

### Temperature Trends:

South Carolina is dominated by a humid, subtropical climate. Winters tend to be fairly mild with temperatures rarely dropping below freezing for sustained periods of time. Summers tend to be hot. South Carolina experiences significant precipitation year-round.<sup>1</sup>

Average temperatures have increased by just over 1°F since 1900. That rise was not accompanied by any increase in the number of “extremely hot days,” which the National Oceanic and Atmospheric Administration (NOAA) defines as days with maximum temperatures over 100°F.<sup>2</sup> There have been significantly fewer extremely hot days in recent decades compared to the 1930s through the 1950s.

The rise in average temperatures is most likely due to a slight decline in the number of winter days below freezing since the 1980s, and an increase in the number of nights with temperatures of 75°F or warmer.<sup>3</sup> The gradual increase in nighttime highs, but not daytime highs, suggests something other than greenhouse gases are driving the modest air temperature increases. The most likely culprit is an increase in the Urban Heat Island (UHI) effect influencing temperature readings at measurement stations. Sunlight during the daytime heats up solid surfaces like concrete, asphalt, and metal, which all hold heat longer than natural environments. Then, at night, the heat is gradually released, increasing local temperature.

South Carolina is the state with the fastest growing population in the country, primarily in coastal

### Key Takeaways

- South Carolina has experienced approximately 1°F warming since 1900; the modest warming has not been accompanied by an increase in heatwaves.
- There is no long-term trend in either heavy rain or drought.
- South Carolina’s sea level rise has largely been driven by land subsidence, which can be managed through civil engineering solutions.
- Hurricanes have not become more frequent or severe.
- Major crops like peaches, cotton, and peanuts have experienced increasing yields.

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**Figure 2: Number of Landfalling Hurricanes in South Carolina, 1850-2025**

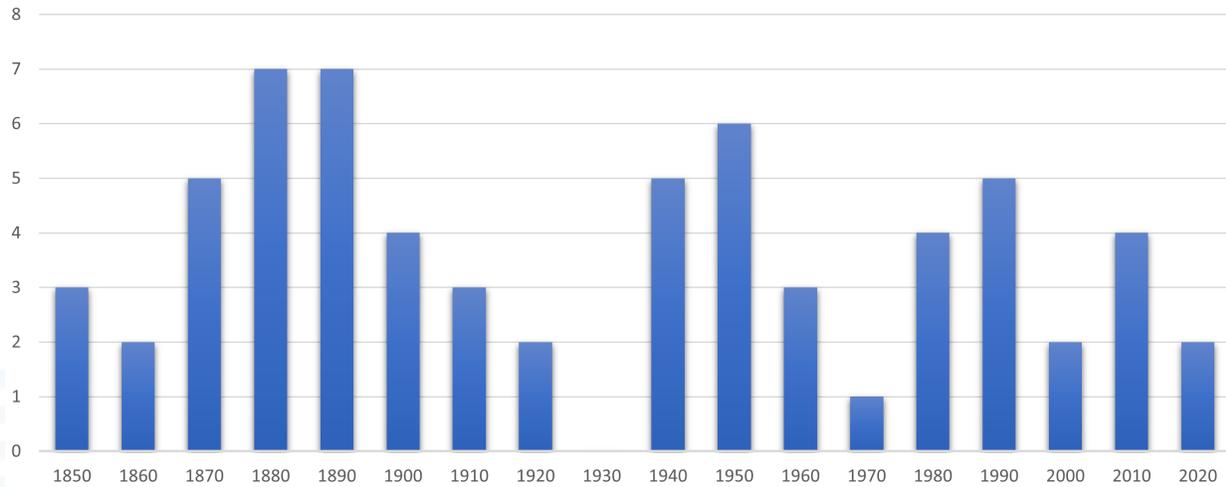


Figure 2: Count of landfalling hurricanes in South Carolina from 1850-2025. Data from NOAA Historical Hurricane Tracks HURDAT 2 database at <https://www.climate.gov/maps-data/dataset/historical-hurricane-tracks-gis-map-viewer>.

**Figure 3: Cotton Yields, 1900-2025**

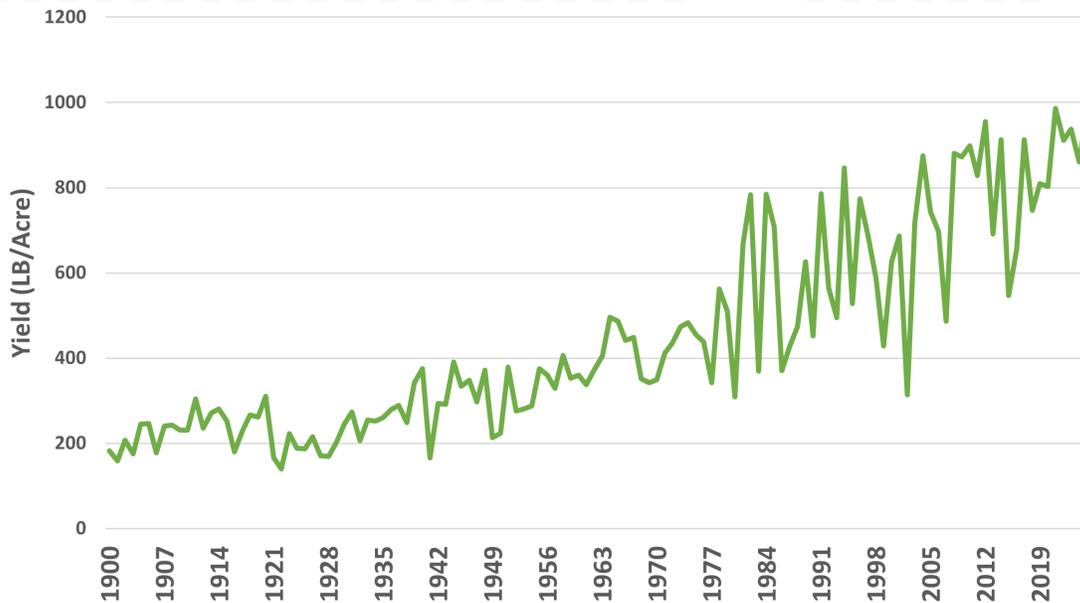


Figure 3: Cotton yields in South Carolina since 1900, measured in pounds per acre. Data from USDA QuickStats.

**Agriculture:**

Some of the major and iconic crops for South Carolina are peaches, cotton, and peanuts.

Peach production and yield data from the United States Department of Agriculture only goes back to 2007, and year-to-year fluctuations are large. In general, peach production has increased by 580 percent from 2007 to 2025.<sup>13</sup>

Data for cotton goes back much further, and cotton production saw its height in the 1910s and declined since then partially due to globalization. Nevertheless, since 1900, cotton yields in South Carolina have increased 448 percent.<sup>14</sup>

Peanuts have done exceptionally well, with production skyrocketing 7,100 percent since recordkeeping begins in 1909, and a 396 percent increase in yield.

**Conclusion:**

Like every state, South Carolina has unique environmental challenges. However, the evidence suggest it is not particularly threatened by or has experienced much impact from recent climate change. Average temperature has modestly risen since 1900, but that has not resulted in any increase in extreme heat, precipitation, extreme weather, or harm to agriculture. On the latter point, this is likely boosted by carbon dioxide (CO2) fertilization amid rising atmospheric CO2. Agricultural production of historically and culturally important crops to the state has improved substantially, with no sign of climate-related decline.

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## Endnotes

- 1 “United States Koppen-Geiger Climate Classification Map,” plantmaps.com, February 18, 2024, [https://www.plantmaps.com/koppen-climate-classification-map-united-states.php#google\\_vignette](https://www.plantmaps.com/koppen-climate-classification-map-united-states.php#google_vignette)
- 2 Frankson, R., K. E. Kunkel, S. M. Champion, and D. R. Easterling, “South Carolina State Climate Summary 2022,” NOAA Technical Report NESDIS 150-OH. Silver Spring, MD: NOAA/NESDIS, <https://statesummaries.ncics.org/chapter/oh/>
- 3 *Ibid.*
- 4 World Population Review, “South Carolina Population,” Accessed February 18, 2026, <https://worldpopulationreview.com/states/south-carolina>.
- 5 Spencer, Roy W., John R. Christy, and William D. Braswell, “Urban Heat Island Effects in U.S. Summer Surface Temperature Data, 1895–2023,” Journal of Applied Meteorology and Climatology, Department of Interior, <https://doi.org/10.1175/JAMC-D-23-0199.1>
- 6 Frankson, R., et al. 2022, “South Carolina State Climate Summary 2022”
- 7 “Climate at a Glance: Statewide Time Series,” NOAA National Centers for Environmental information, September 2025, <https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/statewide/time-series/38/pmdi/1/0/1895-2026>
- 8 “Sea Level Trends – Relative Sea Level Trends for Tropical and Gulf Coast,” NOAA Tides & Currents, Accessed February 18, 2026, [https://tidesandcurrents.noaa.gov/sltrends/sltrends\\_station.shtml?id=8665530](https://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?id=8665530)
- 9 South Carolina Sea Grant Consortium, “Water Cities: Can We Climate-Proof the Coast,” Accessed February 18, 2026, <https://www.scseagrant.org/water-cities-climate-proof-the-coast/>
- 10 “Global Tropical Cyclone Activity: Ryan Maue,” Global Tropical Cyclone Activity, Accessed February 18, 2026, <https://climatlas.com/tropical/>
- 11 “Historical Hurricane Tracks - Gis Map Viewer,” NOAA Climate.gov, Accessed February 20, 2026, <https://www.climate.gov/maps-data/dataset/historical-hurricane-tracks-gis-map-viewer>
- 12 “Tropical Cyclone History for Southeast South Carolina and Northern Portions of Southeast Georgia,” National Weather Service, February 15, 2025, <https://www.weather.gov/chs/TChistory>
- 13 U.S. Department of Agriculture, Peach Production data for South Carolina, USDA/NASS QuickStats, <https://quickstats.nass.usda.gov/results/CA33D6DA-D687-3CC6-83A4-D96B48CF4FB0>
- 14 U.S. Department of Agriculture, Cotton production and yield data for South Carolina, USDA/NASS QuickStats, <https://quickstats.nass.usda.gov/results/249F8E2A-EF7A-30D1-ADDD-70973B7DB34B>