

# NESEC NEWS

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## Northeast Planning for the “Maximum of Maximums”



*During the 1938 Hurricane, the U.S. Coast Guard ship 'Tulip' was washed across the tracks at New London, CT* PHOTO CREDIT: DOT

LITTLE ROCK, AR - Federal Emergency Management Agency (FEMA) Administrator Craig Fugate recently challenged emergency managers from across the United States to plan for worst case scenarios that go beyond the capabilities of government solutions, scenarios which he refers to as “Maximum of Maximums,” or MOMS. Ad-

ministrator Fugate made his remarks at the annual meeting of the National Emergency Management Agency, held in Little Rock, AR.

“Historically in emergency management we have only planned for what our capabilities can handle or only looked at what we can do to respond as government,” said Fugate. “But what we really need to be doing is planning for disasters that go beyond our capabilities.”

What does that mean to us in the Northeast as far as what hazards or events would test our capabilities and challenge our ability to respond? Historically, the Northeast has experience catastrophic events such as earthquakes, hurricanes, tornadoes, blizzards, floods terrorist attacks and others. These events are certain to occur again - it is just a matter of time. But what can we learn from the past and what might the future hold when these events reoccur?

Let us take a look at several of the many potential hazard specific “Maximum of Maximums” that would challenge us here in the Northeast.

*(continued on page 3)*

### Natural Hazards & Sustainability for Residential Buildings

WASHINGTON, DC - The Federal Emergency Management Agency (FEMA) has produced a document that examines current green building rating systems in a broader context. It identifies green building practices—the tools of today’s green building rating systems—that are different from historical residential building practices and that, unless implemented with an understanding of their interactions with the rest of the structure, have the potential to compromise a building’s resistance to natural hazard events.

This document discusses how to retain or improve natural hazard resistance while incorporating these green building practices. While most common green building practices provide sustainability advantages with little or no effect on structural performance, others require reevaluation of the building’s structural design or detailing to retain its integrity during natural hazard events. Often, only minimal design modifications are required to maintain natural hazard resistance. For more information, click the report on the right.



Natural Hazards and Sustainability for Residential Buildings

FEMA P-798 / September 2010



*Click the image above for access to the report*

FEMA PHOTO

(continued from page 1)

**Earthquake MOM: A 6.5 Earthquake striking a heavily populated urban area causing billions of dollars in damage and killing hundreds.**



1755 Boston Earthquake IMAGE: USGS

The northeast has experienced several large earthquakes in the past several hundred years. In 1755 an earthquake struck off the coast of Massachusetts causing significant damage in Boston. This earthquake is estimated at 6.0 magnitude. In 1638 a 7.0 earthquake struck the region. Scientists believe that this earthquake was a 6.5 and was epicentered near Concord NH. In 1884 an earthquake with a magnitude of 5.2 struck New York City causing chimneys and brick walls to fall. Estimates prepared using FEMA's HAZUS Loss Estimation software indicate that a 6.5 earthquake in the northeast would cause billions of dollars in damage, killing hundreds and injuring thousands.

**Hurricane MOM: A Category 3 Hurricane making landfall over Long Island NY and tracking up through New England killing hundreds and causing billions of dollars in damage.**



Hurricane of 1938 aftermath IMAGE: NOAA

Since 1900, the northeast has been struck by twenty-five hurricanes. Some of the most notable were Hurricane Bob, 1991, Gloria 1985, Carol 1960 and Donna 1954. The worst hurricane to affect New England was the Great Hurricane of 1938, which struck on September 21st. The Great Hurricane of 1938 struck at high tide pushing a storm surge of 12 to 15 feet across the south coast. Winds of over 120 mph blew across the region. The Blue Hill Observatory, in Milton MA, recorded a sustained 5-minute wind of 121 mph and a peak gust to 186 mph. Estimates prepared by NESEC using FEMA's HAZUS Loss Estimation software indicate that a Category 3 in the northeast would cause billions of dollars in damage. A storm this strong could kill hundreds and injure thousands.

**Tornado MOM: An F5 Tornado striking a heavily populated area killing a thousand people and causing hundreds of millions in damage.**

The most devastating tornado ever to occur in the Northeast was the Worcester Tornado of June 9, 1953. Within

one minute, more than 90 people were killed and over 1,300 injured. Damage estimates were in excess of \$52 million. In one case, the Worcester Tornado carried pieces of mattresses high into the storm, where they were coated in ice before being dropped into Boston Harbor. Another devastating tornado occurred in Windsor Locks, Connecticut at about 3PM



Worcester Tornado damage IMAGE: NOAA

on October 3, 1979. This twister lasted a little less than a minute, but killed 3 people, injured over 300, destroyed 40 homes, and caused \$300 million in property damage. In November of 1989, the East Coldenham Elementary School was hit by an F1 tornado. The tornado blew down a cafeteria wall, killing 8 students and injuring 18 others. On July 12, 2006 an F2 tornado touched down in Westchester County, NY, proving that devastating tornadoes can form even in the New York City area.

**Blizzard MOM: A major Blizzard hits the Northeast during a heavy rush hour commute with over 50 inches of now and hurricane force winds causing billions of dollars in damage along the coast, widespread extended power outages and stranding thousands.**

The most severe winter storm to ever hit the Northeast was the Great Blizzard of 1888, also known as The Great White Hurricane. Record snowfalls of 40 to 50 inches fell in parts of the region. Sustained winds of over 45 miles per hour produced snow drifts excess of 50 feet. Fire stations were immobilized, and property loss from fire alone was estimated at \$25 million.



1978 Blizzard at rush-hour IMAGE: NOAA

The largest winter storm in recent history is the Blizzard of 1978, which dumped 20 to 40 inches of snow on the Northeast and produced near-hurricane force winds of 65 mph. It snowed for 33 hours, sometimes at the rate of 4 inches an hour. Motorists were stranded on the highways while others were trapped in their homes or offices by snow drifts up to 15 feet high blocked the exits. Fierce northeast winds from the storm combined with astronomically high tides led to a damaging storm surge along the coast. Two weeks were required to remove the snow, as over 3,500 cars were found abandoned and buried in the middle of roads during the clean-up effort.

# Another Winter of Uncertainty for Northeast

WASHINGTON, DC - A moderate to strong La Niña will be the dominant climate factor influencing weather across most of the U.S. this winter. When it comes to the Northeast, other climate factors will play a role in our winter weather forecast. According to Mike Halpert, deputy director of the National Weather Service's Climate Prediction Center, "some of these factors, such as the North Atlantic Oscillation, are difficult to predict more than one to two weeks in advance. The North Atlantic Oscillation adds uncertainty to the forecast in the Northeast and Mid-Atlantic portions of the country."

The Climate Prediction Center is forecasting equal chances for above-, near-, or below-normal temperatures and precipitation in the Northeast. It is important to point out that this seasonal outlook does not project where and when snowstorms may hit or total seasonal snowfall accumulations. Snow forecasts are dependent upon winter storms, which are generally not predictable more than several days in advance.

So once again the forecast for the Northeast is un-



The National Weather Service's US Winter Outlook map for precipitation. Note the uncertainty for the Northeast region.

PHOTO CREDIT: NOAA

certain. Nevertheless, the National Weather Service advises that this is a good time to review the outlook and begin preparing for whatever the winter of 2010-2011 may have in store for the Northeast.

## FEMA WEBINAR: Earthquake Safety & Mitigation for Schools

WASHINGTON, DC - A 1-hour webinar for school officials, teachers, facility managers, and other local stakeholders interested in learning how to reduce earthquake risks and take actions to ensure school safety and continued operations. Information is based on **FEMA 395: Incremental Seismic Rehabilitation of School Buildings (K-12): Providing Protection to People and Buildings**, which is available for download at <http://www.fema.gov/library/viewRecord.do?id=1980>

**GENERAL INFO:** Numerous school buildings located in multiple States and U.S. territories are vulnerable to earthquake damage and losses. This includes potential:

- Death and injury of students, teachers, and staff
- Damage to or collapse of buildings
- Damage and loss of furnishings, equipment, etc.
- Disruption of education and school operations
- Inability of community to use schools as shelters

At this webinar, you will learn how to do the following:

- Assess and analyze your earthquake risks
- Develop an actionable plan to reduce/manage risk
- Initiate an earthquake risk reduction plan for existing school buildings that were not designed and constructed to meet modern building codes
- Secure "non-structural" parts of the school facility
- Apply "incremental seismic rehabilitation" to protect buildings and ensure occupant safety

**WHEN:** Thursday, January 20, 2011 at 3:00 pm EST  
Thursday, February 17, 2011 at 3:00 pm EST  
Thursday, March 17, 2011 at 3:00 pm EST

**WHERE:** Online webinar via FEMA Adobe Connect & Conference Line. Information will be shared upon

**REGISTRATION:** Registration is free. Please send your preferred date to participate, name, organization, address, phone number and email address by fax at 650-593-2320 or by email at [atc@atcouncil.org](mailto:atc@atcouncil.org) by Friday, January 7, 2010.

## Perfect Holiday Gift Idea to Keep Your Family Safe

WAKEFIELD, MA - If you donate \$15 to NESEC this holiday season, we will send you a FREE NOAA HH50 Radio (MSRP \$29.99) to keep you and your family informed in the event of an emergency. Whether traveling, boating, hiking or working outdoors, this portable tone alert weather radio monitors National Weather Service and Emergency Alert System broadcasts so that you can stay safe through dangers such as severe thunderstorms, winter storms, hurricanes, flash flooding and tornadoes. Package includes: One (1) NOAA HH50 Radio, belt clip, hand strap, and owner's manual. Radio runs on 3 AAA batteries (not included).

You can make your donation and receive your FREE gift using PayPal or credit card at: [www.nesec.org/news/weatherradio.cfm](http://www.nesec.org/news/weatherradio.cfm) You can also mail a check or money order, payable to "NESEC", to:

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