

Monthly and Annual “State of the Climate” Reports from the National Climatic Data Center

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The National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC) issues monthly and annual reports on the state of the climate in the United States. These reports place temperature, precipitation and other physical observations related to climate in a historical context. Key climate hazards and extreme events (e.g. drought, floods and hurricanes) across the US are highlighted and placed within a global framework (Figure 14a). Monthly reports are released on the 15th of the subsequent month, and annual reports are typically released by January 15th of the following year.

Monthly Reports

One can access the most recent monthly NCDC report by going to <http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html>, selecting “state of the climate” tab and “latest report”. Here major weather events are highlighted in a straightforward style. For example, for July 2008, the headline statement is “U.S. Temperature Above Normal in July, Fifth Warmest July on Record for Globe. Other notable information is also outlined and includes the following:

1. U.S. Temperature Highlights
2. U.S. Precipitation Highlights

3. Midwest U.S. Flooding
4. U.S. Wildfires
5. Other U.S. Events (including tornadoes, hurricanes and tropical storms)
6. Global Temperatures
7. Global Highlights (such as El Niño)
8. Other Key Global Events (major storms)

Additional discussions regarding the monthly climatology can be accessed through links at the bottom of the summary page. These subsections include global analyses of many observational datasets, a listing of global hazards, an enhanced discussion of U.S. climate (including regional trends), and observations of extremes. The detailed content available is outlined in Table 14.

Of particular note are the regional overviews provided in the subsections. The summaries describe conditions in the six regions of the Regional Climate Centers (see On the Web Box). Information for Colorado and Wyoming are contributed by the High Plains Regional Climate Center (<http://www.hprcc.unl.edu/index.php>) and data for Utah are reported by the Western Regional Climate Center (<http://www.wrcc.dri.edu/index.html>).

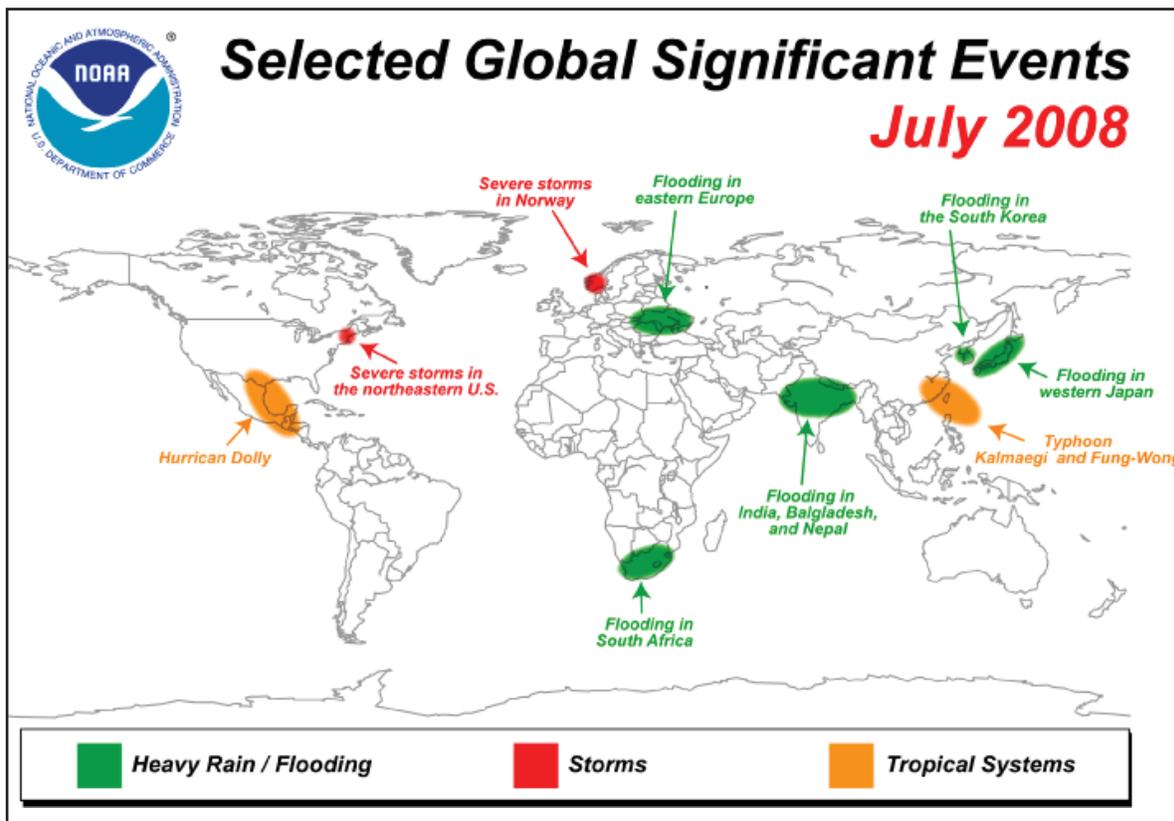


Figure 14a. Extreme climate events that occurred around the world in July 2008.



Annual Reports

Together, the monthly reports are used to develop the Annual State of the Climate Report, also issued by NCDC. For example, as 2008 progresses, content from the monthly climate reports is added to a page called “Climate of 2008” (see On the Web Box). At the end of the year, the data from 2008 will be collated and presented in a similar format to the monthly reports (click Annual Report at the bottom of the list of monthly reports). The annual report provides a succinct resource of the extreme events that occurred throughout the U.S. and places observations into a historical context. Major weather events are also highlighted in a map (Figure 14b; click on U.S. Summary and then Significant Events).

The Annual Reports also provide information and maps of temperature and precipitation ranks for each state on an annual and seasonal time scale (click on U.S. Summary and scroll down). For example, Figure 14c shows the historical ranking of annually averaged precipitation by state and region from the 2007 Annual State of the Climate Report. A pattern of relatively extreme dry conditions emerges in the southeastern and western

U.S., but conditions were moderate to dry in the Intermountain West relative to the observational record. Similar data are also available for temperature records (Figure 14d).

Special Reports

In addition to the monthly and annual climate reports, special reports are also issued that outline notable global hazards and extreme events such as tornadoes, typhoons, droughts and other storms. To find special reports on significant extreme events from recent years (including the July 2000 wildfires, the August 2007 heatwave, and Hurricane Katrina) select the “Special Reports” tab at <http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html>. Links to the special reports relevant to the current year can be found on the “Climate of 2008” page. These reports are issued monthly and are released at the same time as the monthly climate summary. The July 2008 special report, for instance, focused on Hurricane Dolly, Typhoon Kalmaegi, flooding in China, and flooding in eastern Europe. Information relevant to global hazards and climate extremes for the current month is often available

<p>Global Analysis</p> <ul style="list-style-type: none"> • Global Temperatures • Global Precipitation • ENSO SST Analysis • ENSO Monitoring • Sea Ice Extent • Troposphere • Stratosphere
<p>National and Regional Overview</p> <ul style="list-style-type: none"> • National Overview • Regional Overview • Atlantic Hurricane 2008 Seasons • Eastern North Pacific Hurricane 2008 • Seasons • Western Fire 2008 Season • Tornadoes 2008 Season • 200 8 Midwestern US Flood Overview • 2007–08 Northern Hemisphere Winter • Season: Snow and Ice
<p>Selected US City and State Extremes</p> <ul style="list-style-type: none"> • Temperature/Dewpoint • Rainfall/Thunderstorms • Snowfall
<p>Global Hazards</p> <ul style="list-style-type: none"> • Special Focus • Drought and Excessive Heat • Flooding • Severe Storms • Tropical Cyclones • Extratropical Cyclones • Severe Winter Weather • US Drought
<p>National Drought Overview</p> <ul style="list-style-type: none"> • Detailed Drought Discussion • State/Regional/National Moisture Status • Pre-Instrumental Perspective • Drought Indicators • Additional Contacts • Questions



Figure 14b: Significant climate anomalies and events in 2007.

Table 14. Subsections at the bottom of each monthly State of the Climate Report page.



in advance of release of the monthly climate report. For example, although the August 2008 monthly report is not yet online, details of the hazards and significant events are already available (see On the Web). For comparison with current climate events, archival reports and records of historic extreme events can also be ac-

cessed through the NCDC (see On the Web).

The NCDC climate portal provides access to a spectrum of information relevant to the Intermountain West, including drought and storm activity. Accessing the available products can be tricky, but the information is valuable.

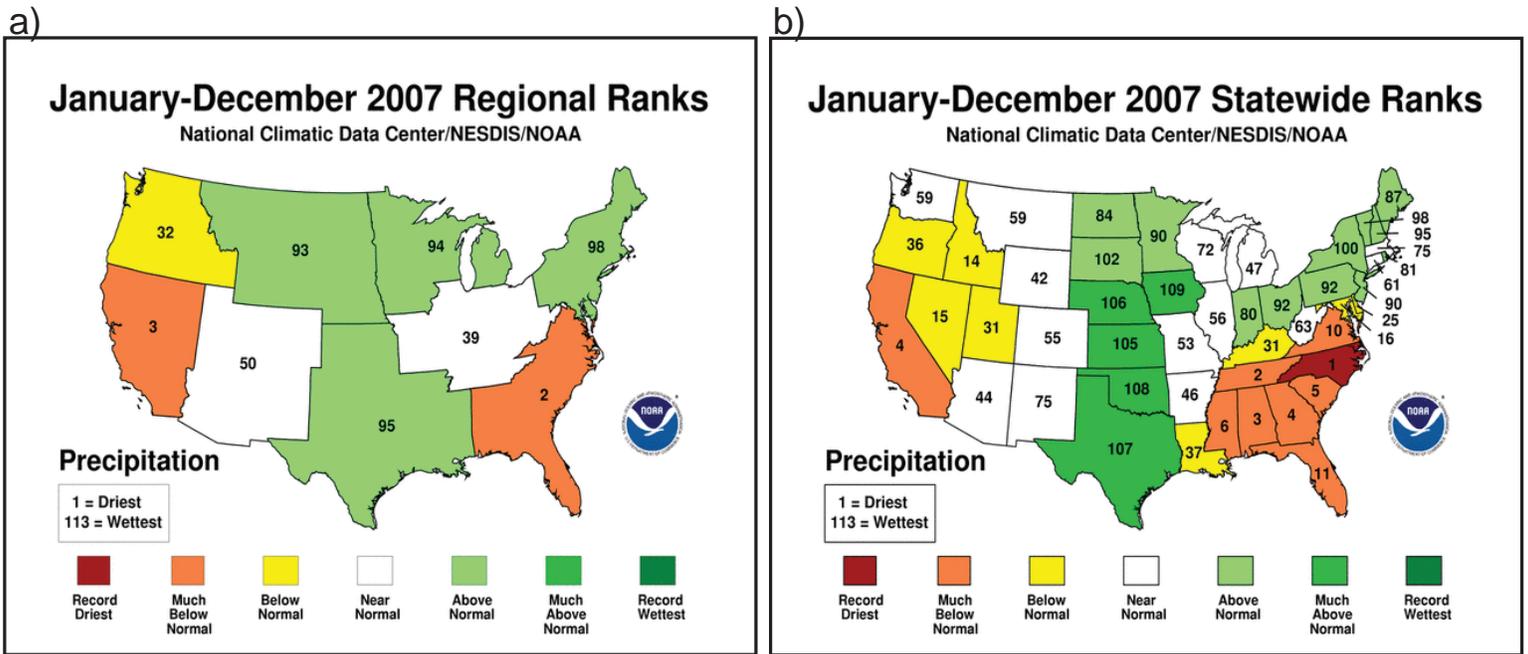


Figure 14c. Panel a shows the state precipitation ranks across the US in 2007; panel b shows the rankings by region. Data are available for a 113 period, so rankings are out of 113.

