



## Massachusetts Emergency Management Agency Hurricane Irene Situational Awareness Statement (SAS) #5

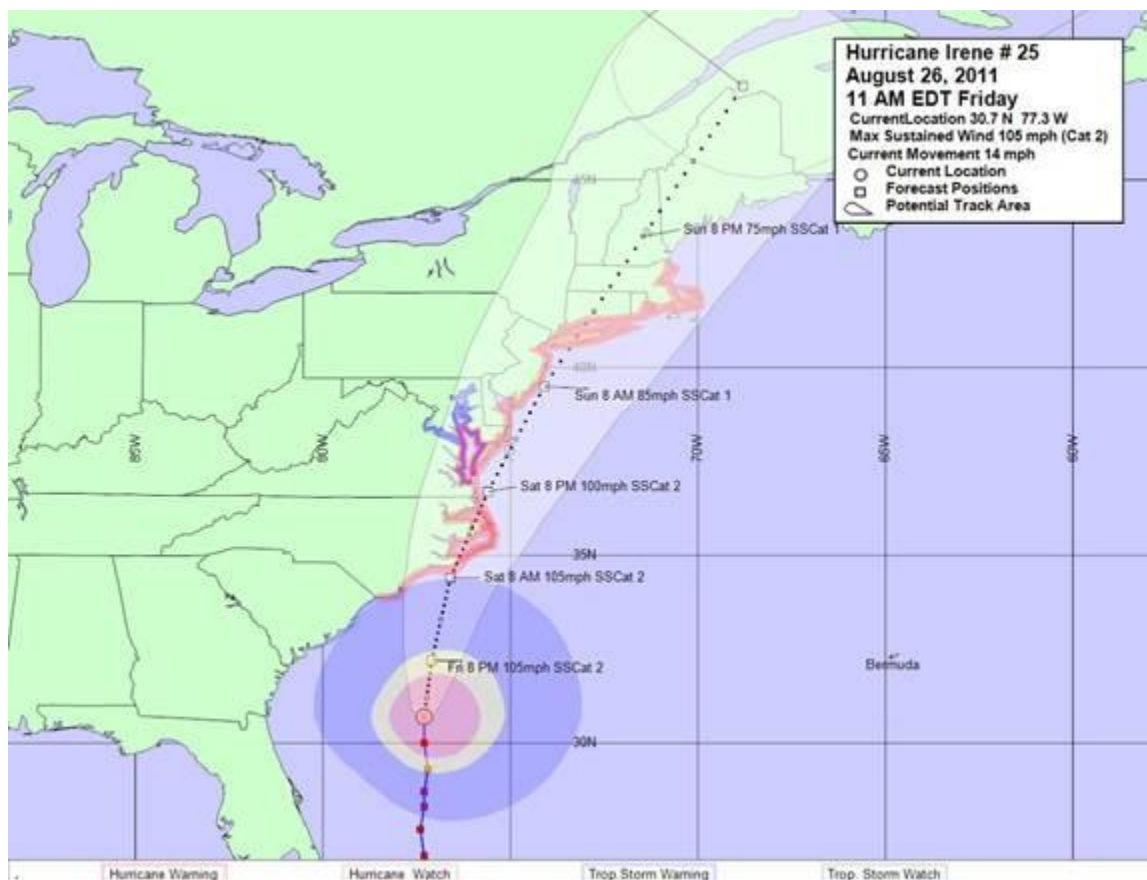
Date: August 26, 2011  
Time: 11:30AM

### Situation:

**A Hurricane Watch is in effect for coastal Massachusetts.**  
**A Tropical Storm Watch is in effect for interior Massachusetts.**  
**A Flood Watch is in effect for interior southern New England.**

Since yesterday, Irene's track has shifted slightly eastward and its projected speed has increased. The center of Irene is now forecast to pass over the Outer Banks on Saturday and remain just offshore of the Eastern Seaboard as it moves northeast. It is forecast to make landfall on Long Island on Sunday, and move through central Massachusetts as a Category 1 hurricane. Note that while there is still some uncertainty about Irene's exact track and timing, it is virtually certain that Irene will impact a large area of Massachusetts on Sunday.

### HURREVAC 5-Day Forecast Map:



### Weather Forecast:

**Precipitation:** Rains associated with Irene may begin as early as Saturday afternoon. 1 to 2 inches may fall Saturday, with the bulk of precipitation coming Saturday night through Sunday night. 5 to 10 inches of rain are possible along and to the left of Irene's track, with localized amounts of 12 inches possible. Several inches of rain are possible just east of Irene's track. Irene's current track puts the axis of heaviest

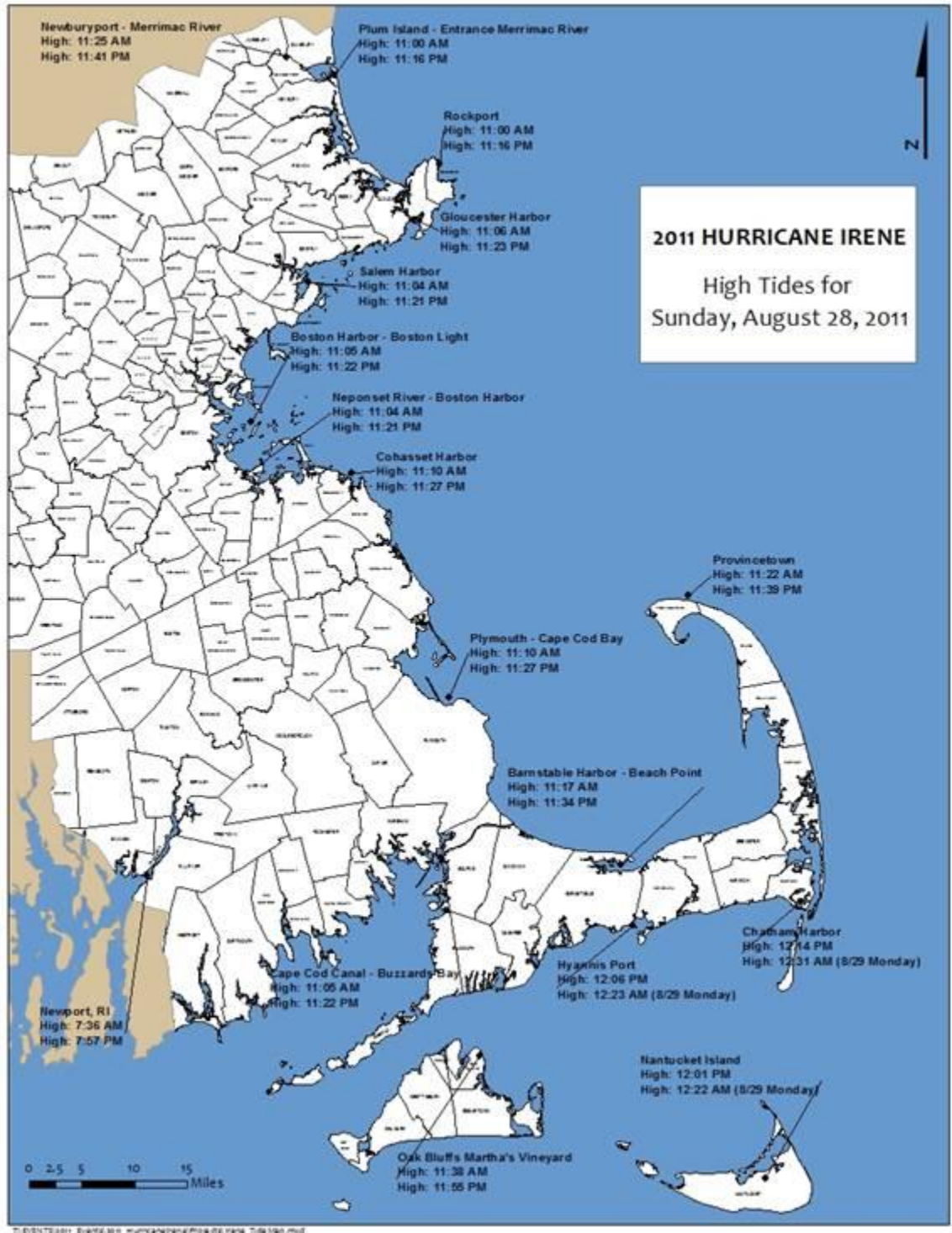
rainfall over western and central Massachusetts, but this will shift with any changes in the projected track. Assuming Irene's current track holds, there is a significant risk of stream and river flooding in the central and western part of the state, including the Connecticut, Chicopee, and Blackstone river basins.

Winds: The most damaging winds will be located to the right of Irene's track. As Irene makes landfall, it is forecast to be a Category 1 (74-95mph) hurricane, although a Category 2 (95-110mph) storm is not impossible. If Irene takes a more westerly track and weakens as it passes over land, wind intensity will decrease. Exact timing of the arrival of damaging winds in Massachusetts is highly dependent on Irene's forward speed; Sunday morning is most likely, but an increase in Irene's speed could bring an earlier onset of significant winds. There is also a risk that Irene may spawn weak tornadoes, especially in its northeastern quadrant, Saturday night through Sunday morning,. If Irene takes a more westerly track as it passes through or near Massachusetts, the risk of tornadoes affecting the state will increase.

Coastal Flooding: The magnitude of coastal flooding will depend on Irene's exact track, speed, and intensity as well as its timing with respect to high tide. Given Irene's current timing, the south coast of Massachusetts is most at risk of coastal flooding on Sunday evening, including Narragansett and Buzzards Bays.

Marine/Beaches: There is a high risk of rip currents on exposed south-facing coasts today. Rip current risk will be high on all exposed coasts this weekend, and will remain high through the beginning of next week. Depending on Irene's forward speed, seas may begin building Saturday night and by Sunday could reach 25-35 feet near shore and 40 feet further out to sea, with the highest seas being to the right of Irene's track. Beach erosion is likely on exposed south-facing beaches from Saturday night through Monday morning.

**Tide Map for Sunday, August 28:**



### **State Actions:**

Today at 11:30AM, Governor Patrick will meet with his cabinet at the State Emergency Operations Center (SEOC) in Framingham to discuss pre-landfall preparations for Irene. Following this, the Governor will participate on the daily conference call with local emergency managers at 12:30PM and hold a press conference at 1:30PM.

Since yesterday morning, the SEOC has been at a Partial activation level in order to facilitate pre-landfall planning efforts. The SEOC will remain at this activation level until it transitions to a more response-oriented posture in advance of the arrival of tropical storm force winds in Massachusetts.

The following functional planning groups have been established:

- Federal/MEMA Integration
- Joint Information Center
- Legal
- Commodities
- Space Assignments, Facilities, Fleet
- Air Operations
- Communications
- Debris Removal
- Emergency Management Assistance Compact / Mutual Aid
- Energy/Utilities
- Rapid Impact Assessment Teams
- Urban Search and Rescue
- WebEOC/Resource Requests
- Evacuation and Transportation Support
- Mass Fatality
- Medical Care / Mass Care
- Sheltering, Staffing, Supplies

The below agencies and organizations are present in the SEOC today. Additional agencies and organizations may be called in to the SEOC as Irene's landfall approaches.

- American Red Cross
- Civil Air Patrol
- Coastal Zone Management
- Dept. of Agricultural Resources
- Dept. of Conservation and Recreation
- Dept. of Environmental Protection
- Dept. of Fire Services
- Dept. of Public Safety
- Dept. of Public Utilities
- Executive Office of Energy and Environmental Affairs
- Executive Office of Public Safety and Security
- FEMA Incident Management Assistance Team
- FEMA State Liaison Officer
- MA National Guard
- MA State Police
- MA Urban Search and Rescue Task Force 1
- MA Volunteer Organizations Active in Disasters
- Mass 211
- MassDOT
- Massport
- MA Dept. of Public Health
- Massachusetts Emergency Management Agency

- MBTA
- National Grid
- National Weather Service
- NEDRIX
- Nestle Water
- NSTAR
- Operational Services Division
- Salvation Army
- Secretary of State's Citizens Information Service
- State of MA Animal Response Team
- Unitil
- US Army Corps of Engineers
- US Coast Guard
- US Dept. of Health and Human Services

MEMA is closely monitoring Irene's progress via tools such as HURREVAC and the National Hurricane Center's website, and remains in close communication with FEMA Region 1 and other state EOCs. MEMA is conducting daily conference call at 12:30PM and 6:30PM with local Emergency Management Directors, daily conference calls at 8:30AM, 2:15PM, and 8:15PM with NWS, and is pushing out Situational Awareness Statements at least once daily and more often as necessary.

**Information for EMDs:**

Tropical storm force winds from Irene are forecast to arrive Sunday morning, but given the possibility of Irene's forward motion increasing and damaging winds, rain, and associated flooding arriving earlier than anticipated, local officials should aim to complete pre-landfall preparations by late Saturday. Similarly, while Irene is projected to be a Category 1 hurricane as it crosses Massachusetts, officials should plan for the occurrence of a strong Category 2 storm in their jurisdictions.

The Sea, Lake and Overland Surges from Hurricanes (SLOSH) model is a computerized numerical model developed by the National Weather Service (NWS) to estimate storm surge heights resulting from historical, hypothetical, or predicted hurricanes by taking into account the atmospheric pressure, size, forward speed, and track data. These parameters are used to create a model of the wind field which drives the storm surge.

The SLOSH Display Program (SDP) is software developed as a tool to aid emergency managers in visualizing storm surge vulnerability. The SLOSH model and the SDP are two different tools. The SLOSH model is used by the NHC to forecast storm surge and model storm surge vulnerability; the SDP is the software provided to emergency managers and other users to visualize the data produced by the NHC.

Graphical output from the model displays color-coded storm surge heights for a particular area in either feet above ground level (inundation) or feet above a specific reference level (NGVD29 or NAVD88). If using NAVD88 or NGVD29, users will need to know the elevation, relative to the same vertical datum, in order to properly interpret the surge elevations. A sample output of the SLOSH model for Hurricane Ike can be seen at [http://www.nhc.noaa.gov/ssurge/images/gl2\\_ike2008.png](http://www.nhc.noaa.gov/ssurge/images/gl2_ike2008.png).

The SDP is intended to be used by trained emergency managers, FEMA personnel, and NWS forecasters. A username and password, which can be obtained at <http://slosh.nws.noaa.gov/sloshPub/disclaim.php>, is required to access the SLOSH Display Web Page and download the program.

At this time, MEMA urges local officials to monitor Irene's progress and predicted track closely, review existing emergency plans and procedures, update emergency contact lists, test communications

equipment, and be prepared to participate with MEMA in more proactive planning and preparedness efforts if necessary. MEMA also strongly encourages local officials to review their SLOSH (inundation) maps, pre-identify areas particularly at risk from storm surge flooding, and consider issuing voluntary or mandatory evacuation orders for these areas if the need arises. Local officials are also reminded to verify their inventories of sandbags and procure additional supplies if needed. MEMA has emergency stockpiles of sandbags available if needed.

MEMA has created a WebEOC event for Irene called "2011 Hurricane Irene". EMDs should use this event for situational awareness and conveying requests for assistance related to Hurricane Irene. Users experiencing issues with logging on to or using WebEOC should contact their MEMA Regional office for assistance.

In order to assist local officials with preparedness and response to Irene, MEMA has made the following resources available on its website ([www.mass.gov/mema](http://www.mass.gov/mema)) in the "Hurricane Information" section:

- Links to online tools and resources
- Hurricane safety information
- Sea, Lake, and Overland Surge from Hurricanes (SLOSH) maps for coastal Massachusetts counties. These are available as static maps in .PDF format, as well as interactive maps using Google Earth which will allow users to zoom in to neighborhoods and view projected inundations for category 1 through 4 hurricanes. Google Earth is available free of charge at [earth.google.com](http://earth.google.com).
- Southern Massachusetts Hurricane Evacuation Study
- Hurricane Evacuation Behavioral Assumptions for Massachusetts
- The Cape Cod Emergency Traffic Plan

#### **Online Resources:**

For additional information and resources, visit:

Massachusetts Emergency Management Agency at [www.mass.gov/mema](http://www.mass.gov/mema)

Federal Emergency Management Agency at [www.fema.gov](http://www.fema.gov)

National Hurricane Center Website at [www.nhc.noaa.gov](http://www.nhc.noaa.gov)

National Weather Service – Taunton at [www.weather.gov/boston](http://www.weather.gov/boston)

National Weather Service – Albany, NY at [www.weather.gov/albany](http://www.weather.gov/albany)

Mass211 at [www.mass211.org](http://www.mass211.org)

**The next SAS will be issued at 5:30PM today or as needed.**