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## **Georgia sees warmest summer nights ever**

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This past summer was one of the warmest on record for Georgia. It wasn't that the daytime high temperatures were that unusual; it was the warm nighttime temperatures that set records.

Meteorologists and climatologists define summer as the months of June, July and August. Almost all locations in Georgia had record to near-record warm nights for this time period.

Locations with at least 60 years of climate data that experienced record warm average daily minimum temperatures, which typically indicates nighttime temperatures, include Atlanta (132 years of climate data), Jasper (68 years), Gainesville, (109 years), Toccoa (107 years), Athens (67 years), Augusta – Bush Field (67 years), Waynesboro (75 years), Louisville (98 years), Macon (80 years), Columbus (63 years), Camilla (70 years), Moultrie (83 years), Brooklet (84 years), and Alma (62 years).

Locations with at least 60 years of climate data that experienced the second warmest summer average daily minimum temperatures include Cedartown (73 years of climate data), Tifton (89 years), Brunswick – McKinnon (62 years), and Sunnyside/Waycross (101 years). The third warmest average daily minimum temperatures were reported at Clayton (109 years), Lafayette (68 years), and Milledgeville (104 years). The fourth warmest average summer nights were recorded at Eastman (105 years), and Savannah (137 years).

These warm nights tell us little about global warming or climate change. Global warming is seen in long-term trends. A warm or cold month, season or year tells us very little about global warming or climate change.

However, warm nighttime temperatures are what we expect with human-induced global warming. If these abnormally warm nights continue over the next several years, then we have good evidence supporting human-induced global warming or climate change.

Based on preliminary data, of 27 locations with at least 60 years of climate data, only 9 locations had average daily maximum temperatures (which typically indicates daytime temperatures) that ranked in the top 5 warmest years for those locations. These 9 included the urban stations of Atlanta, which had the fifth warmest average daily maximum temperatures, and Athens, which had its third warmest average daily maximum temperatures. Columbus had its warmest average daily maximum temperatures ever. Brunswick - McKinnon had its third warmest. And Savannah tied its third warmest ever.

Only four rural locations had average daily maximum temperatures in the top 5 warmest years. Waynesboro had its warmest average summer maximum temperatures in 75 years. Brooklet experienced its warmest in 84 years of records. It was the second warmest in Sunnyside/Waycross in 101 years. Alma experienced its third warmest in 62 years.

Air conditioning cooling demands for buildings were above normal statewide. Cooling demand was 28 percent above normal in Atlanta, 26 percent for Athens, 23 percent for Columbus, 21 percent for Macon, 23 percent for Augusta, 18 percent for Savannah, 16 percent for Alma, and 18 percent for Brunswick.

Compared to last summer, cooling demand was 23 percent higher in Atlanta, 16 percent in Athens, 27 percent in Columbus, 19 percent in Macon, 17 percent in Augusta, 15 percent in Savannah, 12 percent in Alma, and 13 percent in Brunswick.

There is a high probability that winter will be warmer and drier than average. The ocean-atmosphere system is expected to remain in a La Niña pattern, which normally brings a warm and dry winter to Georgia. The La Niña pattern is often the pattern that leads to a summertime drought. Thus, there is an increased probability that Georgia could experience a drought in 2011.

Updated weather conditions can be found at [www.georgiaweather.net](http://www.georgiaweather.net).

*(David Emory Stooksbury is the state climatologist and a professor of engineering and atmospheric sciences in The University of Georgia College of Agricultural and Environmental Sciences.)*