

## Massachusetts State Hazard Mitigation and Climate Adaptation Plan State Agency Vulnerability Assessment Reference Materials: Nor'easter

A nor'easter is an extratropical cyclone that relies on cold, arctic air interacting with warmer ocean water from the Gulf Stream. The interaction of these two systems results in turbulence and instability similar in some ways to a hurricane, except the center of a nor'easter is a column of relatively cold air (as opposed to a hurricane's column of hot air). Nor'easters are often massive systems that can reach 1,000 miles across, and they often travel more slowly than hurricanes. As a result, their impacts usually endure longer than those of a hurricane and can often last up to a week. These storms can bring hurricane-force winds and substantial inundation, in addition to significant snowfall<sup>12</sup>. Hurricanes and nor'easters share many of the same core characteristics and necessary environmental conditions, as described above. Therefore, it is anticipated that changes to nor'easter frequency and intensity as a result of climate change will be similar to those of hurricanes. Specific data on changes to nor'easter behavior are not available at this time, so survey takers are directed to the "Hurricanes and Tropical Storms" hazard reference materials for additional information.

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<sup>1</sup> Prociv, K. (2013, February 13). Hurricanes vs. Nor'easters. What makes them different?. *Washington Post Blog*. [https://www.washingtonpost.com/blogs/capital-weather-gang/post/hurricanes-vs-noreasters-what-makes-them-different/2013/02/13/df35d3de-7598-11e2-aa12-e6cf1d31106b\\_blog.html?utm\\_term=.bff56978b6ac](https://www.washingtonpost.com/blogs/capital-weather-gang/post/hurricanes-vs-noreasters-what-makes-them-different/2013/02/13/df35d3de-7598-11e2-aa12-e6cf1d31106b_blog.html?utm_term=.bff56978b6ac)

<sup>2</sup> Brown, J. (2010, October 14). Nor'easters Vs. Hurricanes. *WVVA.com: Precision Doppler*. <http://addins.wvva.com/blogs/weather/2010/10/noreasters-vs-hurricanes>