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FEMA wants Georgia to earn funds by crystal-ball storm forecasting

Patrick J. Michaels

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Last fall, the Federal Emergency Management Agency issued a draft proposal that will require Georgia to do the impossible or face the loss of disaster relief funds. Specifically, state governments will be required to assess the risk of future disasters in a changing climate.

FEMA Has Solicited public comments and will, as per usual, ignore most if not all of them when it issues its final rulemaking later this year. So what can Georgia confidently expect global warming to do to its most significant natural hazard, the tropical cyclone?

The Georgia coast is recognized as one the five most "overdue" locations in the United States. The last major storm is known as the Georgia Hurricane of 1898. It is classified as a high Category 3 storm, although its pressure recorded at landfall of 27.71 inches is more characteristic of a Category 4 system. The relative rarity is partly because of local geography, which limits the number of "direct" hits because the Florida and Carolina coastlines are much further to the east, usually taking the first landfall from storms that may ultimately pass over Georgia as decaying systems.

It is well known that the late 19th century, when global temperatures averaged aabout 1.4 degrees Fahrenheit lower than today, was a very active period for landfalling hurricanes in the United States. There were three direct strikes on the Georgia coast in 17 years (1881, 1893, and 1898), which is probably as unusual as the very long period (116 years) since the last big hurricane.

Despite some work on maximum hurricane potential from a theoretical point of view, based upon the historical record, there seems to be no relation between global surface temperature and the probability a severe hurricane hitting Georgia.

Nonetheless, Fema will require Georgia to "provide a summary of the probability of future hazard events that includes projected changes in occurrence for each natural hazard in terms of location, extent, intensity, frequency and/or duration. Probability must include ... the effects of climate change on the identified hazards."

Anything one can say about climate change and future hazards, such as hurricanes, has to be based upon some kind of forecast model, and there are a lot out there. For example, in its most recent compendium on climate change, the United Nations uses 107 different versions, all of which predict slightly different futures and none of which have been correct about the climate of the past two decades.

In Those Past two decades, according to the global satellite-sensed temperature record environmentalists used to love, there has been no net global surface warming whatsoever. Is it realistic to think we could use these same models to reliably predict how many hurricanes will hit Georgia in 2050?

In recent years, a substantial number of scientific papers have been published calculating a "sensitivity" of temperature to carbon dioxide that is lower than the mean value used in the science compendia of the U.N.'s Intergovernmental Panel on Climate Change and the U.S. Global Change Research Program. This is unfortunate because planners often are constrained to use their two scenarios for future guidance, even as evidence continues to mount that both have predicted considerably more warming than will occur this century.

One important component of hurricane-related damages is sea level. However, predicted rises are directly proportional to global surface temperature, so if the models are predicting too much warming, they are doing the same for the rise in sea level.

The Relationship between hurricanes and global warming also is not very clear. Since satellite coverage became global around 1970, we can track every last one of them, including the many that stay harmlessly out to sea, and we can estimate their power from the way they look from space. In the nearly half-century of data we now have, there is simply no relationship between the frequency and/or power of these storms and global surface temperature.

The average length of time between Category 3 hurricanes that hit the United States is a little more than two years. The last one we had was almost 10 years ago. We haven't had that big a gap since the Civil War era, even though it is a degree warmer now.

As for the future, some computer models are forecasting slight but statistically significant increases in hurricane wind speed or rainfall around 2080, while other simulations forecast a reduction in the frequency of storms that make landfall in the United States.

Fema Expects Georgia to magically know which of these is right, and how climate change will effect the "intensity, frequency and/or duration" of not just hurricanes, but only those hurricanes that visit their wrath upon the state, as well as monster tornadoes – or else they might withhold the tax dollars paid to them in case of emergency.

It seems as though FEMA's morals are as bad as their grasp of climate science.

Patrick J. Michaels is the director of the Center for the Study of Science at the Cato Institute.