# 2001 Summer Heat in the United States

## National Oceanic and Atmospheric Administration

### National Climatic Data Center

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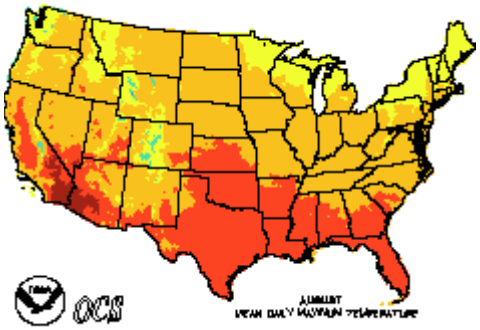
Temperatures were cooler than average in the eastern U.S. during July with relatively mild conditions prevalent across much of the eastern third of the nation and parts of the West. However, extreme heat and humidity began to build across the central U.S. due to the presence of a persistent ridge of high pressure. Daily highs greater than 90 and 100°F were common throughout much of the Central Plains in July with above average heat continuing into August. With dew point temperatures above 70°F in the same region, heat stress index readings soared well above 100°F in many locations. The combination of high heat and humidity was a contributing factor to the death of NFL lineman Korey Stringer during a practice in Mankato, Minnesota.



Average Daily High Temperatures During August (1961-1990 average)

In recent days, the area of above normal temperatures has expanded into parts of the East and West. Temperatures during the first 7 days of August were as much as 5°C (9°F) above average in the Central U.S. with anomalies greater than 2.5°C (4.5°F) in the Northeast and parts of the InterMountain West. Daily maximum temperatures have been more than 10°F above the 1961-1990 average on many occasions across many parts of the U.S. The image above shows temperatures more than 12°F above the 1961-1990 average on August 8 across a large part of the Northeast and Upper Midwest.

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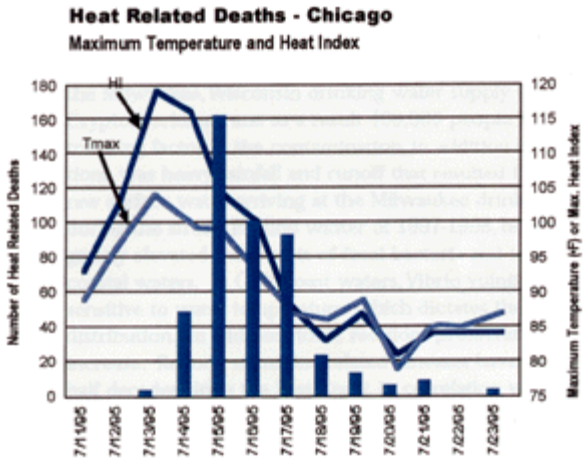
## Heat Waves In Perspective




This graph tracks maximum temperature, heat index, and heat-related deaths in Chicago each day from July 11 to 23, 1995. The gray line shows maximum daily temperature, the blue line shows the heat index, and the bars indicate number of deaths for the day.

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Although temperatures and humidity levels have been much above average, the number of deaths resulting from this summer's heat has not approached the magnitude of heat waves of the recent past. The 1995 Chicago heat wave resulted in more than 400 deaths in a 9-day period as shown in the adjacent plot. In the disastrous heat wave of 1980, more than 1250 people died across the U.S. as the direct result of extreme conditions, with an estimated 10,000 deaths related to heat stress. Additional information on heat and drought-related deaths and economic impacts during the past 20 years can be found in the Billion-Dollar U.S. Weather Disasters technical report.

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## Recent Records

New Temperature Records for August 2001

| Station | Date | Temperature | Previous Record |
|---|---|---|---|
| Hougton Co Apt, MI | August 5 | 92°F | 88°F in 1983 |
| Gaylord, MI | August 5 | 93°F | 91°F in 1955 |
| Gaylord, MI | August 6 | 95°F | 90°F in 1965 |
| Gaylord, MI | August 7 | 92°F | 89°F in 1996 |
| Gaylord, MI | August 8 | 93°F | 90°F in 1978 |
| Alpena, MI | August 5 | 94°F | 93°F in 1958 |
| Alpena, MI | August 6 | 100°F | 92°F in 1968 |
| Alpena, MI | August 7 | 97°F | 92°F in 1996 |
| Alpena, MI | August 9 | 96°F | 94°F in 1949 |
| Marquette, MI | August 5 | 92°F | 86°F in 1989 |

| | | | |
|---|---|---|---|
| Marquette, MI | August 6 | 96°F** | 87°F in 1962 & 1996 |
| Marquette, MI | August 7 | 95°F | 88°F in 1988 |
| Minneapolis, MN | August 6 | 99°F | 97°F in 1916 |
| Minneapolis, MN | August 7 | 98°F | 97°F in 1983 |
| St. Cloud, MN | August 6 | 98°F | 94°F in 1983 |
| Green Bay, WI | August 7 | 97°F | 94°F in 1937 |
| Wausau, WI | August 7 | 95°F | 93°F in 1983 |
| La Crosse, WI | August 7 | 99°F | 98°F in 1988 |
| La Crosse, WI | August 7 | 79°F minimum* | 73°F in 1900 |
| La Crosse, WI | August 8 | 76°F minimum* | 75°F in 1891 |
| Madison, WI | August 7 | 78°F minimum* | 74°F in 1916 |
| Milwaukee, WI | August 7 | 79°F minimum* | 76°F in 1916 |
| Rochester, MN | August 7 | 73°F minimum* | 70°F in 1979 |
| Flint, MI | August 8 | 98°F | 93°F in 1983 |
| Flint, MI | August 9 | 95°F | 94°F in 1944 |
| Detroit, MI | August 8 | 99°F | 97°F in 1941 |
| Houghton Lake, MI | August 8 | 96°F | 95°F in 1949 |
| Traverse City, MI | August 8 | 98°F | 96°F in 1949 |
| Youngstown, OH | August 8 | 95°F | 93°F in 1983 |
| Youngstown, OH | August 9 | 94°F | 92°F in 1949 |
| Toledo, OH | August 8 | 97°F | 95°F in 1934 |
| Harrisburg, PA | August 8 | 99°F | 97°F in 1930 |
| Philadelphia, PA | August 8 | 100°F | 98°F in 1888 |
| Philadelphia, PA | August 9 | 101°F | 98°F in 1909 |
| Atlantic City, NJ | August 8 | 100°F | 96°F in 1983 |
| Atlantic City, NJ | August 9 | 103°F** | 98°F in 1983 |
| Newark, NJ | August 8 | 101°F | 97°F in 1983 |
| Newark, NJ | August 9 | 105°F**# | 100°F in 1949 |
| Binghamton, NY | August 8 | 91°F | 90°F in 1983 |
| Binghamton, NY | August 9 | 95°F | 89°F in 1973 |
| Syracuse, NY | August 8 | 96°F | 94°F in 1930 |
| Syracuse, NY | August 9 | 100°F | 96°F in 1949 |
| New York Central Park, NY | August 8 | 99°F | 96°F in 1980 |

| | | | |
|---|---|---|---|
| New York Central Park, NY | August 9 | 103°F | 100°F in 1949 |
| Bridgeport, CT | August 8 | 93°F | 92°F in 1983 |
| Bridgeport, CT | August 9 | 100°F | 96°F in 1949 |
| Akron-Canton, OH | August 9 | 95°F | 94°F in 1930 |
| Allentown, PA | August 9 | 98°F | 97°F in 1949 |
| Wilkes-Barre, PA | August 9 | 98°F** | 96°F in 1949 |
| Hartford, CT | August 9 | 102°F** | 97°F in 1949 |
| Providence, RI | August 9 | 100°F | 96°F in 1949 |
| Worcester, MA | August 9 | 74°F minimum* | 72°F in 1909 |
| Boston, MA | August 9 | 79°F minimum* | 75°F in 1949 |

* Record high minimum temperature records were broken.
** New maximum temperature record for the month of August
# Tied all-time annual maximum temperature record

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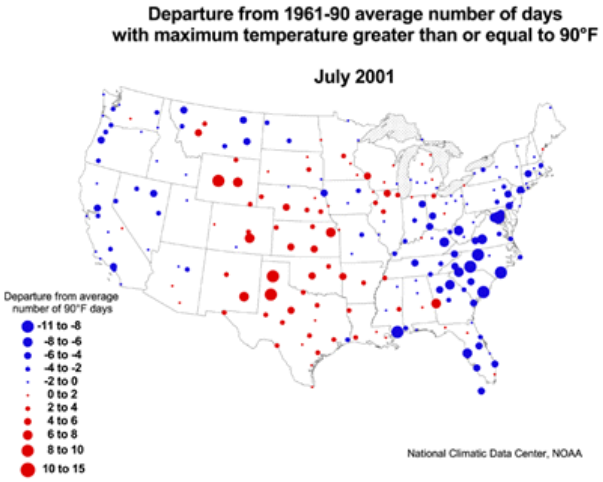
**Additional Data for Selected Cities**

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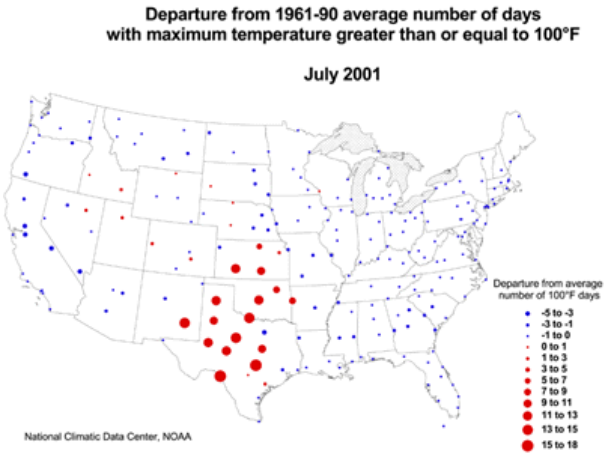
Number of Days with 90°F or Greater Temperatures

| Station | Number of Days | Month |
|---|---|---|
| Kearney, NE | 18 days | July 2001 |
| Kearney, NE | 7 days | Aug 1-7, 2001 |
| Hastings, NE | 17 days | July 2001 |
| Hastings, NE | 7 days | Aug 1-7, 2001 |

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Number of Days with 100°F or Greater Temperatures

| Station | Number of Days | Month |
|---|---|---|
| Garden City, KS | 11 days | July 2001 |
| Elkhart, KS | 11 days | July 2001 |
| Hays, KS | 14 days | July 2001 |
| Wichita, KS | 17 days | July 2001 |
| Liberal, KS | 19 days | July 2001 |
| Dodge City, KS | 19 days | July 2001 |
| Medicine Lodge, KS | 21 days | July 2001 |

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**Related Links**

For information on the heat index, heat disorders and hot weather safety tips, visit http://www.crh.noaa.gov/arx/ or http://www.nws.noaa.gov/om/heat/

To view NOAA's heat wave story, visit http://www.noaanews.noaa.gov/stories/s702.htm.

Citing the Article

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