



# The Torrent

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## Inside this Issue

Are You Ready for the 2002 Hurricane Season?	1
Milford's Point Beach Home Elevation Project	2
Floodplain Focus: Letters of Map Change	3
News Briefs	4
▪ NESEC	
▪ Watermark Newsletter	
▪ NFIP Publications & Forms	
▪ Flood Maps Now Online	
Calendar of Events	5

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## Are You Ready for the 2002 Hurricane Season?

June 1<sup>st</sup> marked the beginning of the 2002 Atlantic hurricane season. Top hurricane experts from the National Oceanic and Atmospheric Administration (NOAA) have predicted that the 2002 hurricane season will have above normal levels of activity. The outlook calls for the potential of nine to thirteen tropical storms, with six to eight classified as major hurricanes (Category 3, 4 or 5 on the 5-point Saffir-Simpson Hurricane Scale). There is an 86-percent probability that one of these major hurricanes will hit somewhere along the U.S. coastline.

In 2001, there were fifteen named storms, nine of which became hurricanes. A normal Atlantic hurricane season typically brings an average of ten tropical storms, of which six reach hurricane strength, with two classified as major. Above-normal activity has been observed during six of the last seven Atlantic hurricane seasons. The key climate patterns guiding this year's expected activity are long-term patterns of tropical rainfall, air pressure and higher temperatures of the Atlantic Ocean that are more conducive to hurricane development.

NOAA researchers also stated that the U.S. is in for above normal hurricane activity for the next 20 to

30 years. According to weather researchers, 1995-2001 was the most active Atlantic Basin hurricane period on record. During those years, there were 94 named storms, 58 hurricanes, and 27 major hurricanes, including Opal (1995), Fran (1996), Georges (1998), and Floyd (1999).

Researchers have noted that while this era will continue to be a busy one, there will be some years that are not above average. However, with coastal populations increasing rapidly, hurricane damage will be felt at a greater scale than ever before. Even weak storms can cause devastating flooding, as happened when Tropical Storm Allison swept across parts of Texas and Louisiana in June 2001.



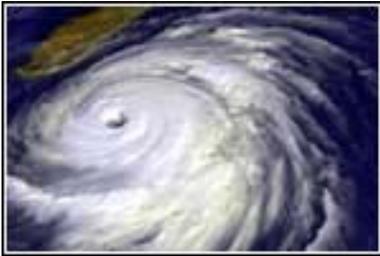
Scientists also warn that it does not take an active hurricane season to have a catastrophic storm. In 1992, Hurricane Andrew became the costliest disaster in U.S. history but was the only hurricane to make landfall that year.

Forecasters note that between the late 1920s and the late 1960s, there were ten Category 4 or 5 U.S.

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landfalls, but only two (Hugo and Andrew) since then. According to researchers, it is just a matter of time until the next Category 4 or 5 storm. This prediction, coupled with a steady population shift to coastal regions during the past few decades, points to the ongoing need for greater hurricane preparedness.



With the start of the hurricane season, the federal government has initiated a nationwide hurricane awareness campaign led by NOAA and the Federal Emergency Management Agency (FEMA). Recognizing the importance of these efforts, President George W. Bush signed a proclamation announcing May 19-25 as National Hurricane Awareness Week.

Speaking on behalf of the President, Commerce Deputy Secretary Sam Bodman said, "One of the most damaging, and potentially deadly weather events is a hurricane. Hurricanes have a devastating impact on our economy, causing billions of dollars in losses and damages, but the human toll can also be very high when people aren't prepared. President Bush asks all Americans in harm's way to be more vigilant about preparing for hurricanes in advance, rather than responding only when they threaten."

Hurricane awareness information can be accessed via the internet at The National Hurricane Center website:

<http://www.nhc.noaa.gov>.

The website contains important information on hurricane awareness and preparedness, such

as family emergency planning, creating a disaster supply kit and securing your home during a hurricane. Also, the website contains satellite and radar images, hurricane history and forecasting models.

The FEMA website also contains hurricane information. The FEMA Tropical Storm Watch web page, [www.fema.gov/fema/trop.htm](http://www.fema.gov/fema/trop.htm), contains preparedness information, links to weather sites, satellite imagery and hurricane forecast maps. FEMA natural hazard preparedness information is at: [www.fema.gov/pte/prop2.htm](http://www.fema.gov/pte/prop2.htm). This page contains preparedness information for hurricanes and other natural disasters such as winter storms and floods.

FEMA offers an independent study course, *IS-324 Community Hurricane Preparedness*, for emergency managers and local officials with decision-making responsibilities who work with hurricane prone areas. The course provides information on how hurricanes form, the hazards they pose, how the National Weather Service (NWS) forecasts hurricane behavior, and what tools and guiding principles can help emergency managers prepare their communities. The course is in CD-ROM format. Technical requirements to run the CD-ROM include: Windows 95, 98, or NT 4.0, 133 MHz Intel Pentium Processor, Windows compatible sound card, 4x CD-ROM drive and 16MB RAM. More information on this course can be found at: <http://training.fema.gov/EMIWcb/is324.htm>.

This course material is also available on a non-federal government website operated by the Cooperative Program for Operational Meteorology, Education and Training (COMET): <http://www.meted.ucar.edu/hazwx>.

## Milford's Point Beach Home Elevation Project

Homes in Milford's Point Beach neighborhood, located along Long Island Sound, have taken the brunt of many coastal storms through the years. Major flooding in this area has imposed significant emotional and financial hardships upon the residents and great damage to their homes and properties.

In an effort to alleviate this recurring problem, a joint project was initiated between the City of Milford, the State of Connecticut and the U.S. Army Corp of Engineers to elevate 42 flood prone homes in order to protect them from repeated coastal flooding. The State of Connecticut is participating under the Flood and Erosion Control Board (FECB) program. The total cost of the project is over \$4 million dollars, with the federal share of the project at 65%, the City share at 23%, and the State share at 12%.



Additionally, five more homes in the Point Beach neighborhood will be elevated using funding from *Project Impact*, a FEMA grant to mitigate natural hazards. The City of Milford received \$300,000 in 1999 to complete this home elevation project and also install three tide gauges, add speakers to its early coastal flood warning system and develop a community hazard mitigation plan.

# Floodplain Focus: Letter of Map Change (LOMC)

*The Federal Emergency Management Agency (FEMA) publishes the Flood Insurance Rate Maps (FIRM), delineating the Special Flood Hazard Areas (SFHA), also known as the 100-year floodplains. Although FEMA uses the most accurate information available, limitations of scale or topographic definition may cause small areas that are at or above the base flood elevation (BFE) to be inadvertently included in the SFHA. The placement of fill may raise small areas within the SFHA to an elevation at or above the BFE. For such situations, the property owner may apply to FEMA for a Letter of Map Change (LOMC). These determinations are issued by FEMA and officially amend or revise the FIRM without requiring it to be republished. There are various types of LOMC for different situations. They are described in detail below.*

**Letter of Map Amendment (LOMA)** – A LOMA is an official amendment to an effective FIRM resulting from FEMA’s determination that the structure or property was inadvertently included in the SFHA. FEMA will review scientific or technical data (topographic data, mapping and survey data, hydrologic and hydraulic analyses) submitted by the property owner. For a LOMA to be issued, the NFIP regulations require that the lowest adjacent grade (the lowest ground touching the structure) be at or above the base flood elevation. To remove the entire lot, the lowest point on the lot must be at or above the base flood elevation. There is no fee for FEMA’s review of a LOMA request. However, the requestor is responsible for providing all the necessary information needed for FEMA’s review. In most cases, the applicant will need to hire a licensed land surveyor to prepare an Elevation Certificate for the property. If FEMA issues a LOMA the mandatory flood insurance purchase requirement for a mortgage is lifted. (Single Lot or Structure - Form: MT-EZ, Processing Time: 1 month; Multiple Lots or Structures – Form: MT-1, Processing Time: 2 months)

**Letter of Map Revision based on Fill (LOMA-F)** – A LOMR-F is an official revision to an effective FIRM resulting from FEMA’s determination that a structure or parcel has been elevated on fill above the BFE and is therefore excluded from the SFHA. NFIP regulations require that the lowest adjacent grade of the structure be at or above the BFE for a LOMR-F to be issued. To remove the entire lot and structure, both the lowest point on the lot and the lowest floor of the structure must be at or above the BFE. The requestor is responsible for providing all supporting information, including elevation data. (Form: MT-1, Processing Time: 1 month, Fee: \$400-\$800)

**Letter of Map Revision (LOMR)** – A LOMR is an official revision to an effective FIRM resulting from a determination by FEMA. A LOMR is used to change flood zones, floodplain and floodway delineations, base flood elevations and planimetric features. All requests for a LOMR should be made through the chief executive officer of the community, since it is the community that must adopt any revisions to the FIRM. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request. (Form: MT-2, Processing Time: 2 to 3 months)

*FEMA also comments on proposed projects for compliance with the minimum NFIP criteria.*

**Conditional Letter of Map Amendment (CLOMA)** – FEMA’s comment on whether a proposed structure would be excluded from the SFHA shown on the effective FIRM. (Form: MT-1)

**Conditional Letter of Map Revision Based on Fill (CLOMR-F)** – FEMA’s comment on whether a proposed project involving the placement of fill at or above the BFE would be excluded from the SFHA shown on the effective FIRM. (Form: MT-1)

**Conditional Letter of Map Revision (CLOMR)** – FEMA’s comment on a proposed project that would affect the hydrologic and/or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway or effective BFE. (Form: MT-2)

*FEMA publishes a guide entitled “Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide For Local Officials”. Contact Kerry Redente, Diane Ifkovic or Carla Feroni, CTDEP, at (860) 424-3706 to obtain this publication and for more information on LOMCs. More information can also be found at the FEMA website, [www.fema.gov](http://www.fema.gov). The LOMC forms can be downloaded from the FEMA website at: [www.fema.gov/mit/tsd/frm\\_form.htm](http://www.fema.gov/mit/tsd/frm_form.htm). A LOMA is free but the other LOMCs have processing fees. These fees can be found at: [www.fema.gov/mit/tsd/frm\\_fees.htm](http://www.fema.gov/mit/tsd/frm_fees.htm).*

## NESEC

The Northeast States Emergency Consortium (NESEC) is a non-profit natural hazard mitigation and emergency management organization located in Wakefield, Massachusetts. NESEC is the only multi-hazard consortium of its kind in the United States and is supported and funded by the Federal Emergency Management Agency (FEMA). The states of Connecticut, Rhode Island, Maine, Massachusetts, New Hampshire, New Jersey, New York, and Vermont form the consortium.

NESEC develops, promotes and coordinates natural disaster and emergency management activities throughout the Northeast. This includes natural hazard risk evaluation and assessment, public awareness initiatives and education programs, hazard mitigation, and information technology transfer.

NESEC works in partnership with public and private organizations to reduce losses of life and property when the next disaster strikes the Northeast. The NESEC website contains valuable information on locating mitigation funding, software downloads, and hazard information. The website can be accessed at: [www.nesec.org](http://www.nesec.org).

## Watermark Newsletter Available on Internet

*Watermark*, FEMA's NFIP newsletter, is available on-line. The newsletter is published twice a year. Although the newsletter is aimed at insurance professionals, it provides important information for all those involved in floodplain management activities. Current and past issues can be found at: <http://www.fema.gov/nfip/wm.htm>.

## NFIP Publications

FEMA's NFIP publications and forms can now be downloaded directly from the internet.

NFIP publications can be found at: [www.fema.gov/nfip/publicat.htm](http://www.fema.gov/nfip/publicat.htm)

Mitigation publications are at: [www.fema.gov/library/lib06.htm](http://www.fema.gov/library/lib06.htm)

FEMA forms can be found at: [www.fema.gov/forms/forms.htm](http://www.fema.gov/forms/forms.htm)  
Forms include the Elevation Certificate, LOMA, LOMR, and the Floodproofing Certificate.

FEMA publications can be ordered free of charge by faxing an order to the FEMA NFIP Publications Warehouse at (301) 362-5335.

## FEMA Flood Maps Now on the Internet

FEMA Flood Insurance Rate Maps (FIRMs) are now available on the internet at the FEMA Map Service Center, Flood Map Store website: <http://msc.fema.gov/MSC>



Once you have linked to the above website, click on "The FEMA Flood Map Store" in the left margin. Then click on "Catalog". Then click on "FEMA issued Flood Maps". For Media Type, select "Online" from the drop down box. For State, District or Territory, select "Connecticut" from the drop down box. For County, Parish, etc., select the county in which the municipality is located from the drop down box. For Community, select the desired municipality from the drop down box. Then click on "Find FEMA issued Flood Maps!" A list of the

FIRMs for the municipality will appear. To view a FIRM, click on "view" in the far right column. The website offers a zoom in and zoom out feature so you can enlarge a specific location. You can also print the maps.

FEMA has also developed F-MIT (Flood Map Image Tool) Basic Version 1.0 software for viewing and capturing any of these FIRMs. Optimized for on-screen display of scanned flood maps, F-MIT allows users to pan and zoom within a map, select an area of interest, and create a "FIRMette"- a section of the map at 100% scale that can be printed on standard paper sizes. The F-MIT software can be downloaded free from the FEMA Map Service Center website at: <http://web1.msc.fema.gov/webapp/commerce/command/ExecMacro/MSC/macros/digitalproducts.d2w/report>. Because a FIRMette is a same-scale "clip" of an official NFIP flood map image, it can be used in all aspects of the NFIP, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements.

Multi-hazard maps are available at [www.HazardMaps.gov](http://www.HazardMaps.gov) as part of FEMA's Multi-hazard Mapping Initiative (MMI). MMI is an implementation of Section 203(k) of the Disaster Mitigation Act of 2000 (DMA 2000), which called for the creation of Multi-hazard Advisory Maps. Maps are available for such natural hazards as tornadoes, earthquakes, and floods. The maps displayed on this site should be considered only as an advisory tool for general hazard awareness, education and floodplain management. The flood hazard maps displayed on this site are not the legal document to be used when making a single site flood hazard determination.

## UPCOMING CONFERENCES & WORKSHOPS

**August 26-30, 2002: World Congress on Disaster Reduction**, Washington, D.C.  
Sponsor: American Society of Civil Engineers (ASCE) and others. Contact: Walter Hays, ASCE, 1801 Alexander Bell Drive, Reston, VA 20191. Phone: (703) 295-6054, Fax: (703) 295-6141, email: [whays@asce.org](mailto:whays@asce.org), [www.asce.org/conferences/disaster2002](http://www.asce.org/conferences/disaster2002).

**September 8-11, 2002: Dam Safety 2002**, Tampa, Florida. Sponsors: Association of State Dam Safety Officials (ASDSO). Contact: Susan Sorrell, Phone: (859) 257-5146, email: [sasorrell@damsafety.org](mailto:sasorrell@damsafety.org).

**May 11-16, 2003: Association of State Floodplain Managers (ASFPM) 27<sup>th</sup> Annual Conference**, St. Louis, Missouri. Sponsor: ASFPM. Contact: Trisha Nelson or Diane Brown Watson, ASFPM, 2809 Fish Hatchery Road, Suite 204, Madison, WI 53713. Phone: (608) 274-0123, Fax: (608) 274-0696, email: [asfpm@floods.org](mailto:asfpm@floods.org), [www.floods.org](http://www.floods.org).

## UPCOMING EMERGENCY MANAGEMENT INSTITUTE COURSES

The Emergency Management Institute (EMI) is located at the Federal Emergency Management Agency (FEMA) National Emergency Training Center (NETC) in Emmitsburg, Maryland. EMI serves as the national center for emergency management training of federal, state, and local government officials. Tuition, housing, and all books and materials are provided at no cost. Participants are responsible for the cost of a meal pass (\$80). The following is a list of upcoming EMI courses through September 2003. For more information on the courses listed, visit the EMI website: [www.fema.gov/emi](http://www.fema.gov/emi). To apply, call Diane Ifkovic at (860) 424-3537.

E234 **Digital Hazard Data** – August 26-30, 2002, October 21-24, 2002, January 27-30, 2003, May 12-15, 2003.

E260 **Hazard Mitigation Grant Program (HMGP)** – Nov. 11-15, 2002, January 20-24, 2003.

E263 **Managing the Hazard Mitigation Grant Program (HMGP)** – August 26-30, 2002, December 16-20, 2002, April 7-11, 2003, September 22-26, 2003.

E273 **Managing Floodplain Development Through the NFIP** – October 14-18, 2002, March 31-April 4, 2003, August 11-15, 2003, September 15-19, 2003.

E276 **Benefit-Cost Analysis: Entry Level Training** – December 4-6, 2002.

E278 **NFIP/Community Rating System (CRS)** – November 4-8, 2002, April 7-11, 2003, September 22-26, 2003.

E279 **Retrofitting Floodprone Residential Buildings** – January 27-31, 2003.

E307 **Basic Hazards HAZAS U.S. Training** – July 29-August 1, 2002, September 9-12, 2002, October 28-31, 2002, April 14-17, 2003, August 25-28, 2003.

E386 **Residential Coastal Construction** – September 9-13, 2002, March 10-14, 2003, September 28-October 3, 2003.