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State of the Climate National Overview July 2012

National Oceanic and Atmospheric Administration National Climatic Data Center

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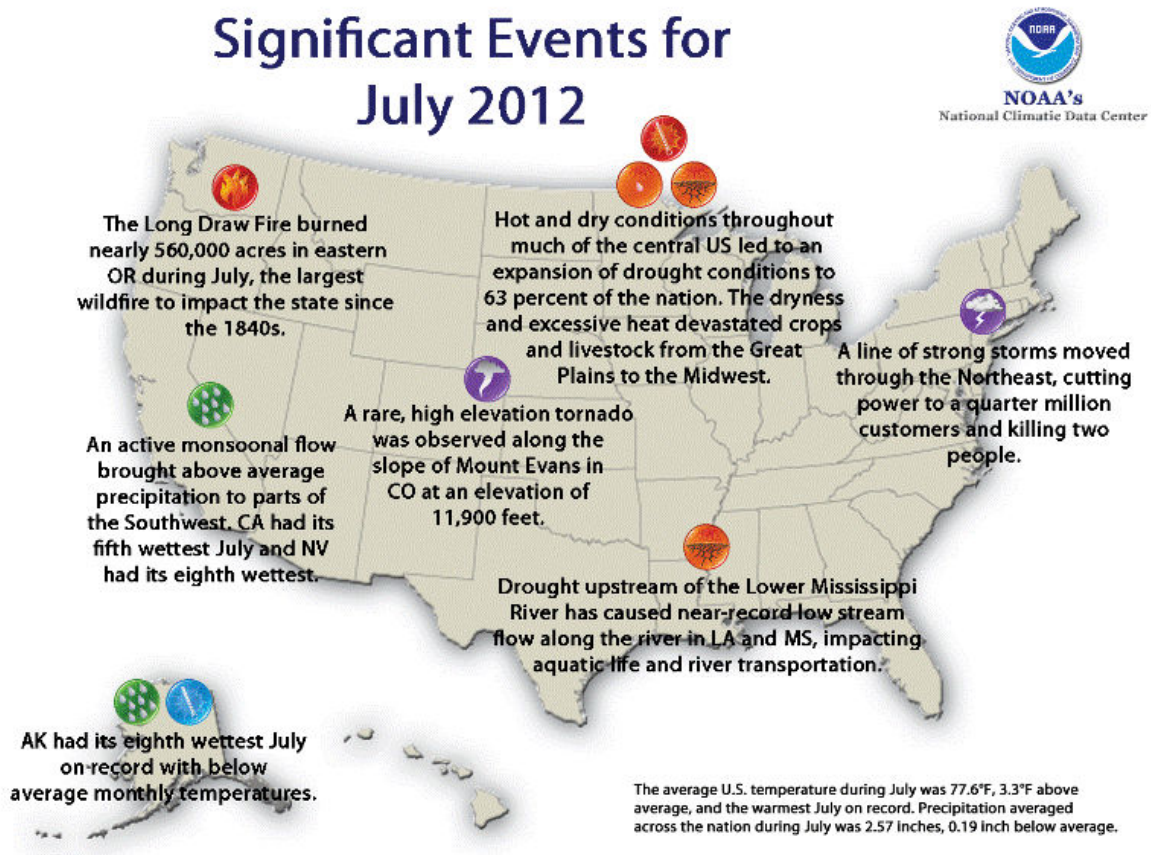
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Climate Highlights — July

- The average temperature for the contiguous U.S. during July was **77.6°F**, 3.3°F above the 20th century average, marking the warmest July and all-time warmest month on record for the nation in a period of record that dates back to 1895. The previous warmest July for the nation was [July 1936](#), when the average U.S. temperature was 77.4°F.
- [Warmer-than-average conditions](#) engulfed much of the contiguous U.S. during July, with the [largest temperature departures](#) from the 20th century average occurring across much of the Plains states, through the Midwest, and along the Eastern Seaboard. [Virginia](#) had its warmest July on record, with a statewide temperature 4.0°F above average. In total, [32 states](#) had July temperatures among its ten warmest, with [seven states](#) having their second warmest July on record.

- **Precipitation totals** were mixed during July, with the contiguous U.S. as a whole being **drier than average**. The **nationally-averaged precipitation total** of 2.57 inches was 0.19 inch below average.
- **Drier-than-average conditions** continued across the Central Plains and Midwest during July. **Nebraska, Iowa, Illinois, and Missouri** had July precipitation totals ranking among their ten driest. **Maine** had its fifth driest July on record.
- An **active storm pattern** in the Southwest contributed to **California** having its fifth wettest July on record and **Nevada** having its eighth wettest. **Wetter-than-average conditions** were also observed through the rest of the Southwest, along the western Gulf Coast, and into the Ohio Valley, where **West Virginia** had its tenth wettest July.
- According to the July 31, 2012 **U.S. Drought Monitor (USDM)**, 62.9 percent of the contiguous U.S. was experiencing moderate to exceptional drought at the end of July. This is an increase of about 6.9 percent compared to the end of June. The maximum value of 63.9 percent reached on July 24 is a record in the 13-year history of the USDM. The percent area of the country in the worst drought categories (extreme to exceptional drought) doubled, from 10 percent last month to 22 percent this month. The extreme dryness and above-average evapotranspiration due to excessive heat devastated crops and livestock from the Great Plains to Midwest.
- According to the Palmer Drought Severity Index, whose record spans the 20th century, about 57 percent of the contiguous U.S. was experiencing moderate-to-extreme drought. The last time drought was this extensive was in December 1956 when about 58 percent of the nation was in moderate-to-extreme drought.
- The warm and dry conditions over a large portion of the country were associated with ideal wildfire conditions. Over 2 million acres were burned nationwide during July due to **wildfires**, nearly half a million acres above average, and the fourth most in the 13-year period of record.
- **A list of select July temperature and precipitation records can be found here.**

Climate Highlights — 3-months (May-July)

- The **May through July three-month period** was the **second warmest** for the Lower-48 with an average temperature 2.9°F above the 20th century average. The record warmest May-July period occurred in 1934. **Above-average temperatures** were prevalent across the nation, with the exception of the **Northwest, where Washington** was cooler than average and **Oregon** had near-average temperatures. **Colorado** was record warm for the three-month period.
- The **May-July period** was the **12th driest** such period for the contiguous United States. The **three-month precipitation total** was 1.19 inches below the average of 8.52 inches. **Dry conditions** dominated the central U.S., with **Nebraska, Kansas, and Arkansas** having a record dry three-month period. **Seven additional states** had three-month precipitation totals among their ten driest.
- The **Primary Corn and Soybean Agriculture Belt**, which has been hard hit by drought, experienced its eighth driest July, third driest June-July, and sixth driest April-July

(growing season) in the 1895-present record.

Climate Highlights — Year-to-Date (January-July)

- The [January-July 2012 period](#) was the [warmest first seven months](#) of any year on record for the contiguous United States. The [national temperature](#) of 56.4°F was 4.3°F above the long-term average. Most of the [contiguous U.S.](#) was record and near-record warm for the seven-month period, except the Pacific Northwest which was near average.
- The [first seven months of 2012](#) were drier than average, ranking as the [15th driest January-July](#) on record. [Below-average precipitation totals](#) were observed for a large portion of the country, with [12 states having January-July precipitation totals among their ten driest](#). [Above-average precipitation](#) was observed for the Upper Midwest and the Pacific Northwest.

Climate Highlights — 12-months (August 2011-July 2012)

- The [August 2011-July 2012 period](#) was the warmest 12-month period of any 12-months on record for the contiguous U.S., narrowly surpassing the record broken last month for the July 2011-June 2012 period by 0.07°F. The nationally-averaged temperature of [56.1°F](#) was [3.3°F above the long term average](#). [Every state across the contiguous U.S.](#) had warmer than average temperatures for the period, except Washington, which was near average.

Alaska Temperature and Precipitation:

- [Alaska](#) had its [18th coolest July](#) since records began in 1918, with a temperature 1.8°F (1.0°C) below the 1971–2000 average.
- [Alaska](#) had its [23rd coolest May-July](#) since records began in 1918, with a temperature 1.3°F (0.7°C) below the 1971–2000 average.
- [Alaska](#) had its [15th coolest January-July](#) since records began in 1918, with a temperature 2.5°F (1.4°C) below the 1971–2000 average.
- [Alaska](#) had its [8th wettest July](#) since records began in 1918, with an anomaly that was 50.0 percent above the 1971–2000 average.
- [Alaska](#) had its [4th wettest May-June](#) since records began in 1918, with an anomaly that was 27.6 percent above the 1971–2000 average.
- [Alaska](#) had its [23rd wettest January-July](#) since records began in 1918, with an anomaly that was 16.6 percent above the 1971–2000 average.

For additional details about recent temperatures and precipitation across the U.S., see the [Regional Highlights](#) section below and visit the [Climate Summary page](#). For information on local temperature and precipitation records during the month, please visit NCDC's [Records page](#). For details and graphics on weather *events* across the U.S. and the globe please visit [NCDC's Global Hazards page](#).

Regional Highlights:

These regional summaries were provided by the six [Regional Climate Centers](#) and reflect

conditions in their respective regions. These six regions differ spatially from the [nine climatic regions of the National Climatic Data Center](#).

[Northeast](#) | [Midwest](#) | [Southeast](#) | [High Plains](#) | [Southern](#) | [Western](#)

Northeast Region: (Information provided by the [Northeast Regional Climate Center](#))

- It was the seventh warmest July since 1895 in the Northeast. The average temperature was 72.8 degrees F (22.7 degrees C), which was 2.9 degrees (1.61 degrees C) above normal. Each of the twelve states in the region averaged warmer than normal, with departures that ranged from +1.5 degrees F (0.83 degrees C) in Rhode Island to +4.0 degrees F (2.22 degrees C) in Delaware. It was the second warmest July since 1895 in Delaware and the third warmest in Maryland. All twelve states in the region ranked within the top 24 warmest since recordkeeping began in 1895. New maximum temperature records were set at many of the region's first order stations during the month as the mercury soared into the upper 90's and low 100's (32 - 40 degrees C). The sensor at Washington's National Airport recorded 105 degrees F (40.6 degrees C) on the 7th, surpassing the record of 102 degrees F (38.9 degrees C) set just two years ago. Baltimore, MD's new record temperature of 104 degrees F (40.0 degrees C) on the 18th broke the long-standing record of 102 degrees F (38.9 degrees C) set in 1887. The Northeast's seven-month average (January July) of 49.9 degrees F (9.9 degrees C) was the warmest such period since 1895. It was the 2nd warmest January through July in Pennsylvania and West Virginia and the warmest first seven months of the year in the rest of the Northeast states. The most recent twelve months (August 2011 through July 2012) was the warmest August through July in 117 years in the Northeast and in all of the states except West Virginia. It was the second warmest August through July in West Virginia where the average temperature of 54.7 degrees F (12.6 degrees C) missed tying the record set in 1932 by 0.1 degree F (0.06 degrees C).
- With a regional precipitation total of 3.70 inches (94 mm), the Northeast averaged 87 percent of normal in July. Three states, Pennsylvania, (107 percent), Rhode Island (116 percent) and West Virginia (125 percent) had totals that were wetter than normal. Departures in the drier-than-normal states ranged from 87 percent in Connecticut to 51 percent in Maine. Interestingly, last month, Maine saw its 4th wettest June since 1895; this month the state had its 5th driest July on record. And last month's dry state, West Virginia, which ranked 11th driest in June ended up having its 10th wettest July in 118 years. The year-to-date totals averaged 88 percent of normal in the Northeast. It was the driest January through June since 1895 in Delaware and the 5th driest in Maryland. While drought conditions in the Northeast were not as bad as some parts of the country, there were areas of concern according to the July 31, 2012 U. S. Drought Monitor. Western Massachusetts, a small area in north central Connecticut, and parts of upstate New York were experiencing moderate drought (D1) conditions while areas of severe drought (D2) expanded in Delaware and eastern Maryland. Areas of abnormally dry (D0) conditions expanded in most of the states in the region, the exception was West Virginia, where conditions improved by month's end.
- Severe storms on the 26th produced five EF1 tornadoes, two in Steuben County, NY, one in Chemung County, NY, one in Luzerne County, PA and one in Susquehanna County, PA. The Chemung County tornado ripped through Elmira, downing power lines and trees, resulting in damage to about 300 homes and businesses. The other

tornadoes formed over more rural areas, causing minor structural damage from fallen trees or wind blown debris. In addition, several microbursts resulted in straight-line damage near Orwell and Harford, PA. Over 600 trees were downed near Orwell and minor structural damage was reported in Harford.

For more information, please go to the [Northeast Regional Climate Center Home Page](#).

Midwest Region: *(Information provided by the [Midwest Regional Climate Center](#))*

- Average July temperatures were the warmest in decades in the Midwest. Preliminary numbers for the month rank all nine states among the top five since 1895. It was the warmest July in Missouri since 1980, in Michigan since 1955, in Illinois, Indiana, Iowa, Kentucky, and Minnesota since 1936, in Ohio since 1934, and in Wisconsin since 1921. Temperatures across the region averaged 2 degrees F (1 C) to 8 degrees F (4 C) above normal. Maximum daily temperatures were 7 to 10 degrees F (4 to 6 C) above normal across most of Missouri, Illinois, Indiana, Iowa, and southern Wisconsin. Record high temperatures were set at more than 100 stations on 15 of the 31 days in the month with the monthly record count topping 3000.
- July precipitation ranged from just a trace amount in western Iowa to more than 10 inches (254 mm) in eastern Kentucky. Precipitation departures of 2 to 4 inches (51 to 102 mm) were common over an area bounded by central Indiana on the east and from southwest Minnesota to southwest Missouri on the west. Kentucky and Michigan had statewide totals above normal. Minnesota, Wisconsin, and Ohio had statewide totals slightly below normal and Indiana fell about 1.50 inches (38 mm) below normal. Missouri had 1.58 inches (40 mm) statewide ranking it as the 7th driest July since 1895. Illinois had 1.46 inches (37 mm) ranking 4th driest and Iowa had 1.21 inches (31 mm) ranking 3rd driest since 1895. It was the driest July in Iowa since 1975, in Missouri since 1970, and in Illinois since 1936.
- Drought expanded and intensified in the Midwest during July. The percentage of the region in drought went from less than 50% to more than 70% during July. Severe drought areas tripled in size from 15% to 55% while areas in extreme or exceptional drought (the highest two categories of drought) grew from just over 5% to more than 31%.
- Crop conditions continued to deteriorate during the month due to the heat and drought. Large portions of the Midwest corn and bean growing areas were in drought. Conditions deteriorated such that more than 40% of the corn crop was categorized as very poor or poor in each state except Minnesota. Beans were fairing slightly better but still reported over 30% of the crop as very poor or poor in every state except Minnesota. In Missouri, over 80% of the corn and 70% of the bean crop were rated very poor or poor.

For details on the weather and climate events of the Midwest, see the weekly summaries in the [Midwest Climate Watch page](#).

Southeast Region: *(Information provided by the [Southeast Regional Climate Center](#))*

- Mean temperatures in July were above normal across most of the Southeast region. The greatest departures (3 to 4 degrees F (1.6 to 2.2 degrees C)) extended from central South Carolina to northern Virginia, while much of Georgia, Alabama, northern

Florida, Puerto Rico, and sections of the Atlantic coast were between 1 and 2 degrees F (0.5 to 1.1 degrees C) above normal for the month. Temperatures across much of the Florida Peninsula and the U.S. Virgin Islands were near normal to slightly below normal for the month. It was the warmest July on record at Roanoke, VA, and Wilmington, NC, in records extending back to 1912 and 1870, respectively. Several other locations recorded one of their top 5 warmest July's on record, including Washington D.C., Richmond, VA, Raleigh-Durham, NC, Charlotte, NC, Columbia, SC, Charleston, SC, and Atlanta, GA. The heat wave that began at the end of June extended into the first week of July, with more record-breaking temperatures observed across the Southeast. All-time maximum temperature records of 108 degrees F (42.2 degrees C) and 107 degrees F (41.7 degrees C) were set on the 1st of the month at Macon, GA, and Greenville-Spartanburg, SC, respectively. Charlotte, NC tied its all-time maximum temperature of 104 degrees F (40 degrees C) on the 1st, while Raleigh-Durham, NC tied its all-time maximum temperature of 105 degrees F (40.6 degrees C) on the 8th of the month. Monthly maximum temperature records of 105 degrees F and 108 degrees F were tied on the 1st of the month at Atlanta, GA, and Athens, GA, respectively. More generally, temperatures exceeding 100 degrees F (37.8 degrees C) were observed at several locations throughout the first week of the month, particularly across the northern half of the region. Reagan International Airport reached 105 degrees F on the 7th of the month, which came within 1 degree F (0.5 degrees C) of the highest July temperature recorded in the Washington D.C. area (period of record 1871-2012). Anomalously warm temperatures were also observed across the higher elevations of western North Carolina. Mount Mitchell, NC recorded a maximum temperature of 80 degrees F (26.7 degrees C) on the 1st and 2nd of the month, which came within 1 degree of the all-time maximum temperature recorded at the summit (period of record 1980-2012).

- Monthly precipitation was above average across northern sections of Alabama, Georgia, and South Carolina and across much of North Carolina, where monthly totals between 5 and 10 inches (127 and 254 mm) were observed. Some precipitation totals across western and eastern North Carolina exceeded 10 inches for the month, which is between 150 and 300 percent of normal. Mount Mitchell, NC recorded its 2nd wettest July on record with 11.32 inches (287.5 mm), while New Bern, NC recorded 11.13 inches (282.7 mm) for the month, which is more than four inches (101.6 mm) above normal (period of record 1948-2012). Montevallo, AL, located south of Birmingham, recorded 5.60 inches (142.2 mm) of rainfall on the 31st of the month, which broke the previous 24-hr rainfall total in July by over two inches (50.8 mm) (period of record 1893-2012). July was also a wet month across Puerto Rico, especially along the northern and southern slopes, where precipitation was more than 200 percent of normal. In contrast, the driest locations (between 25 and 75 percent of normal) were found across much of Virginia, Florida, and southern sections of Alabama, Georgia, and the Carolinas. Wilmington, NC (period of record 1870-2012), and Orlando, FL (period of record 1892-2012), recorded their 5th driest July on record with 2.3 inches (58.4 mm) and 1.3 inches (33 mm) of rainfall, respectively.
- There were 1,832 reports of severe weather across the Southeast in July, with at least one report on 30 of the 31 days. This is the second greatest number of severe weather reports for any month in the Southeast region since 2000 (greatest number is 1,877 in April 2011). Thunderstorm activity was fairly widespread across northern Georgia and across the Carolinas, resulting in numerous reports of wind damage. Some of these storms also produced large hail and contributed to scattered power

outages and some lightning-induced house fires. There were seven preliminary tornado reports, of which six have so far been confirmed. On the 10th of the month, an EF-0 tornado was confirmed in Hyde County, NC along Highway 264 near Palmico Sound. No damage was reported. On the 14th of the month, an EF-0 tornado touched down in a rural part of Accomack County, VA along the Delmarva Peninsula. Numerous trees were damaged or felled over its 0.5 mile (0.8 km) path. On the 29th of the month, an EF-1 tornado tracked for approximately two miles (3.2 km) across northern Wakulla County, FL where some damage to buildings and homes was observed. Waterspouts were observed moving inland near Brunswick, GA on the 18th of the month and near the Bodie Island Lighthouse along the Outer Banks in Dare County, NC on the 30th of the month. No damage was reported and both were given EF-0 ratings. Another waterspout was reported near Roanoke Island in Dare County, NC and was given an EF-0 rating.

- The beneficial rainfall across the central portion of the region helped reduce or stabilize drought conditions during the month, but led to an increase in insect and fungal disease pressures among several crops. By the end of July, much of central North Carolina was drought-free. In contrast, the relative lack of rain across Virginia resulted in an expansion of abnormally-dry conditions (D0) and the emergence of moderate drought (D1) across central and eastern parts of the Commonwealth. There was a re-emergence of moderate drought across parts of the western Florida Panhandle and northern Alabama, while areas of extreme (D3) and exceptional (D4) drought expanded slightly across west-central Georgia, which missed out on the beneficial rains to the north. Several fields remained flooded across the Florida Panhandle from the heavy rains back in June, which prevented some harvest of corn early in the month. However, by the end of July much of the water had subsided, allowing farmers to prepare fields for the planting of fall vegetables. The continued warm and dry weather across much of Georgia resulted in a successful peach season that ended a full three weeks earlier than normal. In fact, overall yields for many crops in Georgia remained ahead of their 5-year average.

For more information, please go to the [Southeast Regional Climate Center Home Page](#).

High Plains Region: *(Information provided by the [High Plains Regional Climate Center](#))*

- Hot and dry conditions continued this July across the majority of the High Plains Region. The larger temperature departures occurred in northeastern Wyoming, southern and eastern South Dakota, northern and eastern Nebraska, and central and eastern Kansas where the departures from normal temperature ranged from 6.0-8.0 degrees F (3.3-4.4 degrees C) above normal. There were even a few pockets of eastern Kansas, northern Nebraska, and eastern South Dakota which had temperature departures which were 8.0-10.0 degrees F (4.4-5.6 degrees C) above normal. No station in the Region had monthly average temperatures which were below normal and the continued warm pattern caused many locations across the Region to be ranked in the top 10 warmest Julys on record. One location was Denver, Colorado which had its warmest July on record with an average temperature of 78.9 degrees F (26.1 degrees C). This was 4.7 degrees F (2.6 degrees C) above normal (period of record 1872-2012). The previous record occurred in 1934 with an average temperature of 77.8 degrees F (25.4 degrees C). Interestingly, this was also the warmest month ever recorded in Denver. The previous record also occurred in July 1934. So far this year, Denver has had 13 days at or above 100 degrees F (37.8

degrees C), with 7 of those occurring this month. Previously, the most days at or above 100 degrees F (37.8 degrees C) was 7 in 2005. Again, this month was just one more month of continued warmth as most of the Region had warmer than normal temperatures each month this year. Eastern portions of the Region have had January-July average temperatures which were 6.0-8.0 degrees F (3.3-4.4 degrees C) above normal. Many locations in this portion of the Region have had the warmest January-July period on record. One of these locations was Topeka, Kansas which had a January-July average temperature of 62.1 degrees F (16.7 degrees C). This was 7.5 degrees F (4.2 degrees C) above normal and easily beat the old record of 58.9 degrees F (14.9 degrees C) set in 1946 (period of record 1887-2012). The continued hot and dry conditions have taken their toll on many crops and livestock across the Region and beyond. According to the U.S. Department of Agriculture, by the end of the month 88 percent of all corn, 87 percent of all soybeans, 64 percent of all hay acreage and 72 percent of all cattle were within an area experiencing drought conditions in the United States. Poor pastureland conditions in the High Plains Region have led to the early weaning of calves in some areas and even culling of herds. Some producers have decided to chop the drought damaged dryland corn for silage or hay due to the poor condition of the pastures, which have been providing little to no grazing capacity at this point. Conservation Reserve Program (CRP) acres have been released for emergency use in Colorado, Kansas, and Nebraska. In Colorado, irrigated crops have progressed ahead of schedule; however there were growing concerns over dwindling water reserves. Meanwhile, in Nebraska, irrigators were struggling with the water demands as surface water use was stopped due to low river levels. According to the National Agricultural Statistics Service (NASS), there were some cases in Nebraska where more water had been used by mid-July than what would normally be used in an entire season.

- Precipitation was varied across the Region this month. Kansas, Nebraska, and South Dakota were hit the hardest by the dryness as the majority of each of those states received only 50 percent or less of normal precipitation. Northern and eastern North Dakota and central and eastern Wyoming also received precipitation which was only 50 percent of normal or less. Some locations in Nebraska did not receive any measurable precipitation this month. Norfolk, Nebraska was one of those locations and set a new record for driest July (period of record 1893-2012). To put this record into perspective, Norfolk normally receives over 3 inches (76 mm) of precipitation in July. The old record occurred in 1936 with 0.18 inches (5 mm). Ultimately, Norfolk went a total of 38 consecutive days without measurable precipitation which is quite unusual for this time of year. This ranked as the 14th longest stretch without measurable precipitation on record and was the longest stretch to occur solely in the summer months. The second longest stretch of days without measurable precipitation to occur only in the summer was a 28 day stretch ending on August 2, 1901 (this stretch ranks 51st). While large areas received little to no precipitation, central Colorado, northwestern South Dakota, and pockets of Wyoming received at least 150 percent of normal precipitation. Boulder, Colorado was one of the wetter locations with 4.99 inches (127 mm) precipitation. This amount of precipitation was 3.20 inches (81mm) above normal, or 279 percent of normal, and enough for Boulder to have its 3rd wettest July on record (period of record 1893-2012). The record set in 1919 held at 7.46 inches (189 mm). Although July was a relatively quiet severe weather month, an interesting event occurred on July 28th in the Rocky Mountains. According to the National Weather Service in Boulder, Colorado, an EF-0 tornado touched down approximately 1.75 miles northeast of Mount Evans. This tornado touched down at an

estimated altitude of 11,900 feet (3627 m), making it the second highest altitude tornado on record. The highest tornado on record occurred on July 4, 2004 in the Sequoia National Park in California at 12,000 feet (3658 m).

- Over the last month, there were major changes to the U.S. Drought Monitor as hot and dry conditions prevailed. These conditions led to a rapid expansion and deterioration of the drought. At the end of June, about 67 percent of the Region was under moderate (D1) to extreme (D3) drought. Unfortunately, at this end of this month, 87 percent of the Region was under drought, with 4 percent of the Region in the exceptional drought designation (D4). D4 areas included a small area of central Nebraska, a small area of southeastern Colorado, and much of western Kansas. The D3 areas expanded tremendously since last month to include nearly all of Kansas and Nebraska, and significant portions of Colorado, South Dakota, and Wyoming. There were even some areas of the Region which went from no drought to D3 in just a matter of weeks. According to the U.S. Seasonal Drought Outlook released July 19th, drought conditions were expected to improve slightly in Colorado and extreme southern Wyoming. Areas of drought in all other areas of the Region were expected to persist, while new areas of drought were expected to develop in the Dakotas.

For more information, please go to the [High Plains Regional Climate Center Home Page](#).

Southern Region: *(Information provided by the [Southern Regional Climate Center](#))*

- With the exception of southern Louisiana, southeastern Texas, and the western Texas panhandle, the majority of the Southern Region experienced a slightly warmer than normal July. The highest temperature anomalies were observed in northeastern Oklahoma and northern Arkansas, where temperatures averaged anywhere from 4 to 8 degrees F (2.22 to 4.44 degrees C) above normal. In Tennessee, temperatures ranged between 4 and 6 degrees F (2.22 and 3.33 degrees C) above normal. Similar values were also observed in western Oklahoma and northern Texas. For Arkansas, it was the sixth warmest July on record (1895-2012) with a state wide average temperature of 84.10 degrees F (28.94 degrees C). Tennessee reported its seventh warmest July on record (1895-2012). The state wide average temperature for Tennessee was 80.40 degrees F (26.89 degrees C). Oklahoma averaged 85.50 degrees F (29.72 degrees C), which was their ninth warmest July on record (1895-2012). The other state wide average temperatures include: 82.10 degrees F (27.83 degrees C) in Louisiana, 81.80 degrees F (27.67 degrees C) in Mississippi, and 83.40 degrees F (28.56 degrees C) in Texas.
- July precipitation in the Southern Region varied spatially such that the northeastern half of the region experienced a much drier than normal month, while the southeastern half of the region experienced a much wetter than normal month. In southern Louisiana, precipitation totals for the month averaged between 150 and 200 percent of normal. Similar values were observed throughout most of Mississippi, southeastern Texas, and eastern Tennessee. State average July precipitation totals were as follows: 2.86 inches (72.64 mm) in Arkansas, 7.72 inches (196.09 mm) in Louisiana, 7.03 inches (178.56 mm) in Mississippi, 1.25 inches (31.75 mm) in Oklahoma, 6.20 inches (157.48 mm) in Tennessee, and 2.72 inches (69.09 mm) in Texas. State precipitation rankings worth mentioning include Louisiana and Mississippi, which both experienced their eighteenth wettest July on record

(1895-2012). Tennessee experienced its twentieth wettest July on record (1895-2012), and Oklahoma experienced its seventeenth driest July on record (1895-2012).

- Drought conditions in the Southern Region have both improved and deteriorated. Improvements occurred in northern Louisiana, whereby now only a small area in the northeast is in drought. There was also a significant amount of improvement in eastern Tennessee, in that much of the central and eastern counties saw a one to two category improvement. Drought conditions in Mississippi remained fairly unchanged from last month. Due to heavy rainfall totals, eastern Texas experienced a one category improvement, and much of the southeastern part of the state is now drought free. Conditions in the remainder of the state are relatively equivalent to what was observed last month. In contrast, conditions did get worse in Arkansas. Over eighty percent of the state is now in extreme or exceptional drought. Drought has also worsened in Oklahoma, where over seventy percent of the state is now in extreme or exceptional drought, with the entire state being in moderate drought or worse.
- Dry, and hot conditions in Oklahoma have made the state vulnerable to wildfires. According to KJRH News in Tulsa, Oklahoma, over 28,000 acres (113.31 square km) have been burned in a blaze in Kiowa County. Oklahoma Forestry Services reports that all counties in the state are under a burn ban.
- In Texas, fires, driven by lightning and dry grasses, burned near Byers in Clay County and in McFadden Wildlife Refuge in Jefferson County; while the former was stopped before any significant damage was caused, the wildlife refuge saw at least 150 acres (0.61 square km) burned. Further, a fire reported at Bluff Creek has burned over 2700 acres (10.93 square km), though no monetary damage report has been issued. Elsewhere, country-wide drought issues are having an effect on ranchers, whose livestock numbers have dropped by 2% in the Panhandle due to elevated corn prices and less grazing acreage. Farmers' losses have been mitigated somewhat by intermittent rainy conditions. Legislation aimed at further mitigating these effects by reducing the processing time for emergency declaration, reducing the emergency loan interest rate by 1.25 percent, and granting subsidies to various crop farmers. The Texas State Water Plan has plans written in it to pursue various projects, totaling \$53 billion, to develop projects to bring water to various parts of the state that are seeing increased demand and competition for water from all sectors (Information provided by the Texas Office of State Climatology).
- There was only one tornado report for the month in the Southern Region. There were no reports of injuries or damages. The twister occurred in Calcasieu Parish, near Lake Charles, Louisiana.

For more information, please go to the [Southern Regional Climate Center Home Page](#).

Western Region: *(Information provided by the [Western Regional Climate Center](#))*

- A vigorous onset of the Southwest Monsoon this month provided much needed precipitation and relief from June heat for the desert Southwest and southern Great Basin. June temperature trends continued into July, with coastal regions slightly cooler than normal while inland locations recorded above normal to record-breaking temperatures.

- Four monsoonal pushes into the Mojave Desert and southern Great Basin set record precipitation totals throughout the region. Lake Havasu City, Arizona, experienced its wettest July on record at 2.48 in (63 mm). Downpours on the evening of July 13th spurred flash floods in the area that swept away cars, damaged houses, and caused one fatality. Precipitation at Pahrump, Nevada totaled 1.74 in (44.2 mm), the second wettest July in a record dating back to 1914. Near the Nevada/Utah border, Caliente (2.48 in, 63 mm) and Pioche (2.88 in, 73.2 mm), Nevada experienced their third wettest Julys in records dating back to 1903 and 1888, respectively. However, south of there, Las Vegas has recorded less than an inch (0.71 in, 18.0 mm) since October 1, just 20 percent of average. Despite high July precipitation in some locations, by month's end the USDA had declared natural disaster areas in all Nevada and eastern California counties due to severe and persistent drought. Mid-month, the remnants of Hurricane Fabio traveled northward over California and Nevada up to the Oregon/Idaho/Washington border. The moisture, combined with atmospheric instability, produced light rainfall that set daily records in many locations that typically receive little July precipitation.
- Record monthly average temperature was set again this month at Denver, Colorado at 78.9 F (26 C); June 2012 also set the monthly average record at 75 F (23.8 C). Denver experienced 27 days over 90 F (32.2 C) this month, breaking the previous record of 26 days set in 2000 and 2008. Records at Denver date back to 1872. Elsewhere in Colorado, Pueblo experienced 14 days of triple digit (F) temperatures (> 37.8 C) from June 22 through July 5. This shattered the previous record of 9 days. Further south, Beaver Dam, Arizona, recorded its all-time high of 121 F (49.4 C) on July 10. Records at Beaver Dam began in 1951. On the morning of July 12, temperatures at Death Valley, California dropped to a minimum of 107 F (41.7 C), the second highest low temperature since records began in 1911. The record highest low stands at 110 F (43.3 C), set on July 5, 1918.
- Further west, temperatures remained slightly below normal throughout July. Southern California saw a smattering of record lows during the last week of the month. The typical summer marine layer affected the California coast throughout the month; the airports at Los Angeles, Santa Barbara, and Monterey all reported 19 days with fog. To the north, Alaska experienced a cool and drizzly July. Average temperature for the month at Anchorage was 55.5 F (13 C), the second lowest July average on a record dating back to 1952.
- July 14. Montana. Great Falls reported the highest atmospheric water vapor content this location has recorded in all of its weather balloon ascents in a record extending from 1948.
- July (all month) Fires throughout the West: Severe fire weather continued for much of the West. These conditions coupled with numerous thunderstorms this month led to numerous small wildfires and several large fires, described below. The number of fires in the US year-to-date is only 77% of the 10-year average, while the country is at 96% of average in acreage burned.
- Oregon: The Long Draw Fire (north of McDermitt, Nevada) and Miller Homestead Fire (1/2 mi, 0.8 km west of Frenchglen, Oregon) both ignited due to lightning on July 8. The Long Draw fire burned 557,648 acres (225,672 hectares) before containment on July 15, by far the largest fire in Oregon's history. The nearby Miller Homestead fire

consumed 160,853 acres (65,094 hectares) before it was contained on July 24. In the past 15 years, 7 of the 11 westernmost states have recorded their largest fire since settlement.

- Wyoming: The Arapaho Fire, 28 miles (45 km) northwest of Wheatland, Wyoming, ignited June 27 due to lightning. The fire continued throughout the month of July and at month's end is 88% contained and burned 98,115 acres (39,705 hectares). July 31.

For more information, please go to the [Western Regional Climate Center Home Page](#).

See [NCDC's Monthly Records web-page](#) for weather and climate records for the most recent month. For additional national, regional, and statewide data and graphics from 1895-present, for any period, please visit the [Climate at a Glance](#) page.

PLEASE NOTE: All of the temperature and precipitation [ranks](#) and values are based on preliminary data. The ranks will change when the final data are processed, but will not be replaced on these pages. Graphics based on final data are provided on the [Temperature and Precipitation Maps](#) page and the [Climate at a Glance](#) page as they become available.

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