## Average U.S. temperature increases by 0.5 degrees $\mathbf{F}$

June 302011



Statewide changes in annual "normal temperatures" (1981-2010 compared to 1971-2000).

According to the 1981-2010 normals to be released by NOAA's National Climatic Data Center (NCDC) on July 1, temperatures across the United States were on average, approximately 0.5 degree F warmer than the 1971-2000 time period.

Normals serve as a 30 year baseline average of important climate variables that are used to understand average climate conditions at any location and serve as a consistent point of reference. The new normals update the 30 -year averages of climatological variables, including average temperature and precipitation for more than 7,500 locations
across the United States. This once-a-decade update will replace the current 1971-2000 normals.

In the continental United States, every state's annual maximum and minimum temperature increased on average. "The climate of the 2000s is about 1.5 degree $F$ warmer than the 1970 s, so we would expect the updated 30-year normals to be warmer," said Thomas R. Karl, L.H.D., NCDC director.

Using standards established by the World Meteorological Organization, the 30-year normals are used to compare current climate conditions with recent history. Local weathercasters traditionally use normals for comparisons with the day's weather conditions.

In addition to their application in the weather sector, normals are used extensively by electric and gas companies for short- and long-term energy use projections. NOAA's normals are also used by some states as the standard benchmark by which they determine the statewide rate that utilities are allowed to charge their customers.

The agricultural sector also heavily depends on normals. Farmers rely on normals to help make decisions on both crop selection and planting times. Agribusinesses use normals to monitor "departures from normal conditions" throughout the growing season and to assess past and current crop yields.

NCDC made many improvements and additions to the scientific methodology used to calculate the 1981-2010 normals. They include improved scientific quality control and statistical techniques.
Comparisons to previous normals take these new techniques into account. The 1981-2010 normals provide a more comprehensive suite of precipitation and snowfall statistics. In addition, NCDC is providing hourly normals for more than 250 stations at the request of users, such as
the energy industry.

Some of the key climate normals include: monthly and daily maximum temperature; monthly and daily minimum temperature; daily and monthly precipitation and snowfall statistics; and daily and monthly heating and cooling degree days. The 1981-2010 climate normals is one of the suite of climate services NOAA provides government, business and community leaders so they can make informed decisions. NOAA and its predecessor agencies have been providing updated 30-year normals once every decade since the 1921-1950 normals were released in 1956.

## Provided by NOAA

Citation: Average U.S. temperature increases by 0.5 degrees F (2011, June 30) retrieved 10 April 2024 from https://phys.org/news/2011-06-average-temperature-degrees.html

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