

'Good old days ... getting snowstorms': What Boston's snowless streak means for New England

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If Friday's forecasted snowfall in Boston surpasses 1 inch, which is likely, the city will end its fifth-longest snowless streak in its documented climate history.

But in the case snow totals don't reach 1 inch, the bleak record will persist, pushing the city into its fourth-longest stretch without 1 inch of snow since 1891.

As of Jan. 1, it had been 316 consecutive days since Boston saw an inch of snowfall, according to the National Weather Service's Boston bureau. If the city reaches 323 days, it'll surpass the current fourth-longest streak at 322 days, which took place between February 2011 and January 2012.

Meanwhile, Boston just closed out 2021 as its warmest year on record, with a mean temperature of 54.4 degrees at Logan International Airport. According to the National Weather Service, the "normal" temperature between 1991 and 2020 was 52 degrees.

The recent data for both snowfall and heat is in line with the persisting reality of warming temperatures and milder winters in New England caused by climate change.

AccuWeather senior meteorologist Carl Erickson said typical snowfall in Boston from October through early January is about 11 inches. As of Jan. 4, Boston was measuring .4 inches of total snowfall.

"To get snow into Boston, you need prolonged, consistent cold, and instead of these fast moving storms (we're seeing), they need to intensify and move up the coast," said Erickson.

While the city is expected to see its first notable snowfall of the season on Friday, possibly 3-6 inches, Erickson said, "I don't see any significant opportunities for snowfall after that, looking into late January."

New England warming faster than the rest of the world

A new study recently published in the journal Climate showed that New England appears to be warming faster than the rest of the world. Researchers from Salem State University and the University of Massachusetts Amherst analyzed data from 1900-2020 in all six New England states, finding that the winter season is experiencing the greatest warming.

"One of the major cultural, ecological and economic features of New England," the study says, is its four-season climate, "arguably the region's biggest draw." The four seasons and their characteristics are diminishing, though, due to rising temperatures.

"This might soon be the good old days in terms of still getting snowstorms," said Mathew Barlow, professor of climate science at the University of Massachusetts Lowell.

New England has warmed past the 1.5 degrees Celsius level, the Climate journal study notes, which the Intergovernmental Panel on Climate Change has set as a do-not-pass threshold, and is actually closer to passing the 2 degrees Celsius level.

In addition to Boston's record-breaking year, Providence, Rhode Island also broke a record in 2021 for its warmest year in NWS station history – at 54.1 degrees.

AccuWeather's Erickson said one of many factors contributing to New England's milder winters "is the oceans have been warming over the past several years, and that can have an impact."

The Gulf of Maine, for example, has been identified as one of the fastest-warming bodies of water in the world.

Consequences of warmer winters in New England

Each decade between 1965 and 2005, New England has lost nine snow-cover days due to less precipitation falling as snow and from faster snow melt, according to a 2008 study titled "Trends in wintertime climate in the northeastern United States."

In essence, New England winters are becoming less and less wintry.

Barlow said the data on warmer winters is in sync with climate change predictions made in the 1980s, and "we're confident that things are progressing the way they were projected."



A line of kids with their sleds atop a huge pile of snow at Quinsigamond Community College in Worcester, a local favorite for sledding. Feb. 7, 2021 T&G Staff/Christine Peterson

Unfortunately, he said, "that increases our confidence that we'll continue to see an acceleration of these changes, unless very substantial reductions are made to greenhouse gas emissions."

Scientists have said warmer winters could disrupt the region's water cycle and soil. A lack of snowfall could also set the scene for an active wildfire season beginning in the spring, if groundwater is unable to recharge during the wintertime.

Experts in the region have pointed to the winter of 2020-2021 as an example, one of the warmest on record following extreme drought conditions in 2020. Because of the subsequent mild winter, groundwater wasn't able to recharge, which is essential for keeping wildfires at bay.

The changing temperatures are making more hospitable environments for pests – such as ticks, mosquitos, and the recently introduced southern pine beetle that has crept its way north due to climate change. In turn, that could lead to increased spread of the infectious diseases they carry, such as Lyme disease and West Nile Virus.