



## SCIENCE & TECHNOLOGY

# Study Predicts Extreme Heat Rise in US Population Centers

August 29, 2020

A new study predicts that major U.S. population centers will experience the most extreme increases in heat over the next 20 or more years.

Some parts of the United States could experience up to 30 times more extreme heat than scientists had predicted, the study found.

The study was a project of researchers at Arizona State University. Their findings were reported in *Proceedings of the National Academy of Sciences*.

The researchers made predictions for extreme heat and cold **exposure** in 47 major U.S. cities.

To break down the local effects of rising temperatures worldwide, the research team measured the effects of heat in "person-hours." This was defined as a human being exposed to extreme heat for one hour.

The researchers considered three areas. The first was local definitions of what an "extreme" temperature is. Another was how city environments change the effects of extreme heat. The researchers also studied the effects of population **migration** and growth.

They also considered local **standards** for extreme heat. This is important because an intensely hot day in places like Phoenix, Arizona, or Austin, Texas, may not feel extreme to locals in those cities. However, the same heat in New York City could result in deaths - especially among higher risk groups, like older adults or the homeless.

With that in mind, the researchers came up with two areas of study: **absolute** increases and relative increases in extreme heat.

The top three cities for absolute increases in people affected by extreme heat were New York, Los Angeles, and Washington D.C.

Relative increases were predicted by combining temperature **factors** with information on population growth.

The researchers predicted that the most intense relative increases would be in the Florida cities of Orlando and Miami, as well as Austin, Texas. They added that because these cities are growing quickly, more people there will be exposed to extreme heat.

The southern city of Atlanta, Georgia, made both lists.

The researchers said the study shows that cities should prepare at the local level to avoid serious disorders and death resulting from extreme heat. They expressed support for safety measures such as having cooling centers and water available. They also noted the importance of having dependable **sources** of energy, since extreme heat can lead to power outages.

I'm Bryan Lynn.

*VOA News reported on this story. Bryan Lynn adapted the report for Learning English. George Grow was the editor.*

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## Words in This Story

**exposure** – *n.* coming in contact with something

**migration** – *n.* when people move to another place, often a different country

**standard** – *n.* a level of quality, achievement, etc., that is considered acceptable or desirable

**absolute** – *adj.* complete

**factor** – *n.* one of the things that has an effect on a particular situation, decision, event, etc.

**source** – *n.* where something comes from

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