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MEDIA ADVISORY:

State Climatologist: The Real 'Perfect Storm' One of the Strongest of Past Century

Andrea Gail Most Likely Lost Before Storm Systems Merged

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DURHAM, N.H. -- Millions of people are expected to flock to the movies this summer to see the "Perfect Storm" based on Sebastian Junger's best-selling book about the deaths of six Gloucester, Mass., fishermen lost at sea in October 1991.

Their boat, the Andrea Gail, was said to have encountered waves 10 stories high and winds of 120 miles per hour, inconceivable levels that only a few people have ever witnessed. Ironically, the Andrea Gail probably went down before the actual "perfect storm" formed, according to Barry Keim, University of New Hampshire associate professor of geography and state climatologist, who says last contact with the vessel was made Oct. 28 at 6 p.m. The merging of the coastal Nor'easter with the remnants of Hurricane Grace took place late on the 29th into the 30th.

"Even before this merging, it was already a potent Nor'easter that was producing high wave activity," says Keim. "But after the storms merged, sustained wind speeds increased from about 35 mph to near 45 mph. A dome of cold air and high pressure to the north and west of the 'perfect storm' intensified the winds by creating a dramatic change in atmospheric pressure between the two systems."

An unusual characteristic of this storm was the duration of wind between 35 and 45 mph, which persisted for nearly five days from Oct. 27 to Nov. 1. The combination of these factors generated the high waves,

making it one of the strongest storms of the past century. Because of this, the storm is also known as the "Halloween Storm" and the "All Hallow's Eve Coastal Storm."

Once formed, says Keim, "the storm retrograded westward, whereas most storms move northeastward in this region. Storms that do this are generally not predicted very well by meteorologists."

Buoy data indicate significant wave heights near 39 feet were produced by the storm. Some unsubstantiated reports suggest that deep-water waves reached up to 85 feet, and others have speculated that 100-foot waves may have been produced.

The "perfect storm" was an offshore storm, causing great damage to the coastal zone from wave activity. In Massachusetts, 25-foot waves reached the shoreline, and came on top of tides that were already 4 feet above normal.

Coastal damage occurred from the Caribbean to the Canadian Maritimes, but the most severe damage was sustained in New England. Hundreds of homes along the coast were damaged, and many washed away completely. Also damaged or destroyed were sea walls, bulkheads, boardwalks, boats and lobster traps.

Over land, winds were strong, but Boston's peak wind during the event was only 55 mph. Portland, Maine, peaked at 53 mph. Chatham, Mass., reported a peak gust of 78 mph, and Marblehead experienced a gust of 68 mph.

"What is more impressive, however, is that the average daily wind speeds at Boston on Oct. 28 through 31 were 21, 18, 26 and 21 mph, respectively," Keim says. "In other words, a very persistent strong wind for a long duration. Note that the winds are generally stronger over water, and closer to the storm center, which was the case here. By comparison, Concord, N.H., had a peak wind gust of only 25 mph during the storm and recorded a meager 0.17 inches of rain from Oct. 26-31."

Based on wave activity offshore, the All Hallow's Eve Storm was the strongest on record over the past 50 years, and was determined to be greater than a 500-year storm event.

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