VALENTINE           |  | 49        | 2         | 17.69   | -1.83     | SAN ANGELO          |  | 67        | 2         | 20.12   | -0.78     |
|                     | SAVANNAH        | 66        | 0         | 36.36   | -13.22    | NV ELKO             |  | 47        | 1         | 11.70   | 2.11      | SAN ANTONIO         |  | 69        | 0         | 37.36   | 4.44      |
| HI                  | HILO            | 74        | 0         | 63.08   | -63.19    | ELY                 |  | 44        | -1        | 11.13   | 1.16      | VICTORIA            |  | 70        | 0         | 46.61   | 6.51      |
|                     | HONOLULU        | 77        | 0         | 17.45   | -0.83     | LAS VEGAS           |  | 70        | 2         | 5.89    | 1.40      | WACO                |  | 67        | 0         | 40.09   | 6.75      |
|                     | KAHULUI         | 76        | 0         | 9.55    | -9.25     | RENO                |  | 54        | 3         | 9.25    | 1.77      | WICHITA FALLS       |  | 64        | 1         | 28.96   | 0.15      |
|                     | LIHUE           | 75        | -1        | 24.64   | -14.92    | WINNEMUCCA          |  | 49        | 0         | 12.27   | 3.94      | UT SALT LAKE CITY   |  | 53        | 1         | 18.72   | 2.22      |
| ID                  | BOISE           | 53        | 1         | 15.01   | 2.81      | NH CONCORD          |  | 49        | 3         | 37.94   | 0.34      | VT BURLINGTON       |  | 48        | 3         | 40.73   | 4.68      |
|                     | LEWISTON        | 53        | 0         | 14.39   | 1.67      | NJ ATLANTIC CITY    |  | 56        | 2         | 42.14   | 1.55      | VA LYNCHBURG        |  | 56        | 1         | 45.68   | 2.37      |
|                     | POCATELLO       | 46        | -1        | 11.22   | -1.37     | NEWARK              |  | 57        | 2         | 43.47   | -2.79     | NORFOLK             |  | 61        | 1         | 50.98   | 5.24      |
| IL                  | CHICAGO/O'HARE  | 51        | 2         | 37.60   | 1.32      | NM ALBUQUERQUE      |  | 58        | 1         | 8.96    | -0.50     | RICHMOND            |  | 60        | 2         | 35.89   | -8.01     |
|                     | MOLINE          | 52        | 2         | 45.13   | 7.09      | NY ALBANY           |  | 50        | 2         | 37.84   | -0.22     | ROANOKE             |  | 57        | 1         | 43.48   | 1.00      |
|                     | PEORIA          | 52        | 1         | 44.15   | 8.13      | BINGHAMTON          |  | 48        | 2         | 38.28   | -0.37     | WASH/DULLES         |  | 57        | 3         | 39.02   | -2.79     |
|                     | ROCKFORD        | 50        | 2         | 37.08   | 0.47      | BUFFALO             |  | 49        | 1         | 36.72   | -3.82     | WA OLYMPIA          |  | 51        | 1         | 55.44   | 4.65      |
|                     | SPRINGFIELD     | 54        | 1         | 46.96   | 11.40     | ROCHESTER           |  | 49        | 1         | 37.46   | 3.50      | QUILLAYUTE          |  | 50        | 1         | 117.80  | 16.08     |
| IN                  | EVANSVILLE      | 57        | 1         | 32.80   | -11.47    | SYRACUSE            |  | 50        | 2         | 41.46   | 1.42      | SEATTLE-TACOMA      |  | 53        | 1         | 46.98   | 9.92      |
|                     | FORT WAYNE      | 52        | 2         | 33.14   | -3.41     | NC ASHEVILLE        |  | 55        | 0         | 44.25   | -2.79     | SPOKANE             |  | 49        | 2         | 19.02   | 2.35      |
|                     | INDIANAPOLIS    | 55        | 2         | 33.83   | -7.11     | CHARLOTTE           |  | 60        | -1        | 36.40   | -7.12     | YAKIMA              |  | 51        | 2         | 11.14   | 2.88      |
|                     | SOUTH BEND      | 51        | 1         | 32.07   | -7.63     | GREENSBORO          |  | 60        | 2         | 42.71   | -0.42     | WV BECKLEY          |  | 52        | 0         | 43.28   | 1.66      |
| IA                  | BURLINGTON      | 53        | 1         | 53.47   | 15.53     | HATTERAS            |  | 61        | -2        | 61.38   | 3.63      | CHARLESTON          |  | 56        | 1         | 44.71   | 0.67      |
|                     | CEDAR RAPIDS    | 48        | -1        | 40.68   | 7.27      | RALEIGH             |  | 61        | 1         | 36.94   | -6.11     | ELKINS              |  | 50        | 0         | 39.45   | -6.64     |
|                     | DES MOINES      | 52        | 2         | 51.79   | 17.07     | WILMINGTON          |  | 63        | -1        | 58.57   | 1.50      | HUNTINGTON          |  | 55        | 0         | 42.65   | 0.34      |
|                     | DUBUQUE         | 48        | 1         | 46.69   | 11.18     | ND BISMARCK         |  | 42        | 0         | 23.18   | 6.34      | WI EAU CLAIRE       |  | 46        | 2         | 36.68   | 4.56      |
|                     | SIOUX CITY      | 49        | 1         | 32.04   | 6.05      | DICKINSON           |  | 41        | -2        | 14.89   | -1.46     | GREEN BAY           |  | 47        | 2         | 38.13   | 8.94      |
|                     | WATERLOO        | 48        | 1         | 43.03   | 9.89      | FARGO               |  | 43        | 1         | 29.47   | 8.28      | LA CROSSE           |  | 48        | 1         | 42.88   | 10.52     |
| KS                  | CONCORDIA       | 54        | 0         | 31.95   | 3.52      | GRAND FORKS         |  | 42        | 2         | 27.77   | 8.17      | MADISON             |  | 48        | 2         | 37.86   | 4.91      |
|                     | DODGE CITY      | 56        | 1         | 25.32   | 2.97      | JAMESTOWN           |  | 42        | 0         | 24.02   | 5.53      | MILWAUKEE           |  | 50        | 2         | 35.98   | 1.17      |
|                     | GOODLAND        | 52        | 1         | 19.46   | -0.30     | MINOT               |  | 42        | 0         | 22.24   | 3.80      | WAUSAU              |  | 46        | 2         | 38.13   | 4.77      |
|                     | HILL CITY       | 55        | 2         | 16.77   | -6.12     | WILLISTON           |  | 41        | 0         | 21.28   | 7.12      | WY CASPER           |  | 46        | 1         | 12.71   | -0.32     |
|                     | TOPEKA          | 56        | 2         | 36.49   | 0.85      | OH AKRON-CANTON     |  | 51        | 1         | 37.85   | -0.62     | CHEYENNE            |  | 46        | 1         | 15.76   | 0.31      |
|                     | WICHITA         | 58        | 2         | 28.17   | -2.21     | CINCINNATI          |  | 55        | 1         | 36.68   | -5.93     | LANDER              |  | 45        | 0         | 14.47   | 1.05      |
| KY                  | JACKSON         | 56        | 0         | 45.26   | -4.13     | CLEVELAND           |  | 53        | 3         | 35.40   | -3.30     | SHERIDAN            |  | 45        | 0         | 14.33   | -0.39     |

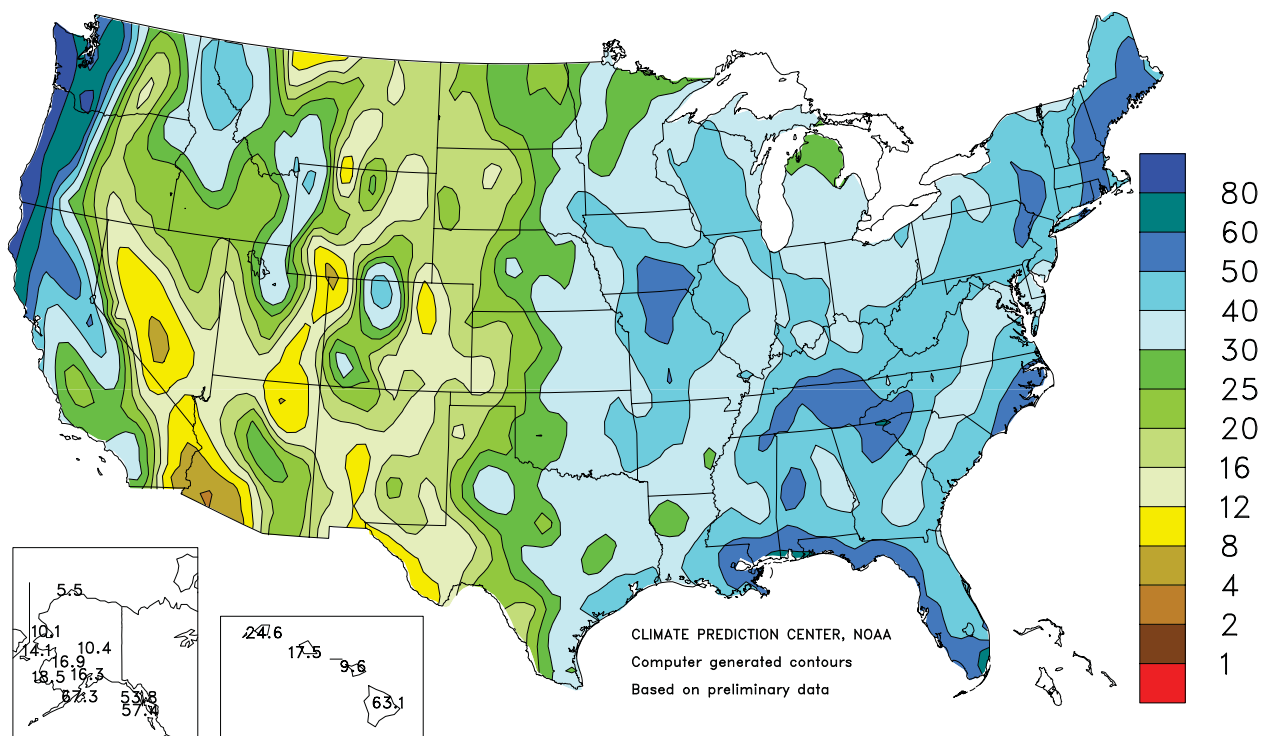
Based on 1971-2000 normals

\*\*\* Not Available



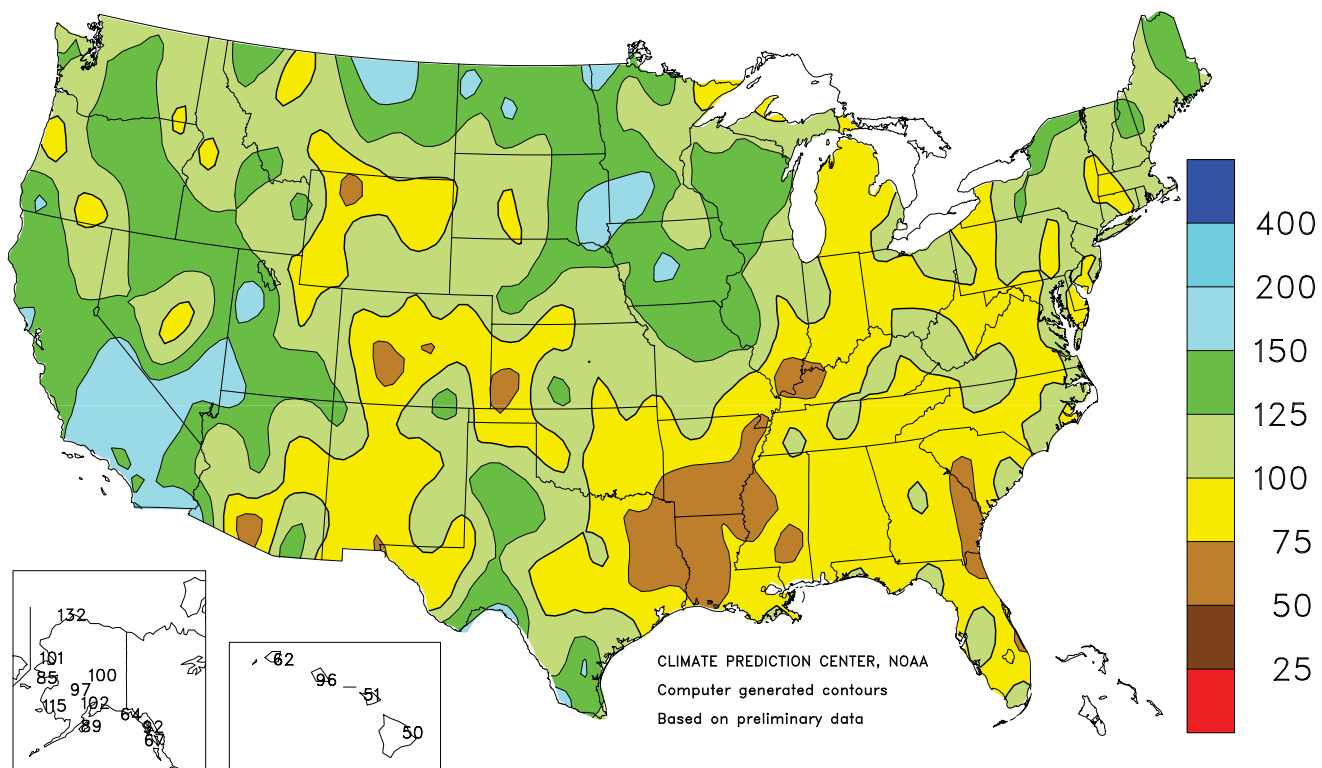
## Total Precipitation (Inches)

JAN - DEC 2010



## Percent Of Normal Precipitation

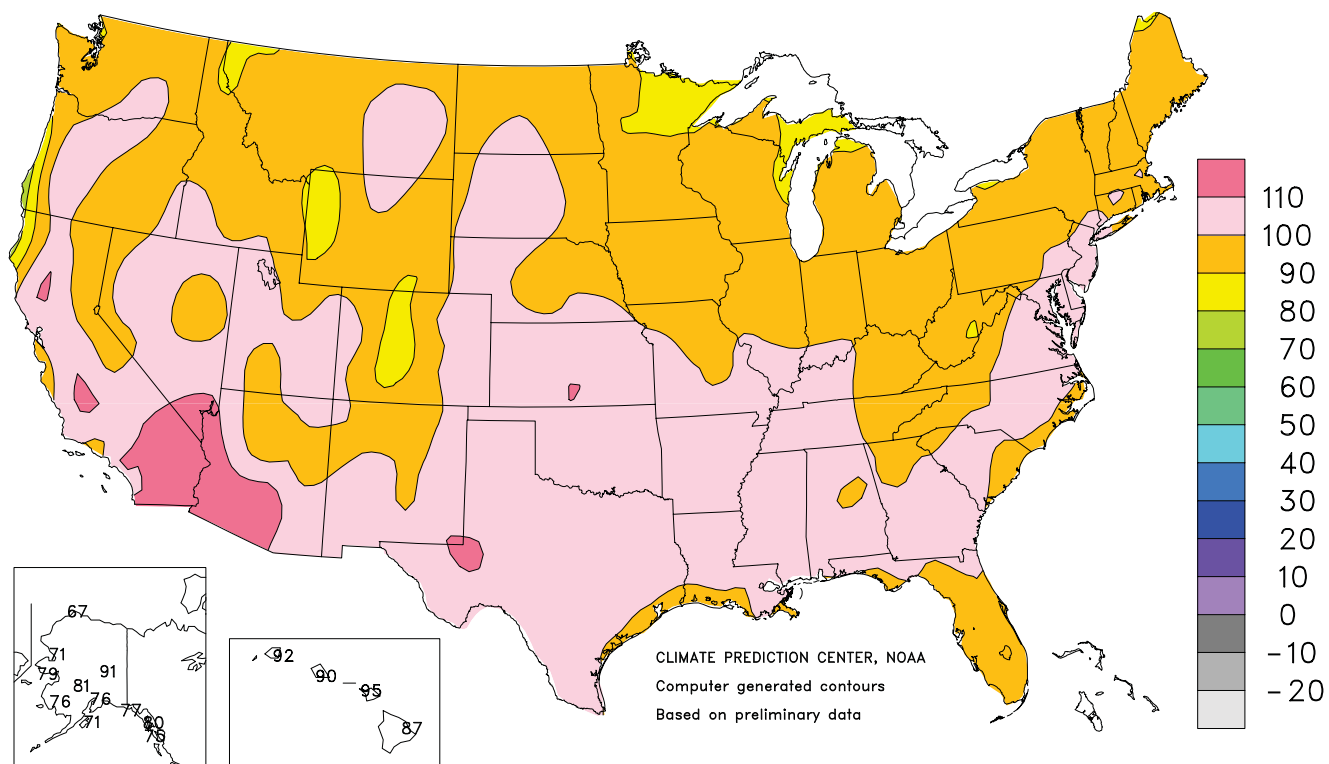
JAN - DEC 2010





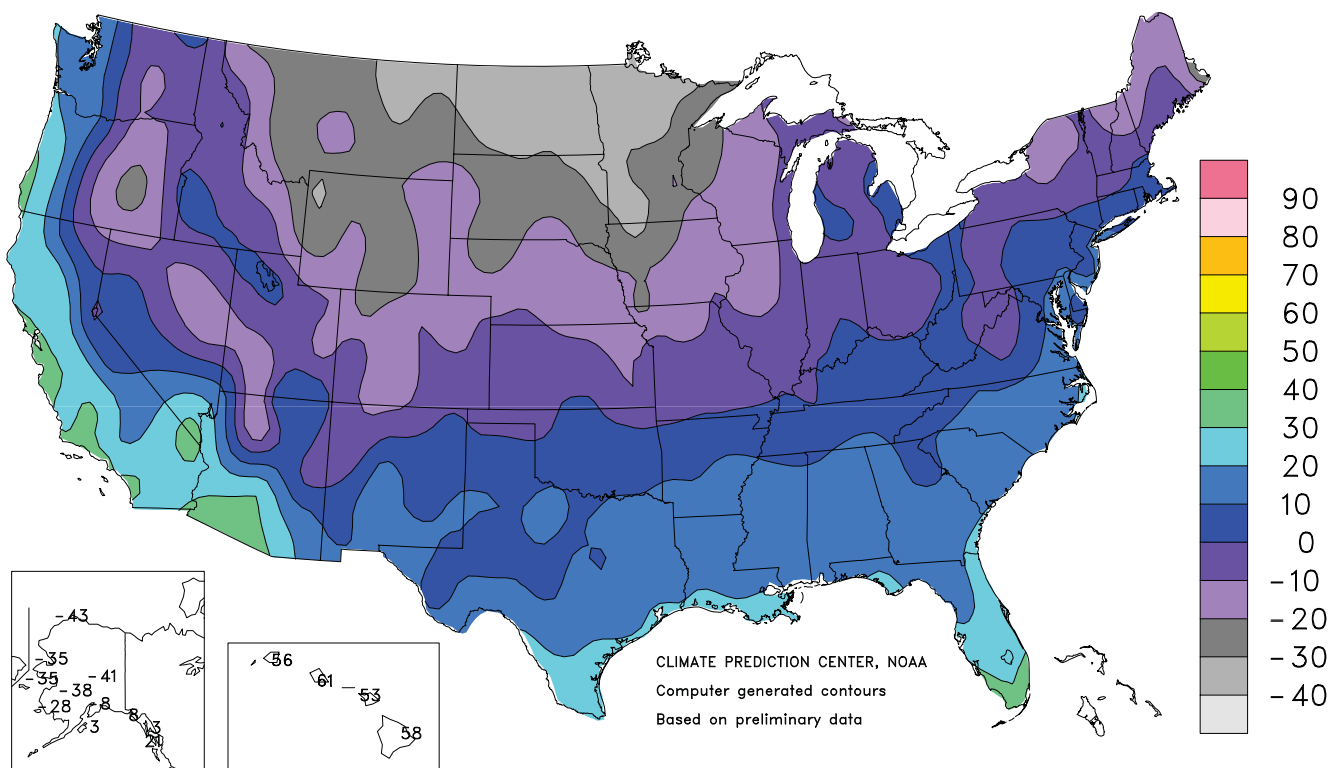
## Extreme Maximum Temperature (°F)

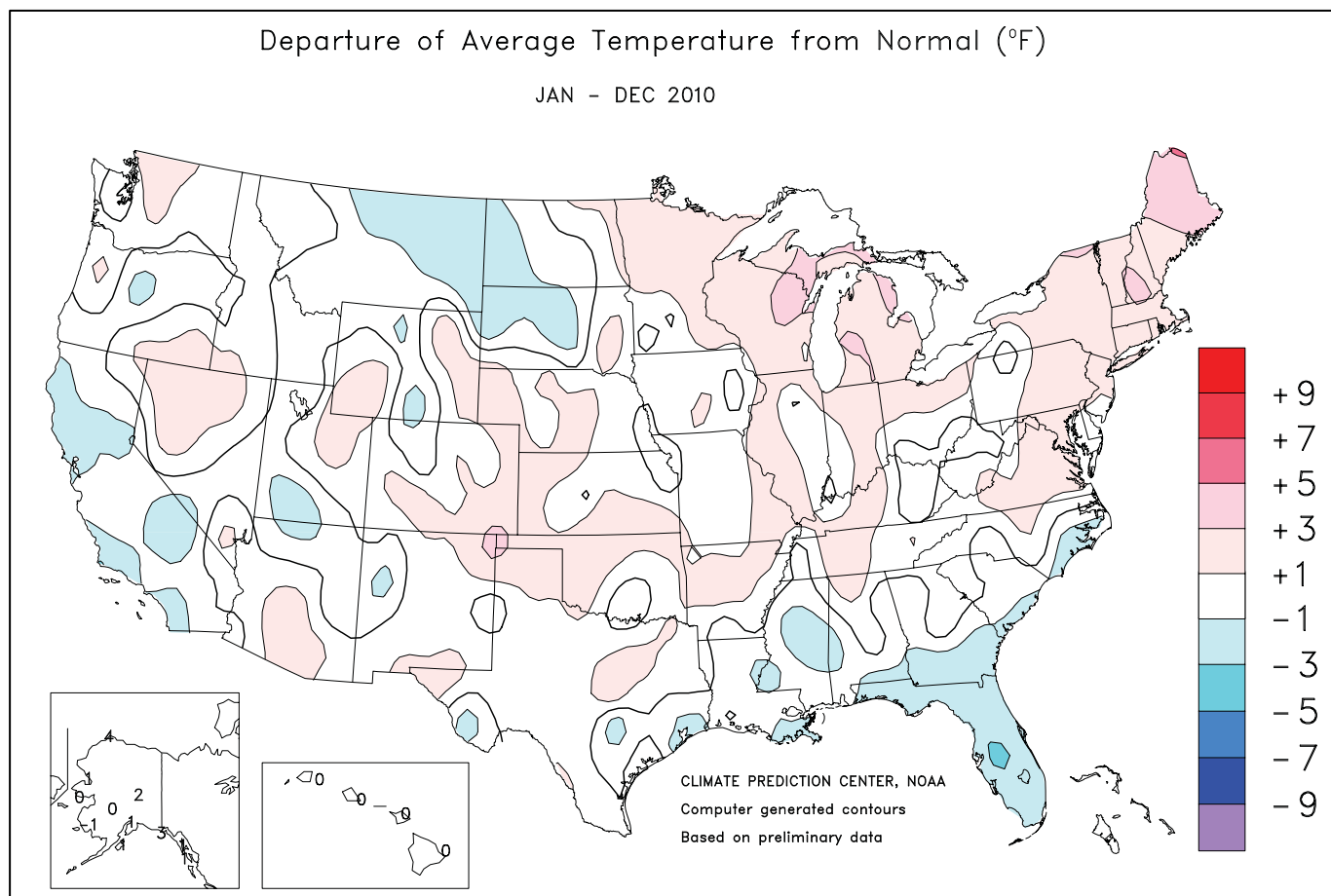
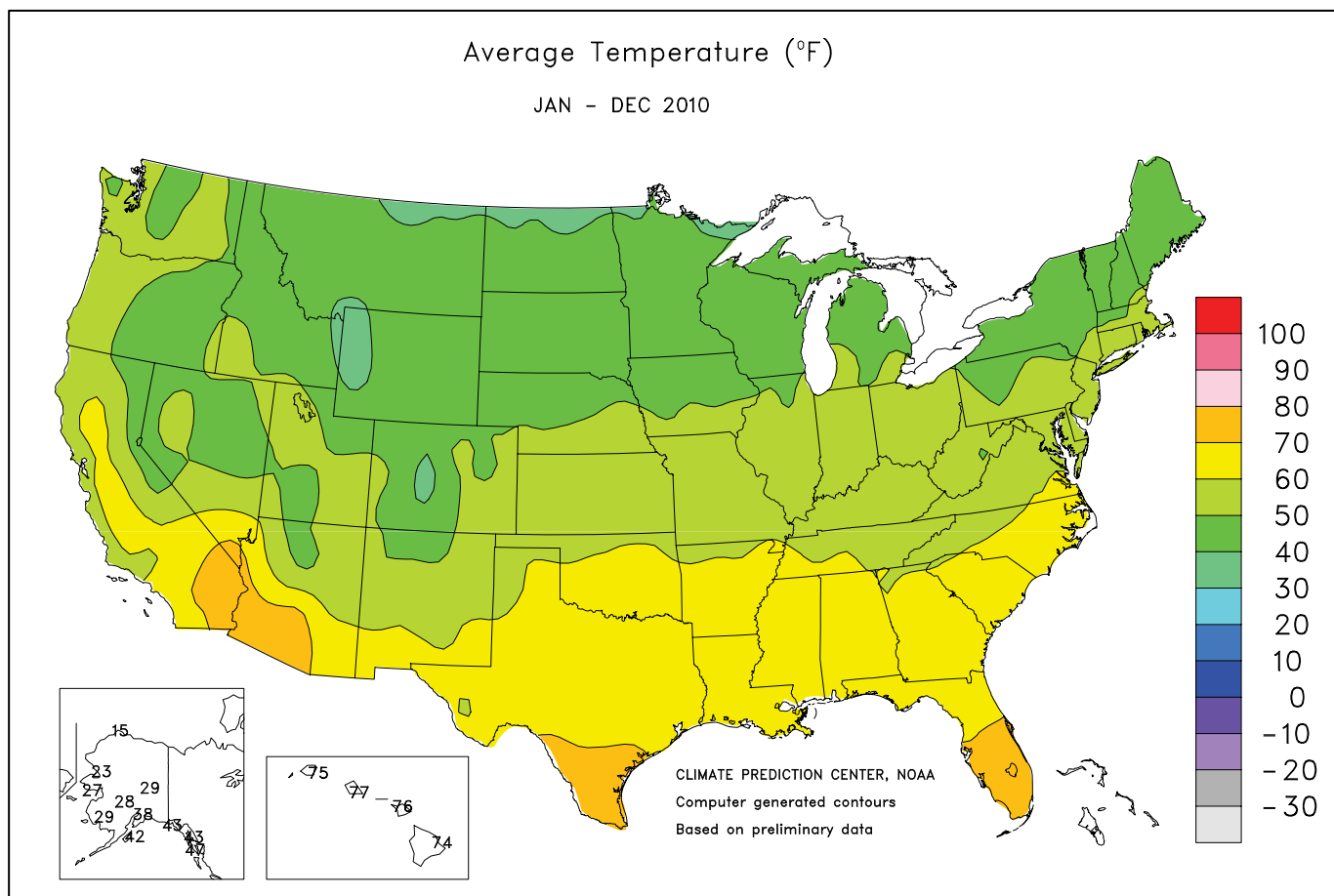
JAN - DEC 2010



## Extreme Minimum Temperature (°F)

JAN - DEC 2010





## 2010 U.S. Fieldwork Highlights

*Highlights, released on January 12, 2011, were provided by USDA/NASS.*

**April:** Unseasonably warm weather blanketed much of the country east of the Rocky Mountains during the month, allowing spring fieldwork in numerous states to advance at a pace well ahead of normal. Rainfall was plentiful in the western half of the United States, helping to alleviate prolonged drought conditions in some areas and boosting small grain growth. In Texas, wet fields and cool weather delayed the start of sorghum planting by about a week, while sunny skies allowed for rapid mid-month planting in the Delta. Elsewhere, warm, mostly dry weather conditions prevailed throughout most of the major corn-producing regions, allowing planting progress to explode during the latter half of April. Midwestern producers rushed to get as much seed in the ground as possible ahead of approaching late-month thunderstorms. By April 25, half of the 2010 corn crop had been planted, the earliest date on record that progress had reached the halfway point.

**May:** Cooler-than-normal weather dominated much of the western United States, slowing the emergence of recently planted row crops and hindering head development in small grains. Meanwhile, above-average temperatures afforded producers throughout the eastern half of the country ample time for completing fieldwork. Early-May thunderstorms delivered a rainfall deluge to portions of Kentucky and Tennessee, causing severe flooding, limiting fieldwork, and damaging some crops in low-lying areas near creeks and rivers. Similarly, spring storm systems inundated California's rice-producing region with above-average rainfall, leaving producers seeding fields as conditions allowed. By May 2, ninety-six percent of the nation's sugarbeet crop was planted, well ahead of both last year and the 5-year average, with producers in Idaho replanting some fields due to poor emergence, frost damage, and seedling disease. Mid-month cold spells damaged some soybean fields in the northernmost areas of Indiana, causing producers to replant a portion of the crop. Barley seeding remained active throughout the month, despite fluctuating weather conditions; however, unusually cool late-month temperatures in Idaho and Montana slowed crop emergence.

**June:** Warmer-than-normal weather prevailed across much of the country during the month, promoting rapid summer crop development in many areas, but negatively

impacting crop conditions in others. Conversely, cool weather in the Pacific Northwest, northern Rocky Mountains, and portions of the northern Great Plains hampered winter grain maturation. As the month began, cotton producers across the country had planted 91 percent of their intended acreage, with planting complete in Arizona, Arkansas, California, Louisiana, and Missouri. Corn condition ratings declined during June, as mid-month storms delivered above-average rainfall and hail that caused flooding and damaged corn plants in some fields in Illinois, Indiana, Iowa, Minnesota, and Nebraska—the five largest corn-producing states. Warm, mostly dry weather was the norm for most of the major winter wheat-producing regions in mid-June, boosting heading progress and providing ideal harvest conditions. Peanut producers had planted 96 percent of the 2010 crop by June 13, ahead of both last year and the average pace. Late-month heat in the Delta caused a decline in rice condition ratings, but promoted rapid phenological development.

**July:** Above-average precipitation fell on much of the Great Plains and Midwest during the month, helping to improve dry soil moisture conditions in some areas while adding moisture to already soggy fields in others. Conversely, many areas east of the Mississippi River and west of the Rocky Mountains were abnormally dry. High temperatures lingered all month east of the Mississippi River, stressing summer row crops in some Southeastern States. Warm weather on the Plains as the month began helped to jump-start the heading of Kansas' sorghum crop, the earliest start of heading since 2006. Following a rapid planting pace during the spring and nearly ideal growing conditions throughout most of the major corn-producing areas in May and June, the nation's crop continued to develop at a faster-than-normal pace during July. Oat harvest was underway in some states by July 11 and neared the halfway point toward month's end. Head development of the nation's rice crop gained momentum as the month progressed, with heading in Arkansas—the largest rice-producing state—over 3 weeks ahead of normal by month's end. Warm weather coupled with adequate soil moisture levels across the major soybean-producing regions provided ideal growing conditions and promoted rapid crop development throughout July.

**August:** During August, near-normal temperatures prevailed from the Rocky Mountains westward, while unseasonably warm weather reigned from the Great Plains to the Atlantic Coast. August heat promoted the rapid phenological development of many row crops and aided small grain harvesting. Rainfall in excess of 12 inches left many low-lying corn fields in Iowa—the largest corn-producing state—completely saturated, stunting growth and yellowing portions of the crop. Despite mostly ideal weather that provided ample time for fieldwork during the first half of the month, barley harvest remained behind normal in Idaho, Montana, North Dakota, and Washington—four of the six largest producing states—due to early-season developmental delays. In Kansas, triple-digit temperatures combined with persistently dry weather to deplete soil moisture and stress portions of the sorghum crop. Similarly, above-average temperatures and a lack of available soil moisture stressed cotton fields in parts of Texas, leading to a decline in crop condition ratings. Hot, humid conditions blanketed most of the major soybean-producing regions in mid-August, maintaining a rapid pod-setting pace. Timely, late-month rainfall aided pod filling in portions of the Corn Belt. By August 29, sorghum harvest was underway and well ahead of normal in the Delta, but was 19 percentage points behind last year in Texas.

**September:** Tropical Storms Hermine and Nicole bookended the month, delivering substantial amounts of precipitation to south-central and eastern United States. Most notably, coastal locations in both North Carolina and Texas received rainfall totaling a foot or more, slowing fieldwork and causing localized flooding in low-lying areas. Elsewhere, unusually dry conditions allowed for the quick harvest of row crops and small grains. By September 5, corn harvesting was underway in 11 of the 18 major corn-producing states. Soybean harvesting had begun in all major estimating states except North Carolina and Wisconsin by September 19. Nationally, sorghum harvesting inched forward during the first half of the month but gained speed as fields in portions of Texas began to dry out. Winter wheat producers were busy seeding their 2011 crop by mid-September. Toward month's end, peanut producers in the Southern Low Plains of Texas were rushing to dig their fields before feral hogs ruined the crop.

**October:** Above-average temperatures and relatively dry conditions across much of the United States promoted the quickest national corn harvest pace in 19 years. For several weeks during October, the soybean harvest advanced at a record-setting pace. Elsewhere, timely late-month storm systems dumped much-needed precipitation on parts of the Great Plains, aiding the establishment of recently seeded small grains. Winter wheat seeding gained momentum as October progressed, as warm, mostly sunny weather provided nearly ideal fieldwork conditions. However, winter wheat establishment in portions of the central and southern Great Plains was negatively impacted by generally dry conditions. Despite improved weather conditions around mid-month in California that allowed rice producers to harvest their crop at a quicker pace, overall progress remained substantially behind both last year's progress and the 5-year average. Double-digit harvest progress was evident throughout most of the major peanut-producing regions during the latter half of the month, but some Southeastern fields needed additional moisture before producers could continue digging their crop. Warm, sunny weather across the major cotton-producing regions allowed for the quickest harvest of the nation's crop since 2001. By October 31, cotton producers had harvested 61 percent of the 2010 crop, 34 percentage points ahead of last year and 17 points ahead of the 5-year average.

**November:** Near-normal temperatures and mostly dry conditions blanketed much of the country during the month, affording producers ample time to finish harvesting their summer row crops and to seed their overwintered small grains. As the month began, sugarbeet producers in the Red River Valley had finished harvesting this year's crop, while growers in Idaho and Michigan were busy digging the last of their fields. By November 7, corn producers had harvested 96 percent of the nation's crop, 61 percentage points—or 43 days—ahead of last year and 23 points ahead of the 5-year average. With the exception of Alabama, where progress typically trails the other peanut-producing states, harvest was complete or nearly complete by November 21. By November 28, cotton producers had harvested 91 percent of the 2010 crop, 11 percentage points ahead of last year and 10 points ahead of the 5-year average.

## 2010 U.S. Crop Production Highlights

*Highlights, released on January 12, 2011, were provided by USDA/NASS.*

**Corn:** Corn for grain production is estimated at 12.4 billion bushels, down 1 percent from the November 1 forecast and 5 percent below the record-high production of 13.1 billion bushels set in 2009. U.S. grain yield for 2010 is estimated at 152.8 bushels per acre. This is down 1.5 bushels from the November forecast and 11.9 bushels below the record-high yield of 164.7 bushels per acre set in 2009. Regionally, estimated yields are down across much of the Corn Belt, central Great Plains, Ohio Valley, and Mid-Atlantic States compared to 2009. Less-than-ideal soil moisture and above-normal temperatures during the latter part of summer limited yield potential in these areas. Estimated yields are up from last year in the Southern Great Plains, Mississippi Delta, and Southeast. Improved weather and favorable harvesting conditions were the main reasons for the increase in yield. Yields were also up in the Great Lakes and upper Mississippi Valley, with record-high yields estimated in Michigan, Minnesota, North Dakota, and Wisconsin.

Corn planted area, at 88.2 million acres, is up 2 percent from 2009. This represents the second-highest acreage since 1946, behind only 2007 with 93.5 million acres. Area harvested for grain is estimated at 81.4 million acres, up slightly from the November forecast and up 2 percent from 2009. The 2010 corn objective yield data indicate the second-highest number of ears per acre for the combined ten objective yield states (Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin), behind only the record year of 2009. Record-high ear counts were recorded in Iowa, Ohio, and Wisconsin.

**Sorghum:** Grain production in 2010 is estimated at 345 million bushels, up 2 percent from the November 1 forecast but 10 percent below 2009. Planted area is estimated at 5.40 million acre—the lowest planted area on record—down 19 percent from last year. Area harvested for grain, at 4.81 million acres, is down 13 percent from 2009, and is the lowest harvested area since 1939. Average grain yield, at 71.8 bushels per acre, is down 0.7 bushel from the previous forecast but up 2.4 bushels from last year. Record-low planted acreages were established in Mississippi, Missouri, and Texas, while record-high grain yields were set in Arizona, New Mexico, and Texas. Kansas led the nation in area planted for all purposes, as well as area harvested for grain and grain production. Planted acreage decreased in nine of the 14 estimating states, with reductions of 13 and 30 percent, respectively, in Kansas and Texas—the two largest sorghum-producing states.

**Oats:** The 2010 production is estimated at 81.2 million bushels, a record-low production, down 13 percent from last year. Yield is estimated at 64.3 bushels per acre, down 3.2 bushels from the previous year. The oat planted area is a

record-low 3.14 million acres, down 8 percent from 2009. The largest decline occurred in North Dakota, where planted area decreased 70,000 acres from last year and is a record low. In total, record lows for planted acres were set in 12 states. Harvested area is estimated at a record low 1.26 million acres, 8 percent below last year. The largest decline occurred in North Dakota, where area harvested for grain decreased 60,000 acres from last year and is also a record low for that state. Record lows for harvested area occurred in ten states. In California, Missouri, New York, North Carolina, and Wisconsin, excessively wet weather hindered the crop, with the average yield in these states declining 10 bushels from last year. In Idaho, favorable growing conditions led to a 6-bushel increase in yield from last year and is a record-high yield for the state. Yield increases of 5 bushels per acre occurred in Michigan, Montana, and Texas.

**Barley:** Production is estimated at 180 million bushels, down 21 percent from 2009. Average yield per acre, at 73.1 bushels, is up 0.1 bushel from last year and is the highest yield on record since estimates began in 1866. Producers seeded 2.87 million acres in 2010, down 19 percent from last year. This is the lowest planted acreage on record. Harvested area, at 2.47 million acres, is at the lowest level since 1882 and down 21 percent from 2009. Compared with last year, barley seedings decreased in Idaho, Montana, and North Dakota—the three largest barley-producing states. Producers in North Dakota seeded 720,000 acres and harvested 670,000 acres, down 40 and 41 percent, respectively, from the previous year. Seeded area in North Dakota established a record low for the state, while harvested area is the lowest since 1936. In addition, Michigan, Minnesota, and South Dakota producers set new record lows for seeded acreage. A record low for harvested area was set in South Dakota and tied in Michigan. Meanwhile, record-high yields were set in Arizona, Montana, and Utah.

**All wheat:** Production totaled 2.21 billion bushels in 2010, down less than 1 percent from 2009. Grain area is 47.6 million acres, down 5 percent from last year. The U.S. yield is a record high at 46.4 bushels per acre, 1.9 bushels above 2009 and 1.5 bushels higher than the previous record set in 2008. The levels of production and changes from last year by type are: winter wheat, 1.49 billion bushels, down 3 percent; other spring wheat, 616 million bushels, up 5 percent; Durum wheat, 107 million bushels, down 2 percent.

**Winter wheat:** The 2010 winter wheat production totaled 1.49 billion bushels, 3 percent below last year. The U.S. yield is 46.8 bushels per acre, up 2.6 bushels from the previous year and the fourth highest on record. Area harvested for grain is estimated at 31.7 million acres, down 8 percent from the previous year.



Planted acres were down from 2009 in many of the major Hard Red Winter growing states. While harvested acres were down from last year in most of the major growing states, ideal weather conditions in Oklahoma and Texas resulted in an increase of 1.70 million harvested acres from 2009 in those two states. Record-high yields occurred in Colorado, Montana, Nevada, and North Dakota. Overall, Hard Red Winter production totaled 1.02 billion bushels, up 11 percent from 2009.

Planted and harvested acres decreased from a year ago across all of the Soft Red Winter growing area due to the late row-crop harvest and wet weather during seeding. Illinois, Indiana, Missouri, and Ohio set record lows for planted acres. Production was down from last year in all of the Soft Red Winter growing states. Production was down 50 percent or more from 2009 in Arkansas, Georgia, Illinois, Indiana, Missouri, and North Carolina. Overall, Soft Red Winter production totaled 238 million bushels, down 41 percent from last year.

White winter production totaled 229 million bushels, up 14 percent from last year. Planted and harvested acreage in the Pacific Northwest States (Idaho, Oregon, and Washington) was above last year's levels. Yields were also up from last year in all three states.

Other spring wheat: Production for 2010 is estimated at 616 million bushels, up 5 percent from 2009 and the third-highest total on record. Harvested area is 13.4 million acres, up 3 percent from last year. The U.S. yield is a record-high 46.1 bushels per acre, 1.0 bushel higher than last year, which was the previous record. Yields are above last year's level in all states except North Dakota and South Dakota. Average yield in North Dakota, the largest spring wheat-producing state, was 44.0 bushels per acre, 2.0 bushels lower than 2009 but still the second highest on record. Record-high yields were set in Colorado, Montana, and Oregon.

Durum wheat: Production for 2010 is estimated at 107 million bushels, down 2 percent from 2009. Grain area harvested is 2.53 million acres, up 4 percent from the previous year. The U.S. yield is 42.4 bushels per acre, 2.5 bushels lower than the record yield set last year but still the second-highest yield on record. Record yields occurred in Arizona, California, Montana, and South Dakota. North Dakota's yield of 37.5 bushels per acre is 1.5 bushels lower than last year but still the third-highest yield on record. Harvest progress in Montana and North Dakota was behind normal.

**Rice:** Production in 2010 is estimated at a record-high 243 million cwt, up 1 percent from the previous forecast and up 11 percent from 2009. Planted area is estimated at 3.64 million acres, up 16 percent from 2009. Area harvested, at 3.62 million acres, is down slightly from the previous forecast but up 17 percent from the previous crop year. The average yield for all U.S. rice is estimated at 6,725 pounds

per acre, up 56 pounds from the previous forecast but 360 pounds below the 2009 yield. Planted area is up from 2009 in all rice-producing States except California. Growers in Arkansas, the largest rice-producing state, planted a record 1.79 million acres in 2010, up 21 percent from the previous year. Area planted in Missouri, at 253,000 acres, is also a record high. In California, the second-largest rice-producing state, planted area is down 1 percent from last year and totaled 558,000 acres.

**All hay:** Production of dry hay for 2010 is estimated at 146 million tons, down 4 percent from the October 1 forecast and down 1 percent from the 2009 total. Area harvested is at 59.9 million acres, up slightly from both the October 1 forecast and from last year. The average yield, at 2.43 tons per acre, is down 0.12 ton from October and down 0.04 ton from the previous year.

**Peanuts:** Production is estimated at 4.16 billion pounds, up 5 percent from the previous forecast and up 13 percent from 2009. Planted area is estimated at 1.29 million acres, up 15 percent from 2009. Area harvested is estimated at 1.26 million acres, up 16 percent from the previous crop year. Average yield is estimated at 3,311 pounds per acre, up 169 pounds from the previous forecast but down 110 pounds from 2009.

Production in the Southeast States (Alabama, Florida, Georgia, Mississippi, and South Carolina) is estimated at 3.20 billion pounds, up 4 percent from the previous forecast and up 13 percent from 2009. Planted area is estimated at 986,000 acres, up 16 percent from 2009. Harvested area is estimated at 957,000 acres, up 16 percent from the previous crop year. Average yield in the region is estimated at 3,340 pounds per acre, up 140 pounds from the previous forecast but 88 pounds lower than the 2009 average yield. Yields are up from the previous crop year in Florida, Mississippi, and South Carolina, but yield is down from last year in Alabama. In Georgia, the leading peanut-producing state, the yield of 3,560 pounds per acre ties the record-high yield achieved in 2009. The excellent yields in Georgia can be attributed to intensive irrigation and new drought-resistant varieties.

Virginia-North Carolina production is estimated at 273 million pounds, up 5 percent from the previous forecast but down 5 percent from 2009. Planted area is estimated at 105,000 acres, up 33 percent from the previous crop year. Area for harvest, which is estimated at 104,000 acres, is up 33 percent from 2009. The average yield is estimated at 2,627 pounds per acre, up 163 pounds from the previous forecast but down 1,073 pounds from 2009. Hot, dry weather conditions during the growing season stressed the crop in the region and resulted in poor yields.

Southwest peanut production (New Mexico, Oklahoma, and Texas) is estimated at 686 million pounds, up 12 percent from the previous forecast and up 20 percent from 2009.

Planted area is estimated at 197,000 acres, up 6 percent from the previous crop year. Area for harvest is estimated at 194,000 acres, up 11 percent from 2009. The average yield for the region is estimated at 3,536 pounds per acre, up 310 pounds from the previous forecast and up 271 pounds from the previous crop year. Yield is down from last season in Oklahoma, up from last year in Texas, and unchanged from last year in New Mexico.

**Sunflower:** The 2010 sunflower production totaled 2.74 billion pounds, down 10 percent from 2009. The U.S. average yield per acre decreased 94 pounds from last year's record high to 1,460 pounds. Planted area, at 1.95 million acres, is 4 percent below last year. Area harvested decreased 4 percent from last year to 1.87 million acres. Production in North Dakota, the leading sunflower-producing state, is estimated at 1.25 billion pounds, down 5 percent from 2009. The yield in North Dakota, at 1,456 pounds per acre, is down 62 pounds from 2009. Compared with last year, planted area in North Dakota was unchanged and harvested area decreased by less than 1 percent. Yields, compared with last year, are down in five of the nine major sunflower-producing states, but are up in Minnesota, Nebraska, Oklahoma, and Texas. The average yield in Nebraska is the second highest on record.

**Soybeans:** Production in 2010 totaled 3.33 billion bushels, down 1 percent from the November 1 forecast and down 1 percent from 2009. U.S. production is the second largest on record. The average yield per acre is estimated at 43.5 bushels, 0.4 bushel below the November forecast and 0.5 bushel below last year's record-high yield. Planted area for the nation, at 77.4 million acres, is down fractionally from last year's record high. Soybean growers harvested a record 76.6 million acres, up slightly from last year but down less than 1 percent from November. Yields are down or unchanged from last year in all states except Illinois, Louisiana, Mississippi, Texas, and the northern tier states. Hot, dry weather during the blooming stage and throughout pod development negatively impacted soybean yields in many areas. Compared with last year, the largest yield decrease occurred in New Jersey, down 18 bushels. Decreases of 10 bushels or more occurred in Alabama, Delaware, Georgia, Kansas, Kentucky, Tennessee, Virginia, and West Virginia. Meanwhile, the biggest increase from last year occurred in Wisconsin, where yields are up 10.5 bushels from 2009. Yield increases of 5 bushels or more from last year also occurred in Illinois, Minnesota, New York, and Texas. New record-high yields were set in Illinois, New York, and Wisconsin. The 2010 soybean objective yield survey data indicate that final average pod counts were higher than last year in seven of the eleven objective yield states. Compared with last year, pod counts were up more than 15 percent in Indiana and Ohio and up more than 20 percent in Illinois and Minnesota. The only states that showed a decrease in pod counts from last year

were Arkansas, Kansas, Missouri, and South Dakota.

**Cotton:** Upland cotton production is estimated at 17.8 million 480-pound bales, up slightly from the December 1 forecast and up 51 percent from last year. The U.S. yield for Upland cotton is estimated at 814 pounds per acre, up 7 pounds from last month and up 48 pounds from 2009. Harvested area, at 10.5 million acres, is down 1 percent from last month but up 42 percent from last year. Upland planted area, estimated at 10.8 million acres, is up 20 percent from last year. Objective yield data in Georgia show bolls per acre to be the lowest in the last 7 years and boll weight to be at its lowest level since 1998. North Carolina boll weights are at their lowest level since 2005. In Louisiana, objective yield data show boll weight to be the lightest in over 10 years. Objective yield data in Arkansas show the bolls per acre to be the largest on record in Arkansas and the largest in the last 5 years in Mississippi. In Texas, objective yield data show boll weight to be the lowest since 2005.

American Pima producers planted 204,200 acres, up 44 percent from last year. Harvested area, at 201,700 acres, is up 46 percent from last year. Production is estimated at 497,500 bales (480-pound), down slightly from the August 1 forecast but up 24 percent from last year. The U.S. yield is estimated at 1,184 pounds per acre, up 30 pounds from the August 1 forecast but down 205 pounds from last year.

**Sugarbeets:** Production for 2010 is estimated at 31.9 million tons, up fractionally from the November 1 forecast and 7 percent above last year. Growers in the ten major sugarbeet-producing states planted 1.17 million acres, a decrease of 1 percent from 2009. The harvested area totaled 1.16 million acres, up 1 percent from last year. Estimated yield, at 27.6 tons per acre, is 0.1 ton below the November forecast but 1.7 tons above last year and establishes a record high. Record-high yields were set in Colorado, Minnesota, North Dakota, and Wyoming. Production increased from last year in three of the four largest sugarbeet-producing states.

**Sugarcane:** Production of sugarcane for sugar and seed in 2010 is estimated at 29.5 million tons, of which 27.9 million tons was utilized for sugar and 1.69 million tons for seed. Total production for sugar and seed is up less than 1 percent from the December 1 forecast but down 3 percent from 2009. Sugarcane producers harvested 881,200 acres for sugar and seed in 2010, up 1 percent from both the December forecast and last year. Yield for sugar and seed is estimated at 33.5 tons per acre, unchanged from the December forecast but down 1.3 tons from 2009. In Louisiana, expectations for a bumper crop were diminished when unusually dry weather conditions ruled the summer months, resulting in decreased yields and overall production. Elsewhere, unseasonably cold weather in Florida in late December damaged much of the state's remaining crop, prompting a rapid harvest pace in hopes of preventing as much loss as possible.

# National Agricultural Summary

January 17 – 23, 2011

Weekly National Agricultural Summary provided by USDA/NASS

Colder-than-normal weather blanketed much of the eastern half of the nation, while parts of the West experienced weekly temperatures averaging more than 15 degrees F above normal. Warmer, drier weather in the Southwest allowed producers to resume many fieldwork activities. Elsewhere, fresh snow in portions of the Midwest helped to protect winter wheat fields from temperatures that fell below 0 degrees F late in the week.

In Florida, more cold weather resulted in some frost and hard freezes from the Panhandle to the southern Peninsula. Precipitation associated with late-week showers totaled an inch or more. Producers in Putnam County continued to plant potatoes, while sugarcane growers in the Lake Okeechobee area were busy harvesting their crop. Continued cold weather slowed the growth of many vegetable crops and limited the number of crops available for market. Despite the cool weather, producers in Lee County began planting watermelons.

Wet weather continued across eastern Texas, with portions of the state receiving over 3 inches of rain during the week. Elsewhere, many dryland winter wheat fields in areas of the Cross Timbers and Plains continued to suffer from drought stress. Conversely, emergence and crop development progressed well in irrigated

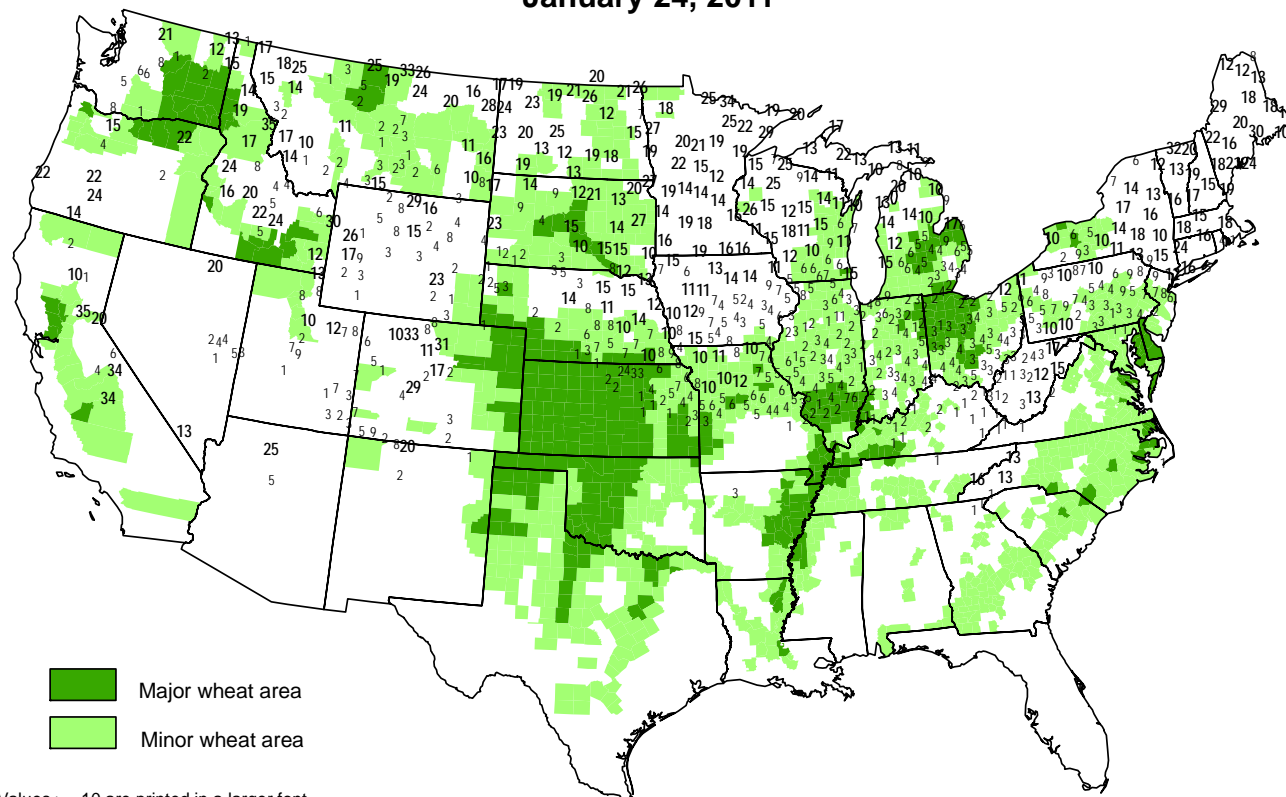
small grain fields throughout the southern regions of the state. Cotton producers continued cultivating their fields in preparation for spring planting. In South Texas, potatoes were planted, while spinach and cabbage were harvested.

Temperatures in Arizona were above average during the week, averaging as much as 10 degrees F above normal in some locations. Alfalfa producers were still harvesting hay in limited areas, but most fields were being grazed by sheep. Vegetable growers in central and western Arizona shipped a variety of crops during the week.

Weather conditions across California were mixed during the week, but warmer weather and little to no rainfall allowed fieldwork to slowly resume. Cotton producers were busy preparing beds for planting, while alfalfa fields were sprayed. Small grain crops continued to develop well under ideal growing conditions. Citrus harvesting continued in both the San Joaquin Valley and desert region; however, inconsistent sizing and quality slowed picking. Blueberry plants arrived from other states for transplanting, while new vineyards were planted in Fresno County. Vegetable producers resumed planting activities in Tulare County.

## Snow Depth (inches)

January 24, 2011



Values  $\geq 10$  are printed in a larger font.

Snow depth reports obtained from the NWS Cooperative Observer Network.

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

## International Weather and Crop Summary

January 16-22, 2011

*International Weather and Crop Highlights and Summaries provided by USDA/WAOB*

### HIGHLIGHTS

**EUROPE:** Mild weather kept most of the region's dormant winter crops devoid of protective snow cover.

**WESTERN FSU:** Additional snowfall maintained sufficient insulation for dormant winter crops.

**MIDDLE EAST:** Wet weather further eased drought in Iran, while dry conditions settled over the rest of the region.

**NORTHWEST AFRICA:** Showers maintained favorable soil moisture for winter grain establishment in Algeria, while dry weather reduced soil moisture for vegetative winter grains in Morocco.

**SOUTH ASIA:** Cooler-than-normal weather slowed winter crop development.

**EAST ASIA:** Frigid weather remained entrenched across winter crop areas.

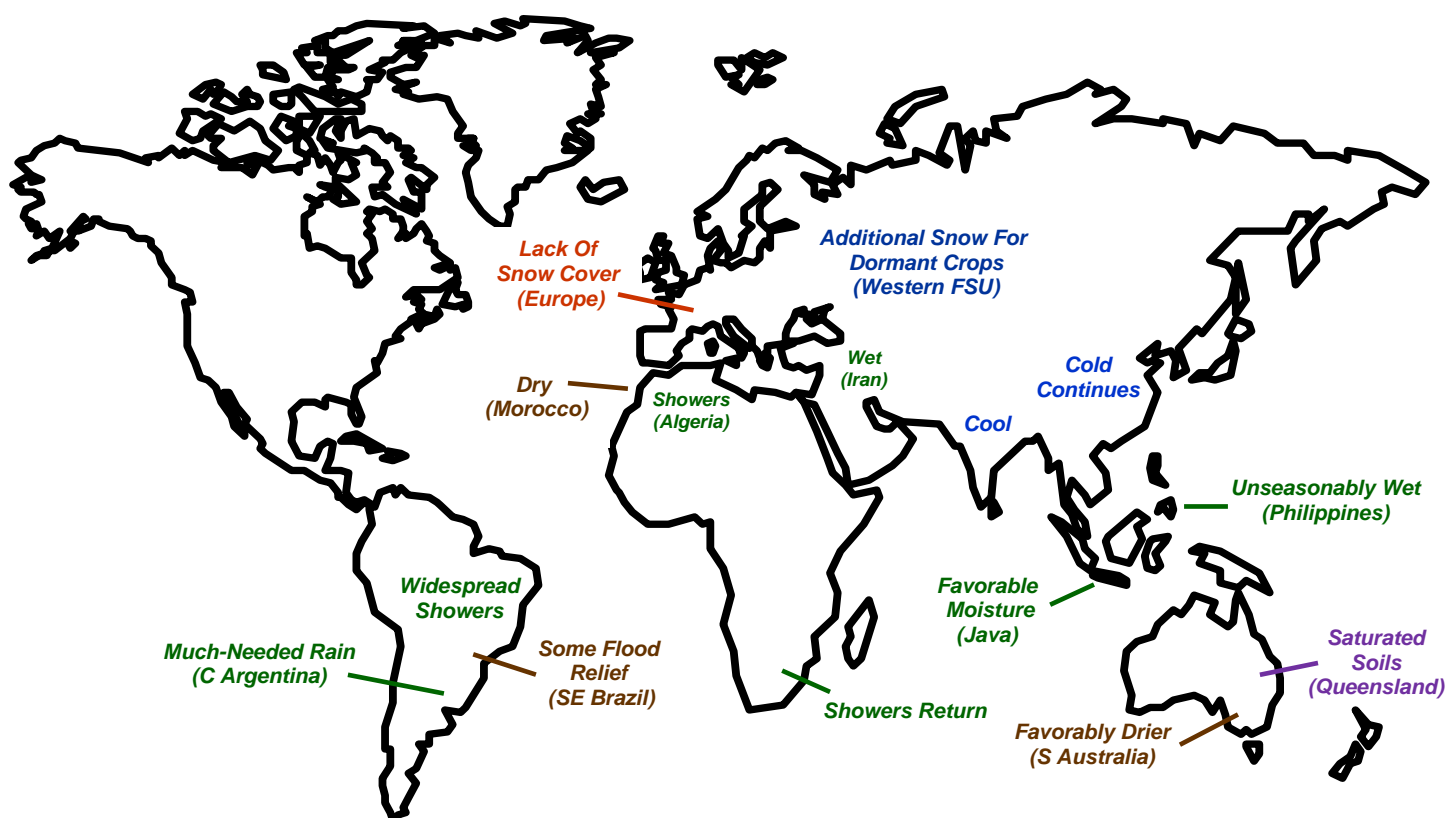
**SOUTHEAST ASIA:** Wet weather continued in the Philippines, while moisture remained favorable for reproductive rice in Indonesia.

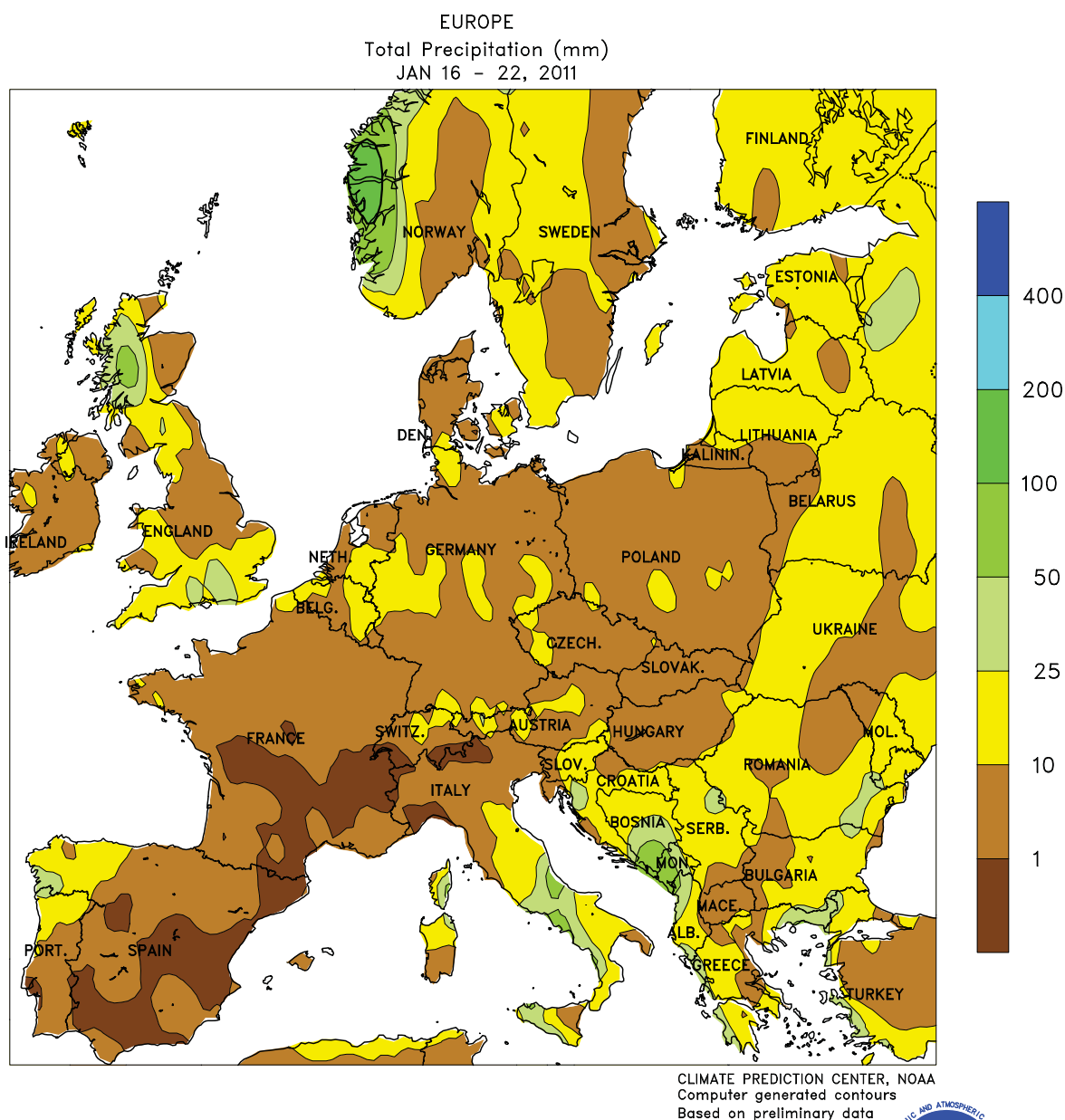
**AUSTRALIA:** Rain kept soils saturated in Queensland, while dry weather in southern Australia allowed flood waters to recede and spurred some fieldwork.

**SOUTH AFRICA:** Locally heavy showers returned to the corn belt, boosting moisture levels for reproductive summer crops.

**ARGENTINA:** Rain brought needed relief from heat and dryness to summer grains and oilseeds in central Argentina.

**BRAZIL:** Showers maintained favorable moisture levels for soybeans and other crops throughout central and southern Brazil, although favorably drier conditions prevailed in flooded areas near Rio de Janeiro.



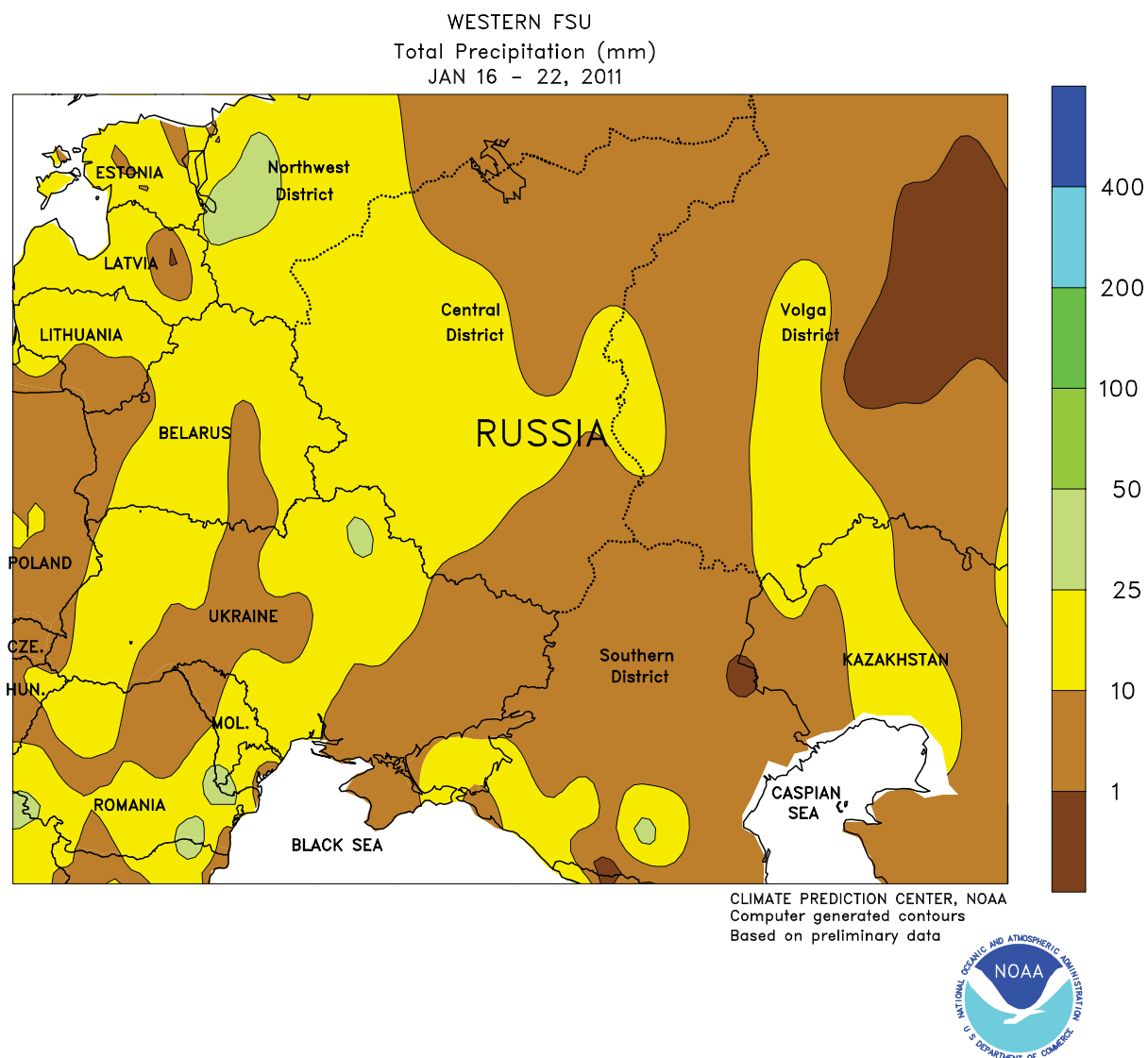


### EUROPE

Mild conditions prevailed over much of the continent, although colder, snowy weather returned at week's end. Precipitation was generally light (less than 10 mm) over most of Europe, although somewhat higher totals (10-25 mm) were reported from southern England into northwestern Germany. With temperatures averaging 1 to 3 degrees C above normal, much of the precipitation fell as rain, but colder weather caused snow to fall by week's end. However, dormant winter grains from France into northwestern Poland remained devoid of snow cover and are consequently vulnerable to potential incursions of bitter

cold. Meanwhile, a slow-moving Mediterranean storm brought a mixture of rain and snow (10-25 mm liquid equivalent) to southeastern Europe, boosting moisture reserves for dormant (Balkans) to vegetative (southern Italy) winter crops. Snow depths exceeded 5 cm at the end of the week across Serbia and northwestern Romania, while the rest of the Danube River Valley was mostly free of snow cover. Farther west, sunny skies promoted winter wheat development on the Iberian Peninsula, where soil moisture and irrigation reserves remained abundant due to consistent autumn and winter precipitation.

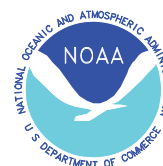
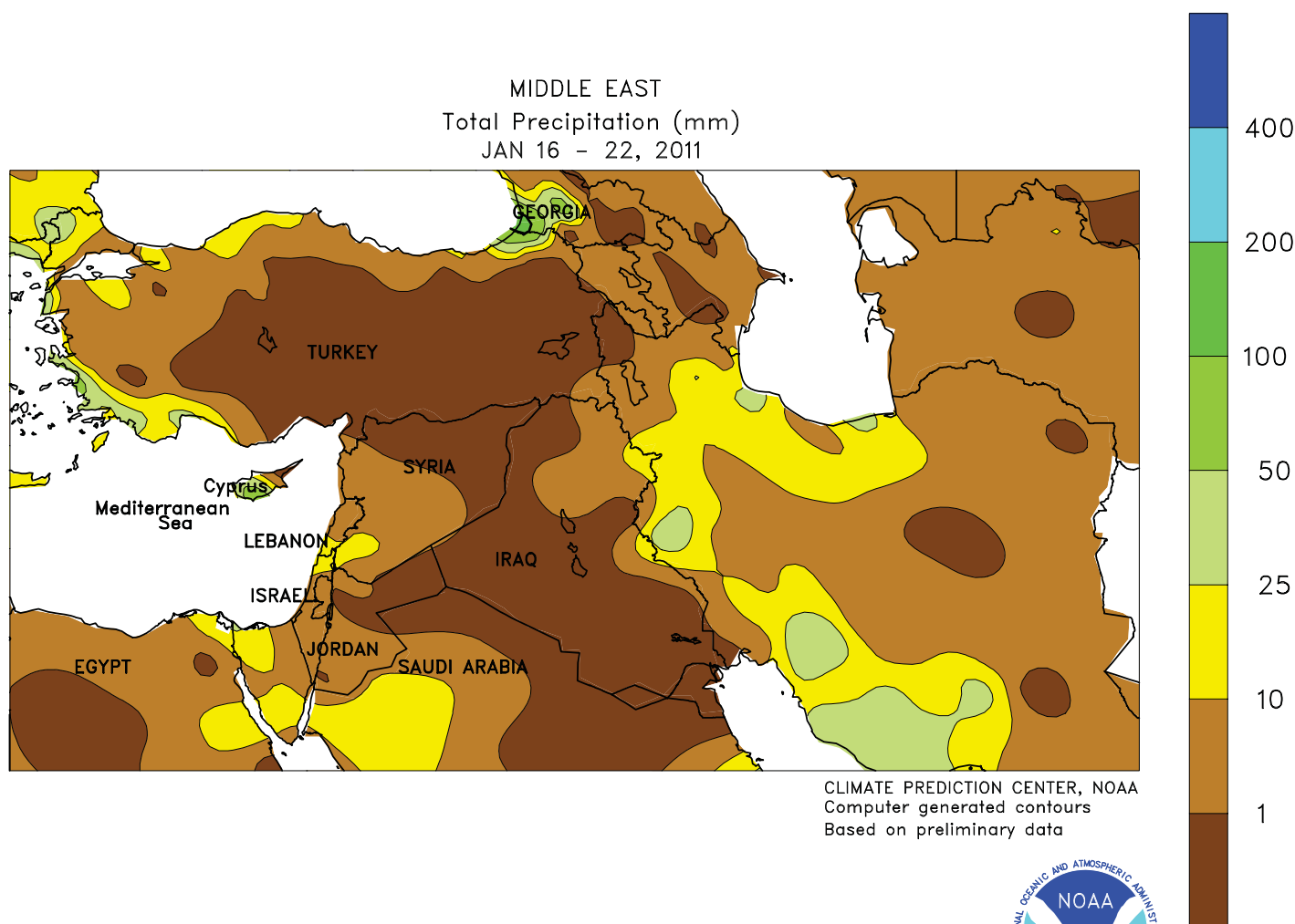




### WESTERN FSU

Snow blanketed much of the region, providing additional insulation against bitter cold. A pair of storms tracked from the eastern Mediterranean into southern and central Russia, producing widespread snow (2-25 mm liquid equivalent) over most winter crop areas. Snow was heaviest in northern Ukraine and southern portions of the Southern District, where depths at week's end exceeded 25 and 10 cm, respectively. As of January 23, an adequate snowpack (10 cm or more) covered most primary growing areas; however, snow was shallow (less

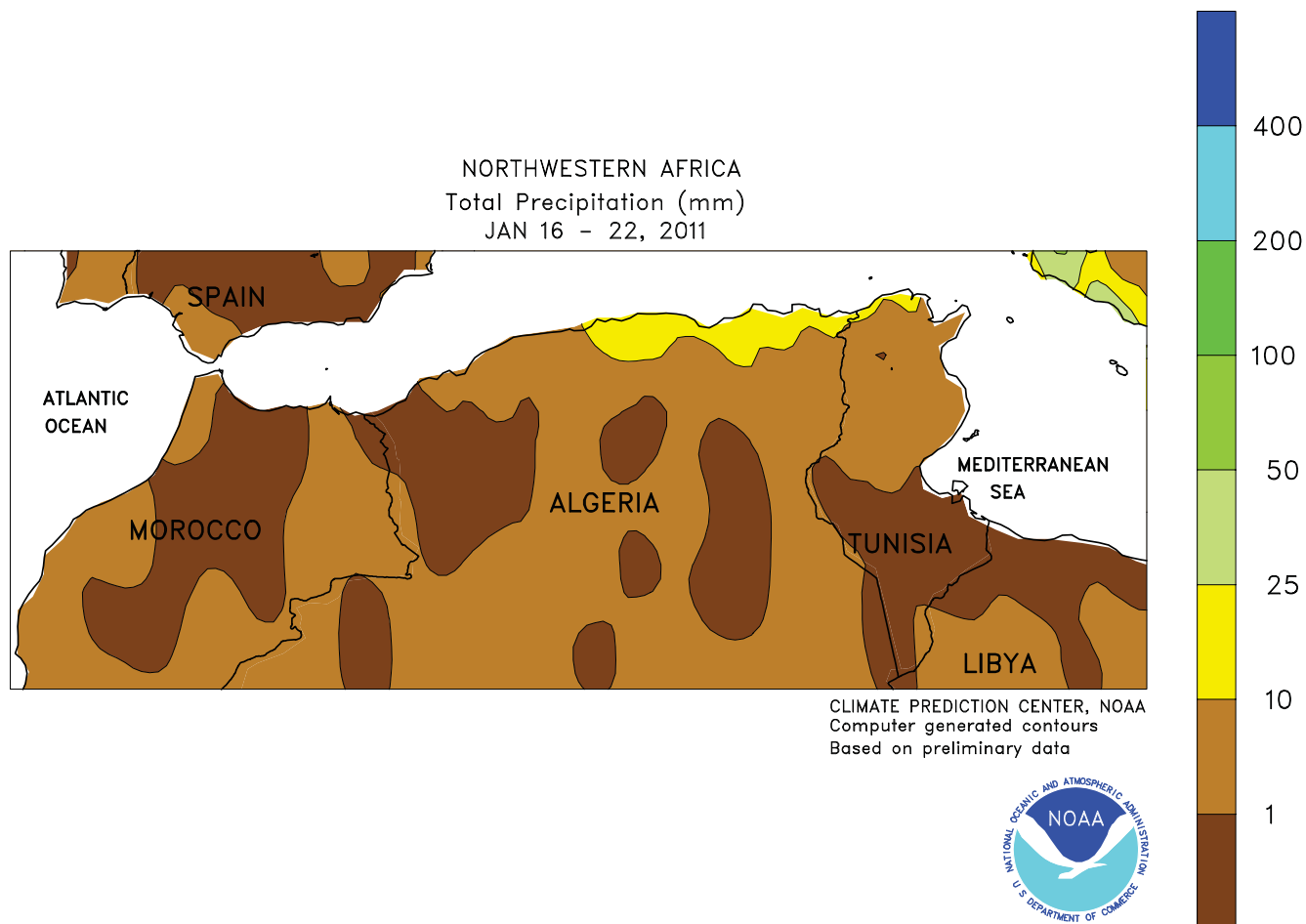
than 5 cm) and patchy in northwestern portions of the Southern District. Bitter cold (-20 degrees C or lower) was reported from eastern Ukraine and the Central District into the Volga District. Consequently, there may have been pockets of burnback or winterkill in northwestern portions of the Southern District. In contrast, temperatures averaged up to 6 degrees C above normal in Belarus and western Ukraine, although an adequate snowpack remained despite the milder conditions.



### MIDDLE EAST

Dry, generally mild weather prevailed across the region, although beneficial precipitation fell in Iran. From Turkey into western Iraq, sunny skies and near- to above-normal temperatures (1-4 degrees C above normal) promoted winter crop development in coastal areas but kept traditionally colder climate zones devoid of protective snow cover. However,

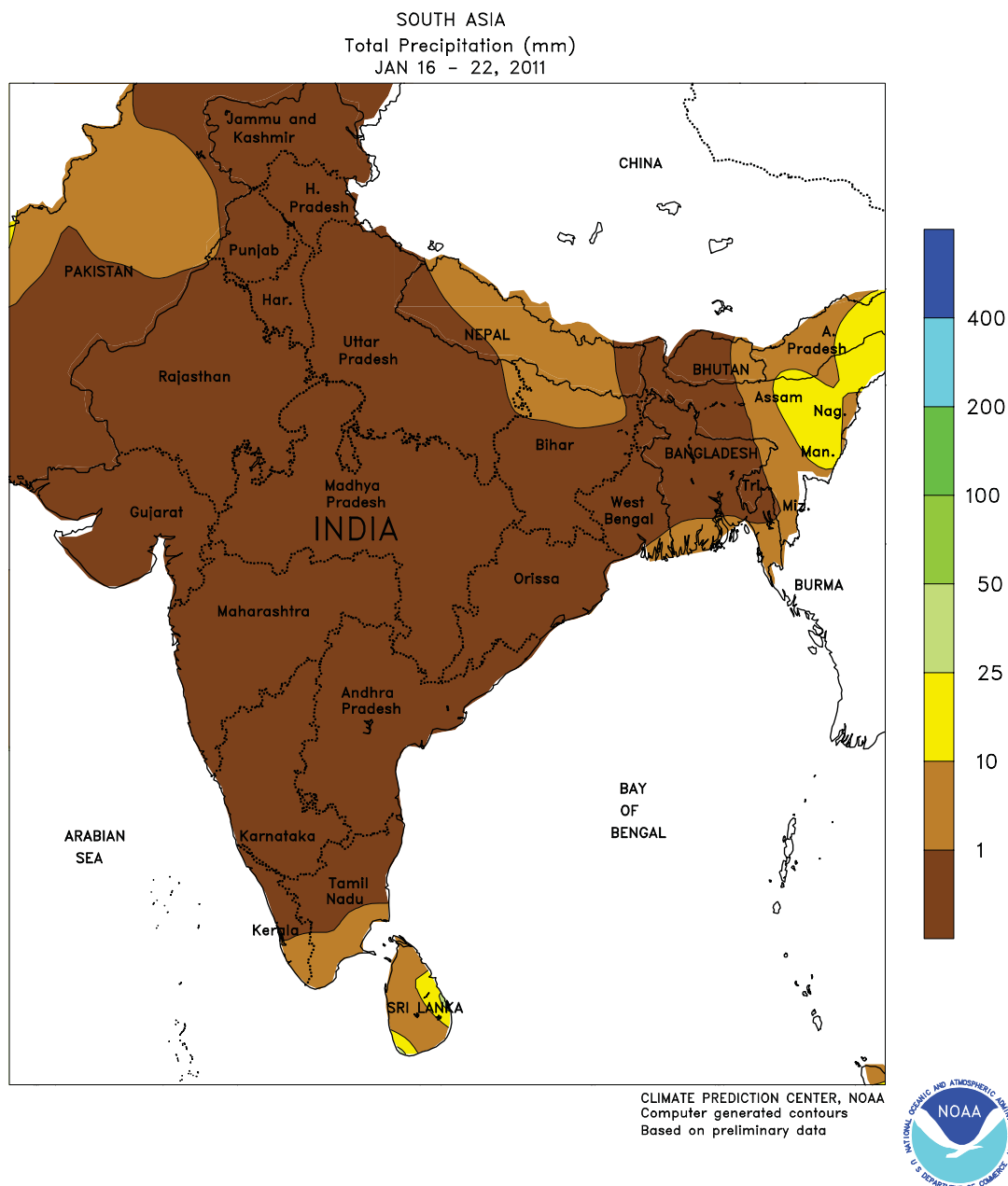
drier-than-normal conditions since early autumn in the mountains of eastern Turkey (Lake Van and nearby environs) have depleted snowpacks and reduced spring runoff prospects. In contrast, rain and snow (4-45 mm liquid equivalent) in Iran provided additional, much-needed drought relief and boosted the protective snow cover for dormant winter grains.



#### NORTHWESTERN AFRICA

Dry conditions in western portions of the region contrasted with showers in eastern growing areas. Sunny skies and above-normal temperatures (2-3 degrees C above normal) promoted winter grain development in Morocco. However, soil moisture levels continued to decline in southern Morocco, where little if any rain has fallen since

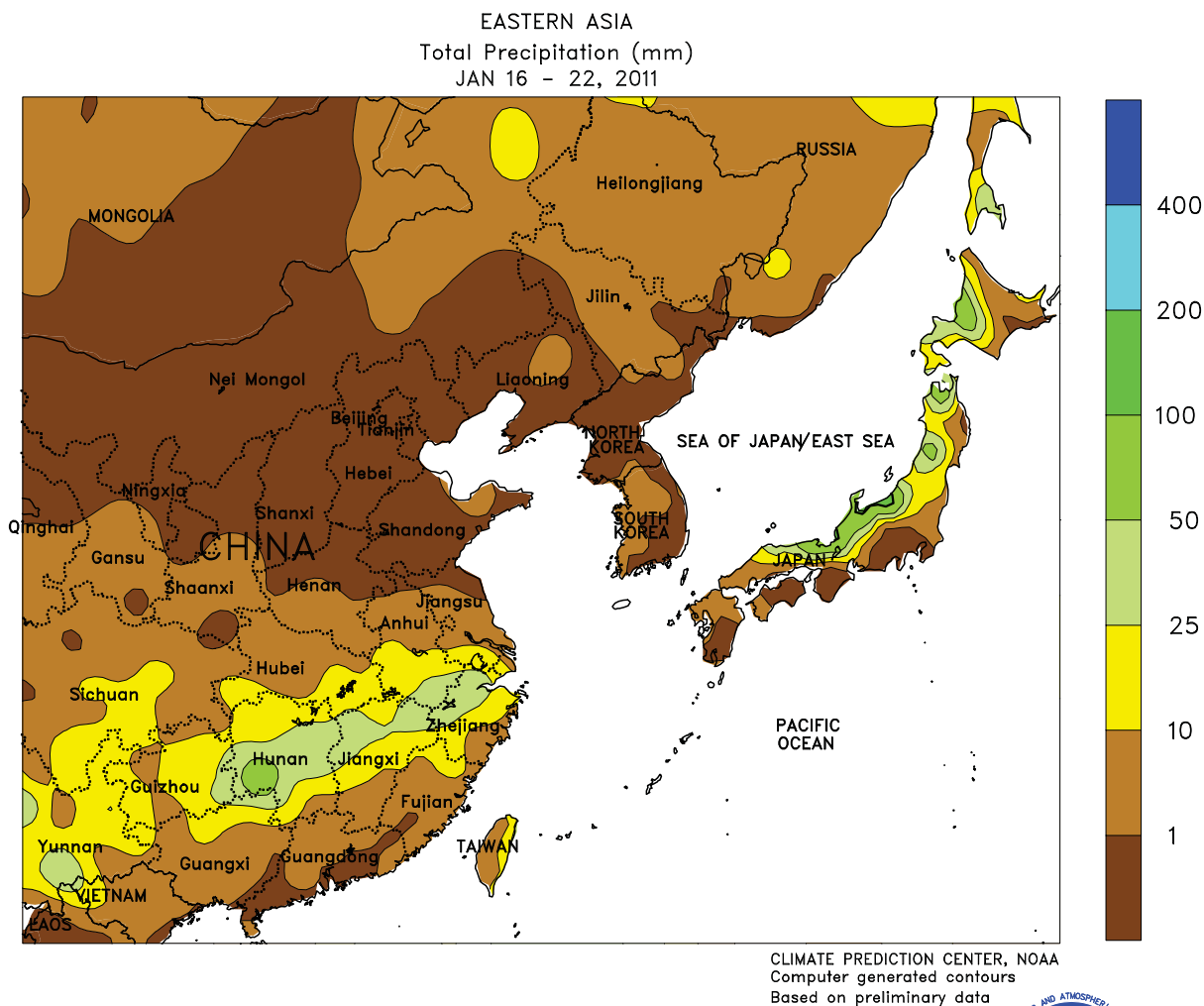
December 20. Scattered showers (2-20 mm) maintained adequate soil moisture for vegetative winter crops in Algeria and northern Tunisia. Freezes (-4 to -1 degrees C) were noted in central Algeria, although duration or intensity were insufficient to threaten winter crops in primary agricultural districts.



### SOUTH ASIA

Cooler-than-normal weather remained firmly established across India and northern Pakistan. Temperatures were above freezing for vegetative winter crops, but the cool weather

maintained a slow pace of development. Wheat and rapeseed were roughly 2 to 4 weeks behind in development as of January 23.

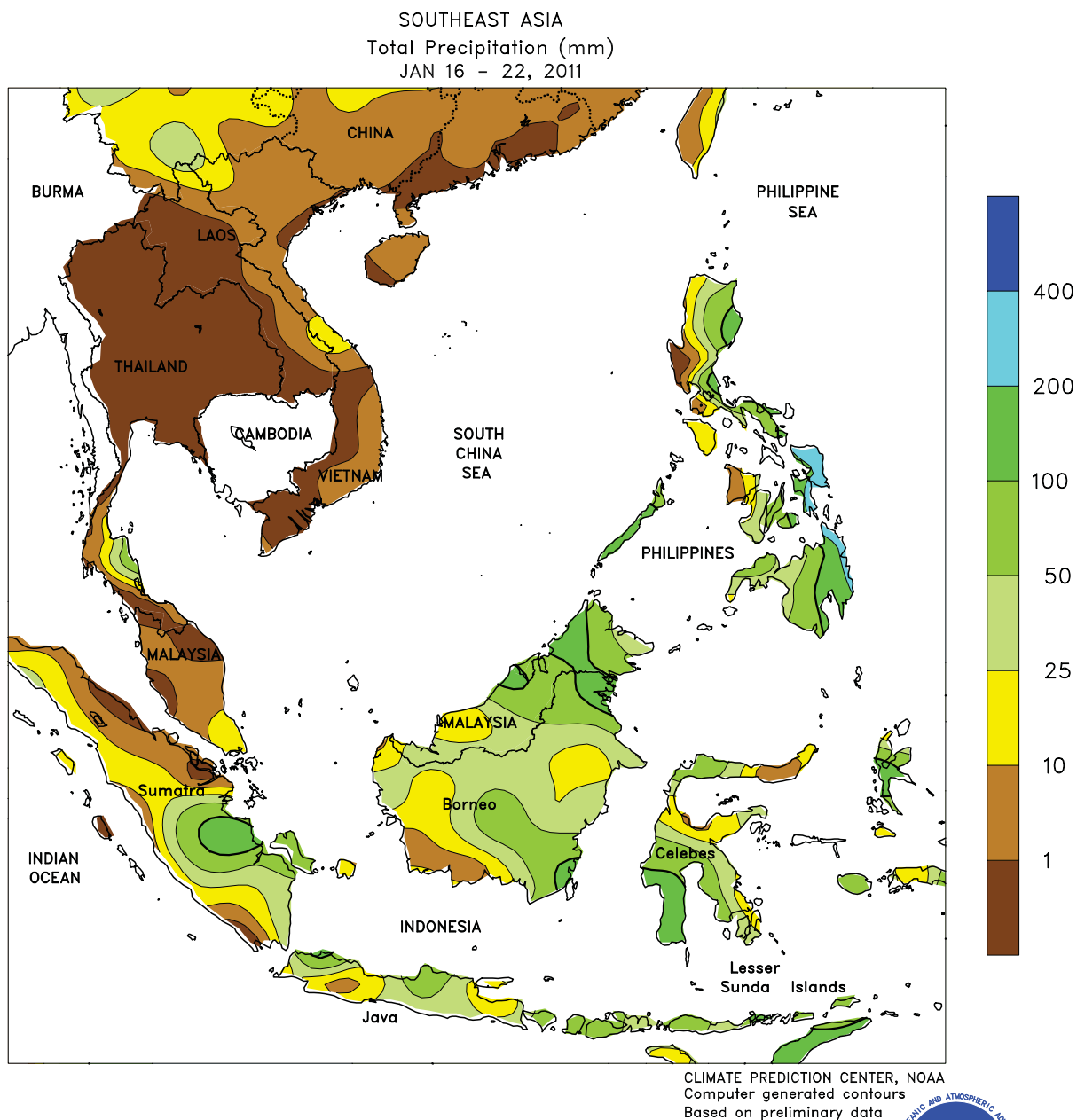


### EASTERN ASIA

Temperatures remained up to 5 degrees C below normal across much of China. Freezing temperatures lingered in southern China, maintaining concerns over reduced sugarcane production. Meanwhile, a mixture of snow and ice prevailed in a narrow band just south of the Yangtze River. Over 25 mm

of liquid equivalent provided good moisture reserves for the upcoming early season rice transplanting next month. Despite minimum temperatures dipping to -15 degrees C in some of the coldest locations, dormant winter wheat and rapeseed continued to overwinter well.

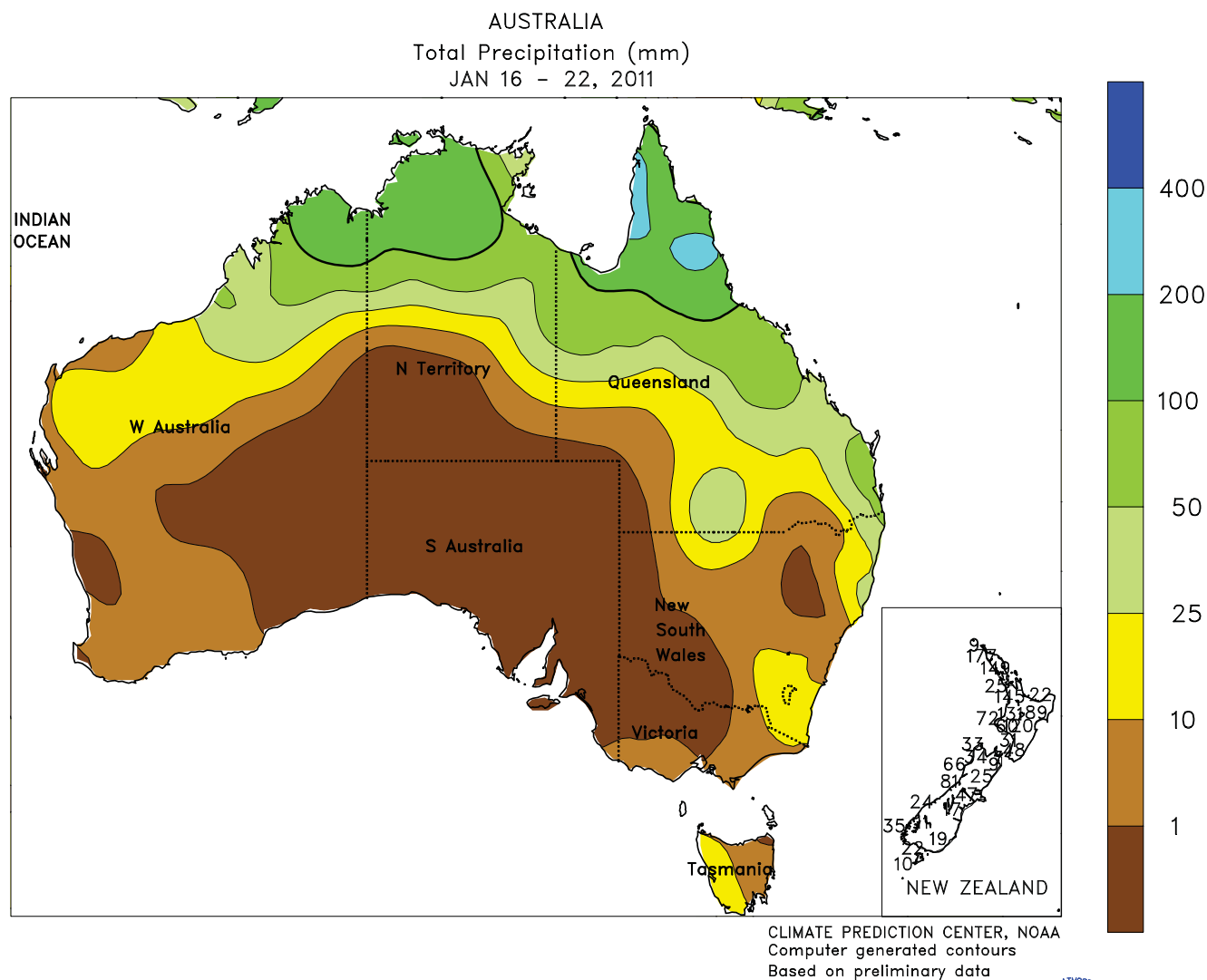




### SOUTHEAST ASIA

Wetter-than-normal weather continued across the eastern Philippines, maintaining excessive soil moisture and slowing primarily corn harvesting. Cool, dry weather favored spring rice harvesting in southern Vietnam and spring rice transplanting in the north. More rain is needed to bolster

moisture supplies for rice in the Red River Delta of northern Vietnam. Reproductive rice in Indonesia continued to benefit from consistent rainfall of 10 to 25 mm. Meanwhile, drier weather aided oil palm harvesting in Indonesia and Malaysia, with only localized delays from heavy rain (over 100 mm).

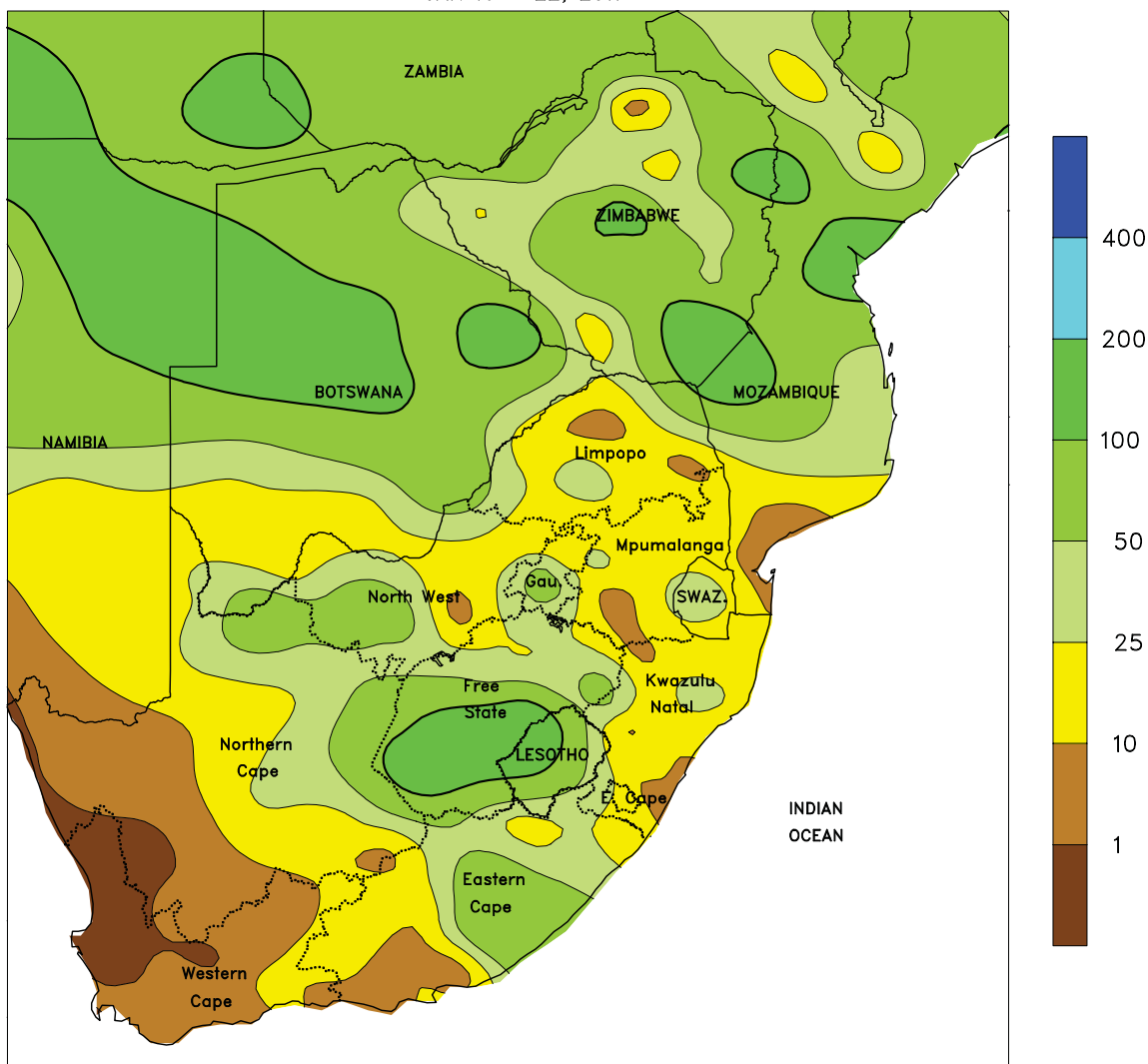


### AUSTRALIA

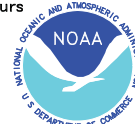
Widespread showers (10-50 mm) kept soils saturated in central and southern Queensland, limiting fieldwork but maintaining abundant to locally excessive moisture supplies for reproductive summer crops. More widely scattered showers (3-15 mm) helped cotton and sorghum development in New South Wales, while periods of dry weather aided late winter wheat harvesting. Farther south, dry weather overspread

Victoria, allowing flood waters to recede in the wake of last week's torrential rains. Fieldwork most likely remained limited because of the recent wet weather. In contrast, the second consecutive week of dry weather covered a large portion of the South Australia wheat belt, favoring winter grain harvesting. Temperatures in southern and eastern Australia were generally seasonable.

SOUTH AFRICA  
Total Precipitation (mm)  
JAN 16 - 22, 2011



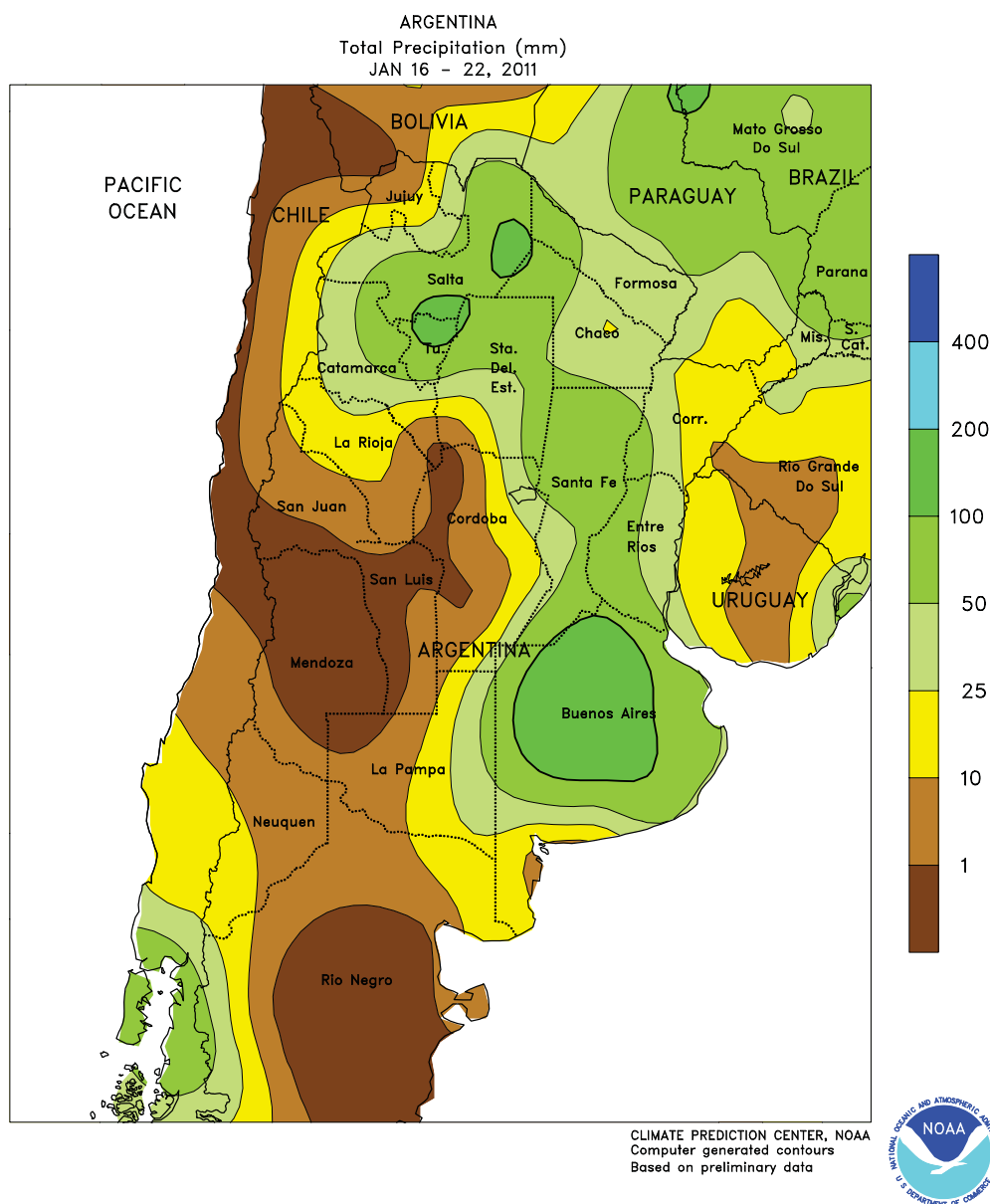
CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



### SOUTH AFRICA

Locally heavy showers returned to the corn belt, after a brief period of sunny, yet mild weather. The heaviest rain (25-50 mm or more) fell in Free State, Gauteng, and western farming areas of North West; most other areas received 5 to 25 mm. Temperatures were generally seasonable, averaging within 1 degree C of normal (daytime highs reaching the upper 20s and lower 30s degrees C) in most areas. Elsewhere, unseasonable wetness (rainfall totaling 25-50 mm or more) continued in eastern sections of Northern and Eastern Cape Provinces,

increasing irrigation reserves and keeping temperatures at seasonable levels (highs reaching the middle 30s degrees C) but likely causing some flooding. In contrast, showers were generally scattered and light (5-25 mm) in the main sugarcane areas of KwaZulu-Natal and in outlying farming areas in Limpopo. In Western Cape, seasonable warmth and dryness promoted development of irrigated tree and vine crops, with daytime highs briefly reaching the upper 30s degrees C at midweek.

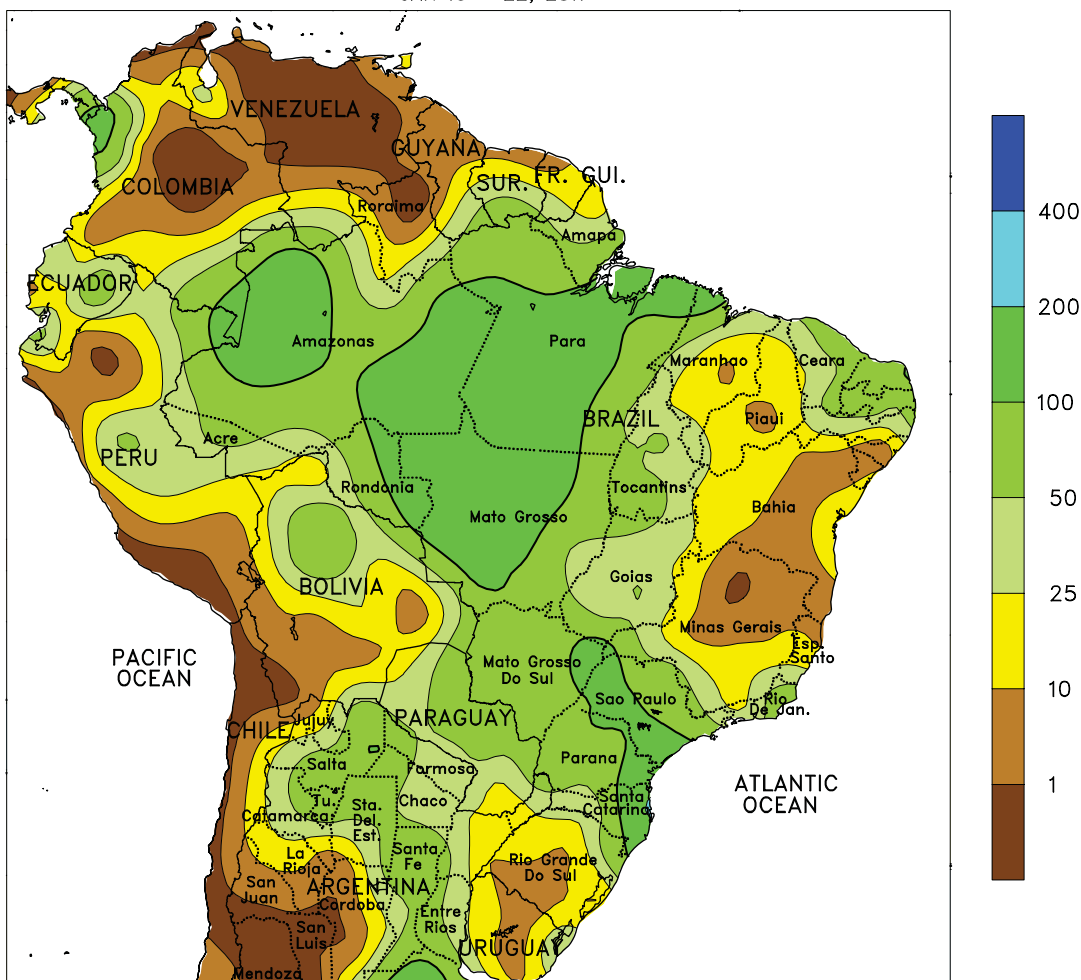


### ARGENTINA

Widespread, locally heavy rain brought much-needed relief to summer grains and oilseeds in drought-afflicted croplands of central Argentina. Rainfall exceeded 50 mm over most of Buenos Aires and nearby locations in Santa Fe and Entre Rios, providing significant moisture for vegetative to filling crops. More moderate amounts of rainfall (10-25 mm) were recorded in La Pampa and southernmost Buenos Aires. Weekly temperatures averaged near to slightly below normal in the aforementioned areas, though daytime highs climbed into the lower 30s degrees C toward the end of the week. The rain and seasonable warmth were beneficial for all summer crops; however, some of the damage reportedly done to silking corn during the recent spell of heat and dryness was irreversible, and losses in yield potential are likely. Meanwhile, mostly dry

weather dominated Cordoba and bordering locations of Santa Fe, which recorded daytime temperatures in the 30s for much of the week. Some of these areas (most notably Marcus Juarez Delegation in east-central Cordoba, a high-yielding producer of corn and soybeans) have been abnormally dry since December, and need rain immediately to prevent further declines in yield potential. In northern Argentina, several outbreaks of heavy rain (25-50 mm or more, locally exceeding 100 mm) increased moisture for pastures and summer row crops, including cotton, while keeping temperatures at generally seasonable levels (highs occasionally reaching the middle and upper 30s degrees C). According to Argentina's Ministry of Agriculture, planting of corn and soybeans is virtually complete, as is the winter wheat harvest.

BRAZIL  
Total Precipitation (mm)  
JAN 16 - 22, 2011



CLIMATE PREDICTION CENTER, NOAA  
Computer generated contours  
Based on preliminary data



### BRAZIL

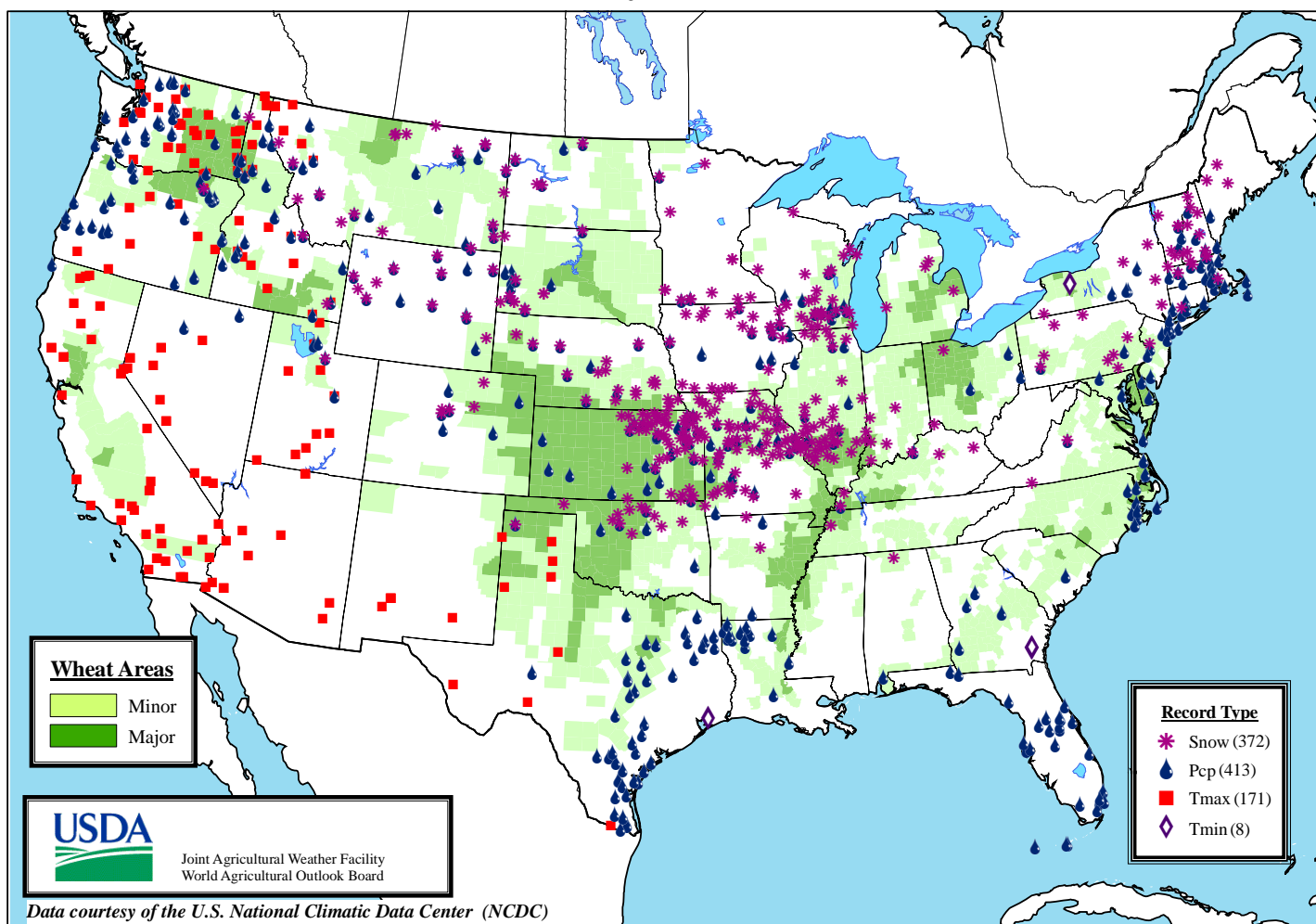
Moderate to heavy rain continued throughout major production areas of central and southern Brazil. The heaviest rainfall (amounts exceeding 100 mm) was recorded over a broad area of central and northern Mato Grosso, although similar amounts were reported locally in the vicinity of western and southern Sao Paulo. Consequently, some flooding and disruptions in transportation were likely in coastal locations of Parana and Santa Catarina. Seasonal fieldwork, including early harvesting of soybeans, may also have been affected. In contrast,

favorably drier weather (rainfall totaling less than 50 mm) was reported in previously flooded areas centered over southern Minas, helping floodwaters to recede and aiding recovery efforts. Most remaining farmlands of central and southern Brazil received 25 to 50 mm or more of rain, maintaining generally favorable levels of moisture for soybeans and other summer row crops. Seasonably drier weather favored harvesting of sugarcane and cocoa along much of the northeastern coast.



# Daily Weather Records (ASOS & COOP)

## January 16-22, 2011



The *Weekly Weather and Crop Bulletin* (ISSN 0043-1974) is jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53rd Congress, 3rd Session. The contents may be redistributed freely with proper credit.

Correspondence to the meteorologists should be directed to:  
**Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 4443B, Washington, DC 20250.**

Internet URL: <http://www.usda.gov/oce/weather>

E-mail address: [weather@oce.usda.gov](mailto:weather@oce.usda.gov)

The *Weekly Weather and Crop Bulletin* and archives are maintained on the following USDA Internet URL:

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### U.S. DEPARTMENT OF AGRICULTURE

World Agricultural Outlook Board

Managing Editor.....**Brad Rippey** (202) 720-2397

Production Editor.....**Brian Morris** (202) 720-3062

International Editor.....**Mark Brusberg** (202) 720-3508

Editorial Advisors.....**Charles Wilbur and Brenda Chapin**

Agricultural Weather Analysts.....**Tom Puterbaugh,**

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National Agricultural Statistics Service

Agricultural Statistician.....**Julie Schmidt** (202) 720-7621

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### U.S. DEPARTMENT OF COMMERCE

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Meteorologists.....**David Miskus, Brad Pugh, Adam Allgood,**  
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