

STORY ARCHIVE

Northeast Saw One of the Warmest, Least Snowy Winters on Record

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AMHERST, Mass. - The meteorological winter that just ended was one of the warmest ever recorded for Massachusetts and the Northeast, depending on location, and was coupled with very low snowfall amounts, according to climatologist Michael Rawlins, manager of the Climate System Research Center at the University of Massachusetts Amherst. Meteorological winter runs from Dec. 1 to March 1.

"We haven't had a below average monthly temperature since last June," Rawlins says. "To me as a climate scientist, it's interesting that we've had all these warm months. If this were to continue, we'll very likely go on to have a very warm 2012."

At Boston, the season was the second warmest on record since 1872, with a seasonal average mean daily temperature of 37.2 degrees F. Worcester also saw the second warmest seasonal average at 32.8 degrees F. In Hartford, meteorological winter was the second warmest ever recorded at 35.0 degrees F, Rawlins reports.

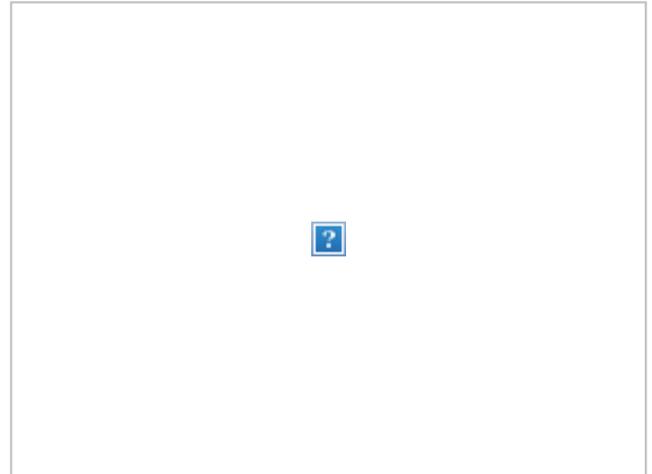
At the Blue Hill Observatory in Milton, home of the oldest continuous weather records in North America, the winter was also second warmest at 34.3 degrees F. and saw the second lowest snowfall since 1872.

In Amherst, where record keeping began in 1836, this winter was the warmest ever recorded. The seasonal average mean daily temp was 32.6 F, surpassing 32.1 F set in 2001-02, which was the warmest meteorological winter recorded for most Northeast locations.

Regionally, the Northeast Regional Climate Center in Ithaca, N.Y., reports a mean winter temperature across Massachusetts of 33.6 F, second warmest of the 117-year record. The average across the Northeast was 31.3 F, third warmest. Seven of the 12 Northeast states experienced their second warmest year on record, with the other five falling in the top six warmest winters.

"Overall we've had quite a warm winter. It was also remarkable for the low snow-to-total-precipitation ratios, which is consistent with the multi-decade trend of lower snow totals compared to rainfall during the snow season," Rawlins notes.

Winter total precipitation at Boston was 7.64 inches, around 75 percent of normal. Amherst, Worcester and Hartford received 84, 91, and 99 percent of normal winter precipitation, respectively. "So while Boston experienced its fourth least snowiest winter on record, and snowfall at other locations likely fell in the top 10 least snowiest, the region did not experience exceptionally dry weather," he adds.



Boston has received 9.2 inches of snow this snowfall season. Amherst has received 17.4 inches. In the absence of additional snowfall, Boston's total would rank second least snowy on record, while Amherst's total would rank in the top five least snowy. "Given the relatively warm waters offshore, it will be increasingly difficult for snow to occur as the weeks go by," says Rawlins.

Season 2011-12 degree-day totals, a measurement designed to reflect the demand for energy needed to heat a home or business, through February at Boston, Worcester and Hartford are 20 percent below average, a reflection of the warm conditions over autumn and winter. At Boston, Worcester and Hartford, the last month with a mean monthly temperature below average was June 2011.

As for the relationship between weather and climate, the climate scientist points out that "these are weather data from one year. Remember climate is weather averaged over long time periods. We shouldn't confuse warm weather with climate change. But it's also true that when you have a warm season on top of a long-term warming trend, you're more likely to see records broken and more likely to experience extremes in weather."

It's interesting that while monthly average temperatures have risen over the past decade in spring, summer and fall, we've seen a series of colder-than-average winters since 2002, Rawlins adds. "Winter has been the anomaly in the picture so far, and recent research suggests that this may be attributable to processes occurring further north," he reports.

"Climate researchers are currently investigating the hypothesis that losses of sea ice in the Arctic has led to increased snowfall in Siberia, which in turn may be leading to colder winters in the eastern United States and Europe in recent years." He notes that data reported here are considered preliminary by the National Weather Service and have not undergone quality control by the National Climatic Data Center.

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