



## Houston-Harris County Heat Mapping

### *Urban Heat Fact Sheet*

#### The danger of heat

- **Globally, heat is the number one weather-related killer, causing more deaths each year than floods, tornadoes, or hurricanes.** Extreme heat can kill directly via heat stroke and indirectly through increased risk of respiratory issues, heart attack and stroke. ([Yale 360](#))
- **Nine of the 10 most deadly heat waves on record have occurred since 2000,** killing nearly 130,000 people. ([C40](#))
- **More people die from the heat in this country than all the other natural disasters combined.** ([CDC Report](#))
- **80 percent of Americans live in cities,** meaning that urban heat islands can have serious health effects for hundreds of millions of people during the hottest months of the year. ([U.S. Census Bureau](#))
- **Summer 2020 is expected to be hotter than average,** and that's risky for municipalities and residents during the coronavirus pandemic because most heat-related fatalities occur indoors in homes, and emergency response plans rely on mass cooling centers. ([Urban Land](#))
- **Heat-related deaths occurred most frequently in urban areas (81%), and the three states with the highest burden, Arizona, Texas and California, accounted for 43% of all heat-related deaths.** ([CDC Report](#))

#### Disproportionate impacts

- **There can be upwards of 15° to 20° differences within a city. Data clearly demonstrates a correlation between lower-income neighborhoods and higher temperatures.** Other urban heat island studies have shown that the hottest places in metropolitan areas are often in poor, minority neighborhoods with few trees. ([Yale 360](#))
- **Non-Hispanic blacks were 52% more likely, non-Hispanic Asians 32% more likely, and Hispanics 21% more likely to live in [heat island] conditions compared with non-Hispanic whites.** ([Environmental Health](#))
- **Affluent whites were more likely to live in vegetated and less climatically stressed neighborhoods...In addition to being warmer, poorer neighborhoods lacked critical resources in their physical and social environments to help them cope with extreme heat.** ([Equity and the Environment](#))

#### Climate connection

- **Climate models show that in some cities the number of high-heat days could double by 2040.** ([Yale 360](#))
- **Under future scenarios, climate warming could increase heat deaths fivefold.** ([Public Integrity](#))

#### Houston & Harris County

- **Demographica:**
  - **Harris County has a population of roughly 4.7 million people. It's the most populous county in Texas and third largest county in the U.S.**
  - **The City of Houston has a population of 2.3 million.** It is the largest city within Harris County.
  - **The Harris County population is 42% Hispanic, 31% White, 19% Black, and 8% Asian/Other.**
  - **The uninsured population is 21.2% in Harris County and 24.1% in the City of Houston.**
  - **10.9% of the population in Harris County is over age 65 and 7.4% is under the age of 5**
  - **16.5% of the population live below poverty level in Harris County.**
- **In the last 15 years, the city's pavement cover has increased by more than 25%.** ([Texas A&M University](#))

- **August 2019 was the second warmest on record in Houston, with seven days in a row topping 100°.** ([Weather.gov](#)) All but two days that month met or exceeded the average daily high, leading our power grid to set an all-time record for system peak demand. ([ERCOT](#))
- **Summer heat in Houston is up to 13° hotter than in nearby rural areas.** ([Climate Central](#))
- **If there's no reduction in global greenhouse gas emissions, Houston can expect the average number of days with a heat index above 105° to increase from 10 to 74 by 2065.** ([Union of Concerned Scientists](#))
- **Houston has one of the largest per capita greenhouse emissions in the country. In 2014, Houston residents and businesses generated nearly 35 million tons of greenhouse gases through carbon-fueled buildings, cars and waste. If nothing is done, this number is projected to rise to at least 45 million per year by 2050.** ([Houston Chronicle](#))