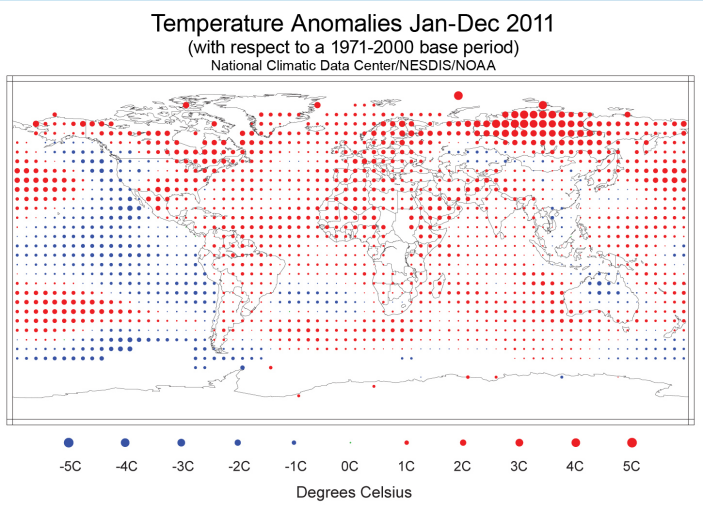
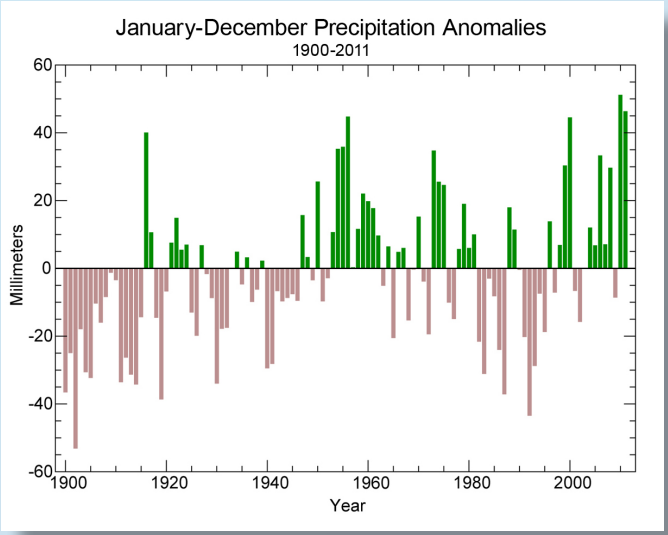
# 2011 Global Highlights

- The 2011 combined global land and ocean surface temperature tied 1997 as the 11th warmest such period on record, at 0.51°C (0.92°F) above the 20th century average of 13.9°C (57.0°F).
- The global land surface temperature for 2011 was the eighth warmest on record, at 0.83°C (1.49°F) above the 20th century average.
- The global ocean surface temperature for 2011 tied with 2007 as the 11th warmest on record, at 0.40°C (0.72°F) above the 20th century average.
- The combined land and ocean surface temperature was second coolest of this century and tied with the second warmest of the previous century.
- La Niña conditions were present in the eastern and central equatorial Pacific Ocean during 2011, with the exception of May to September, when ENSO-neutral conditions prevailed.
- Arctic sea ice extent during September 2011 was 34.5 percent below the 1979-2000 average — the second smallest September Arctic sea ice extent records began in 1979.

Warmer-than-average temperatures occurred during 2011 for most of the world's surface. The warmest annual above-average temperatures occurred throughout the high latitude regions of the Northern Hemisphere including, Siberia, Europe, eastern Canada, Southern U.S., the Middle East, North Pacific Ocean, and western Africa. Temperatures were notably cooler across the Southern oceans, most of the eastern Pacific Ocean, southwest Canada, and parts of Australia.




Globally, 2011 was the 2nd wettest year over land on record since 1900. Precipitation throughout the year was variable in many areas. Regionally, drier than average conditions were widespread across much of French Polynesia, the Solomon Islands, Hawaiian Islands, northwestern Canada, and southwestern China. The wettest regions included much of Central America, Micronesia, northern Brazil, and Northeastern U.S.

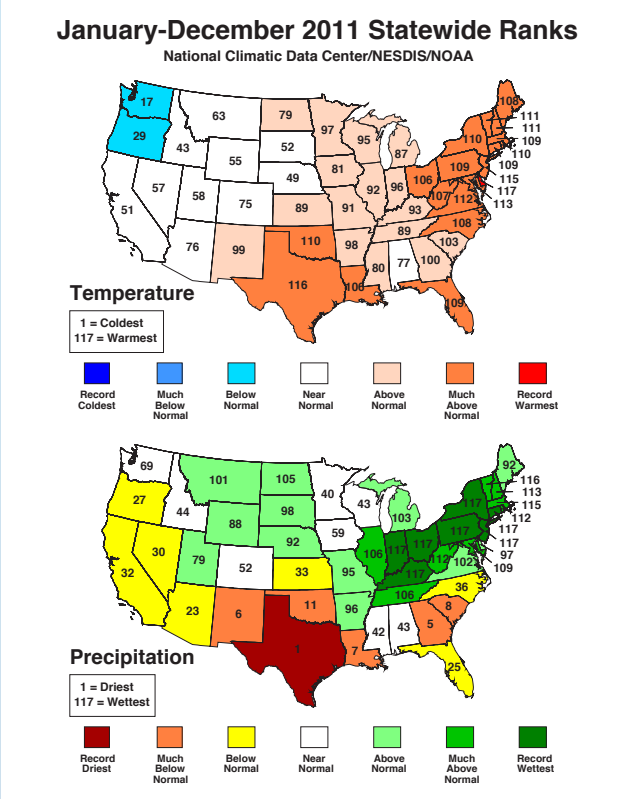
The table to the right lists the top ten Global weather and climate events of 2011. These events are listed according to their overall rank, as voted on by a panel of weather and climate experts.

| Rank | Event |
|---|---|
| 1 | Drought in eastern Africa (Throughout 2011) |
| 2 | Thailand Flooding (July-October, 2011) |
| 3 | Flooding across eastern Australia (Austral Summer) |
| 4 | Double-Dip La Niña (Throughout 2011) |
| 5 | Flash Floods in Brazil (January 6-12, 2011) |
| 6 | Tropical Storm Washi (Sendong) (December 16-17, 2011) |
| 7 | Arctic Sea Ice Extent (Throughout 2011) |
| 8 | Heavy Rain in Columbia (Austral Autumn) |
| 9 | Drought in Mexico (Throughout 2011) |
| 10 | Drought across Europe (Autumn) |

# 2011 National Highlights

- The 2011 contiguous United States (CONUS) average annual temperature was 1.0°F (0.6°C) above the long term average, ranking in the top third of the historical distribution.
- Since 1895, the CONUS has observed a long-term temperature increase of about 0.07°C (0.12°F) per decade.
- Precipitation across the CONUS in 2011 was 0.36 inch (9.14 mm) below the long-term average.
- Over the long-term, precipitation averaged across the CONUS, is increasing at a rate of about 0.18 inches (4.6 mm) per decade.
- One of the worst 1-year droughts on record occurred across Texas. The percent area of the CONUS in D4 drought (the most severe category) during July was the highest in the 1999 to present U.S. Drought Monitor record (~12%).
- Hurricane Irene was the first hurricane to make U.S. landfall since 2008. The destructive storm made three landfalls along the eastern seaboard killing 45 and causing over $7.3 billion in damages.
- The number of tornadoes during 2011 is currently the 3rd most active tornado season in modern history (1950-present) with 1632 confirmed tornadoes through October, according to NOAA's Storm Prediction Center.

For the U.S., 2011 was warmer than average, with temperature anomalies 1.0 degree F above the 20th century average. Much of the country east of the Rockies experienced annual temperatures that were above to-much above normal. Only Oregon and Washington's annual average temperature was below normal. Sixteen states had annual temperatures among their ten warmest. Delaware was record warm for the period, with an annual temperature of 58.2 degrees F, or 3.5 degrees F above average. Texas had its second warmest year on record, with an annual temperature anomaly of 2.2 degrees F, just shy of the annual record of 2.5 degrees set in 1921.




For the calendar year, precipitation was record wet in the Ohio Valley and Northeast, but record to-near record dry in parts of the South. These two extremes counterbalanced, resulting in near normal annual precipitation across the U.S. The 2011 annual average for the entire U.S. was 0.36 inch below the 20th century average. Texas was more than 13 inches below its annual average, besting the previous direst year (1917) by 0.1 inch. The state with the most precipitation above its long term average was Connecticut at 22.28 inches. December 2011 was the first month since September 2010 that the state of Texas had above-average precipitation.

The table below lists the top ten U.S. weather and climate events of 2011. These events are listed according to their overall rank, as voted on by a panel of weather and climate experts.

| Rank | Event |
|---|---|
| 1 | Tornado Super Outbreak (April 25-28, 2011) |
| 2 | Southern Drought (Throughout 2011) |
| 3 | Joplin Tornado (May 22, 2011) |
| 4 | MS/OH River Flooding (May 22, 2011) |
| 5 | Hottest 3-month Statewide Temperatures on Record (summer) |
| 6 | Hurricane Irene (August 20-29, 2011) |
| 7 | Northern Plains/Midwest Flooding (June) |
| 8 | U.S. Wildfire Season (Throughout 2011) |
| 9-tie | Tornado Outbreak (April 14-16, 2011) |
| 9-tie | Tropical Storm Lee (September 1-11, 2011) |

| Tornadoes by the Numbers in 2011 |
|---|
| **6** : the number of EF-5 tornadoes confirmed in 2011, the strongest category on the Enhanced Fujita scale. This ties with 1974 as the most E(F)-5 tornadoes during a single year. |
| **1,632** : the number of tornadoes confirmed in the U.S., marking the x busiest year since 1950. |
| **199** : the number of confirmed tornadoes across the Southeast on April 27, the most on record for any single day in the U.S. |
| **177** : the number of confirmed tornadoes that covered an area from Oklahoma to North Carolina on April 14-16, the second largest tornado outbreak in the modern era. |
| **343** : the largest outbreak of tornadoes ever recorded (April 25-28), which left a path of destruction from Alabama to Virginia. |
| **748** : the number of confirmed tornadoes for the month of April, the most for any month on record. |
| **27** billion : the total amount of losses from tornadoes across the U.S. in 2011. |
| **551** : the total number of deaths in 2011, the deadliest year in the modern period of record. |

For more information go to:
www.ncdc.noaa.gov/climate-monitoring/