

## Study: Northeast seeing more, fiercer rainstorms

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In this March 30, 2010 file photo, West Warwick, R.I., firefighters evacuate residents from their flooded houses near the Pawtuxet River. The Northeast is seeing more frequent "extreme precipitation events" in line with global warming predictions, a study released Monday, April 5, 2010 shows, including storms like the recent fierce rains whose floodwaters swallowed neighborhoods and businesses across New England. (AP Photo/Stew Milne, File)

(AP) -- The Northeast is seeing more frequent "extreme precipitation events" in line with global warming predictions, a study shows, including storms like the recent fierce rains whose floodwaters swallowed neighborhoods and businesses across New England.

The study does not link last week's devastating floods to its research but examined 60 years' worth of [National Weather Service](#) rainfall records in nine Northeastern states and found that storms that produce an inch or more of rain in a day - a threshold the recent [storm](#) far surpassed - are

coming more frequently.

"It's almost like 1 inch of rainfall has become pretty common these days," said Bill Burtis, spokesman for Clean Air-Cool Planet, a [global warming](#) education group that released the study Monday along with the University of New Hampshire's Carbon Solutions New England group.

The study's results are consistent with what could be expected in a world warmed by greenhouse gases, said UNH associate professor Cameron Wake. He acknowledged it would take more sophisticated studies to cement a warming link, though.

"I can't point to these recent storms and say, that is global warming," he said.

What is more certain, researchers said, is the potential economic impact should the 60-year trend continue and require billions of dollars in infrastructure improvements to things in the region including roads, bridges, sewers and culverts.

The study examined precipitation data from 219 Weather Service reporting stations in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont from 1948 to 2007.

The report found that in all but 18 of the stations, "extreme precipitation events," defined as storms that produced at least 1 inch of rain over a 24-hour period or the water equivalent of snow, are occurring at a more frequent rate.

Average annual precipitation in the region also increased, albeit slightly, by nearly three-quarters of an inch per decade over the 60-year period. That period included a marked drop-off in rainfall during the 1960s,

when much of New England experienced drought, and again during a regional drought in 2001.

When it came to the really big storms - ones that produce 2 inches or even 4 inches in a 24-hour period - the study found those also occurring with more regularity than in the past.

As the world warms, Wake said, there is more energy to evaporate water, creating more water vapor in the air. That in turn can increase the number of storms and the amount of precipitation those storms produce, he said.

The ferocious March storms - Providence, R.I., and other cities set a monthly record for precipitation, while Boston experienced its second-rainiest month since record keeping began - seem out of whack even with the findings in the report.

"It's consistent, but it's way more than even the trends we've seen," he said. "It's anomalous for sure."

Global warming skeptic Patrick Michaels, a senior fellow in environmental studies at the Cato Institute, said it would be unfair to use the recent floods as an example of what's in the study.

"You can't take an individual event and say it's a product of a certain trend," Michaels said.

Previous studies have shown that New England's wettest days of the year are getting wetter over time, but there was no net change nationwide, raising doubt as to whether global warming is the culprit, Michaels said.

Whether warming is the cause or not, if rainstorms are getting fiercer, there will be a price to pay, some experts noted.

"If you're spending more on dealing with extreme weather events, what does that take away from?" said Ross Gittel, an economics professor at UNH and executive committee member of Carbon Solutions New England.

"Do you have to tax people more and that has a damper on the overall economy?" he said. "... Or does it take away from investments in education that could lead to more productivity and economic growth over time?"

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