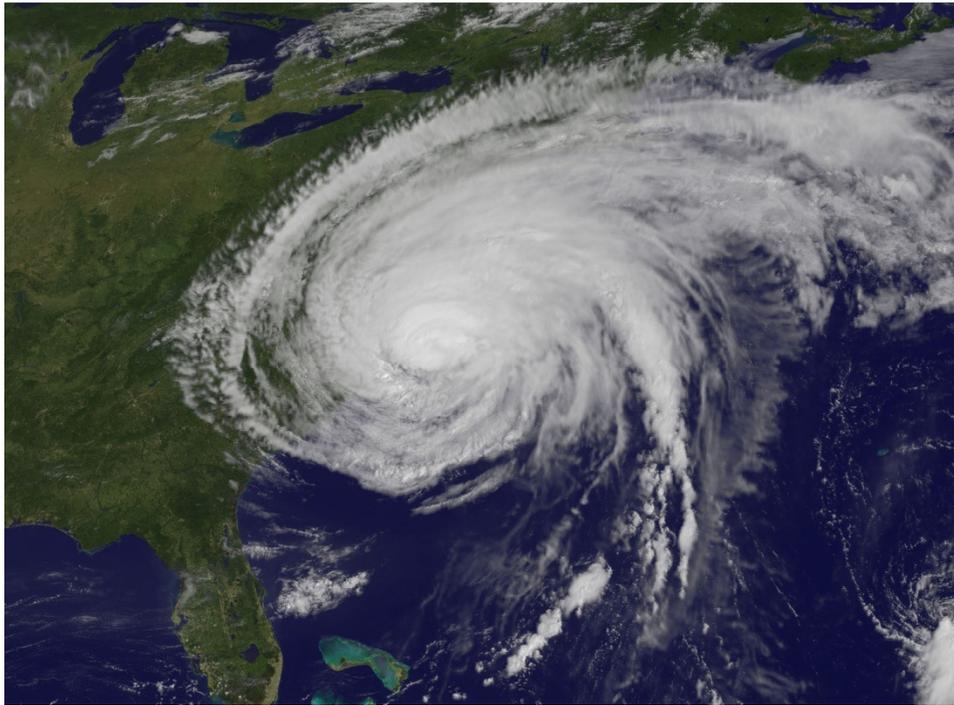


Hurricane Irene Response by the Town of Bolton

28 Aug 2011



Hurricane Irene

Source: Nasa.gov

Prepared by:

Andrew Bagdonas, Bolton EMD Co-Director

PLANNING:

As Hurricane Irene tracked up the east coast, it became clear that this would be a storm of significant power. As it got closer to New England, Bolton EMD entered the planning phase, and conducted a department head meeting on Friday 8/26. During this meeting, we discussed what each department would do to prepare for the storm, the availability of EMD resources to each department, and assigned roles according to the ICS command structure. The first half of the meeting was open to the towns of Bolton, Berlin, Lancaster and Clinton. These towns represent the Nashua Valley Regional Emergency Planning Committee. An open invitation for their EMD Directors, agency heads, and government representatives was sent out. The second half of the meeting was directed at Bolton's response planning. Bolton's Neighbor to Neighbor group was also invited. Planning for the event started with the assignment of ICS roles. Additional roles left empty would be filled during the event as needed. We also identified a shelter should the need arise. Contact numbers for the Building Inspector were also noted, should any houses or structures be damaged and require immediate safety inspection.

The EOC was initially planned to open around 22:00-23:00 on Saturday, however Irene slowed down. The opening was pushed back to the following morning.

On Saturday evening, the Governor issued a state of emergency for all of Massachusetts. The President also issued a pre-declaration of disaster covering Massachusetts.

At 8:00 on Sunday 8/28/2011, Co-Director of EMD Andrew Bagdonas began preparing for the arrival of the storm. The EOC was setup for operations. By mid morning, representatives from police, fire, ems, and public works were present in the EOC.

The track of the hurricane placed Bolton on the severe wind side of the storm. Brief periods of heavy rainfall were expected, but totals were not to exceed 5-8" of precipitation. MEMA phone conferences were attended on a daily basis building up to the storm and after it had passed. These conferences were aimed at EMD Directors, allowing users to obtain weather updates direct from a representative of the National Weather Service, and situation updates from MEMA itself.

Direct contact with Lancaster and Clinton EMDs was maintained to insure an open path/route for any persons requiring transport to Clinton Hospital.

Emergency notifications to the public were handled via the town's website, www.townofbolton.com via the Emergency Management Notifications page, as well as safety and hurricane preparation tips on the Emergency Management Department page.

OPERATIONS:

Attached below is a sequence of significant events during the storm. This includes role assignments for the ICS structure and calls for service. Bolton responded to several burglar and fire alarm activations during the storm. These were considered "routine" calls for service. All storm related calls, such as trees down, flooded streets, or wires down, were relayed to the Emergency Operations Center (EOC) where EOC staff could allocate resources as needed.

See list of significant events at bottom of document.

POST STORM:

On Monday, 8/29/2011, the EOC remained in a soft state, ready to be activated if needed. Additional police staff remained on duty to cover calls. Highway department workers continued to manage debris removal.

Continual updates from MEMA and National Grid via phone conferences allowed EMD to update Bolton's web pages and EMD Emergency Announcement section with information regarding storm damage assessments as well as estimates for restoration of utility services.

Bolton had over 81% of its utility customers lose power by the end of the storm on Sunday night 8/28/11. By Tuesday afternoon, the utilities had restored power to all but an estimated 144 customers in Bolton. Full restoration was expected by 9/1. Data for residents served by Hudson Light and Power was unavailable.

Photos of damage were recorded by fire and police crews, and forwarded to the Department of Public Works to help document the town's response. This information will be used to apply for Federal Aid under the Stafford act, which reimburses town's 75% of their costs for cleanup related to the storm.

Review:

Hurricane Irene was an excellent exercise in multi-disciplinary response to a natural disaster. While the storm raged for 16 hours, emergency workers coordinated their efforts through the use of Bolton's Emergency Operations Center located in the Public Safety Building at 15 Wattaquaddock Hill Road. Operations were set to maintain the safety of workers, and still provide life saving or critical services to residents, should the need have arisen. This included maintaining open roadways when possible, mapping routes to circumvent closed roadways, and coordinating with surrounding towns to insure access to hospitals remained available. There are no reports of injury or significant property loss to any resident or business in the town of Bolton. An all department head review will be called to analyze the town's response to the storm, and its use of the Incident Command System.

- Storm calls transferred to EOC where then noted on the white board as pending problems. Crews were tracked and assigned to issues. Board was used for open items. Closed or solved issues were noted on form by M.Diaz for historical record.
 - During Peak of activity, it was decided to bring another dispatcher in to EOC so fire operations and police/DPW operations (ONLY STORM RELATED) could be handled efficiently.
- Weather UPDATE: 14:00 for EOC staff
 - Winds will continue around 40-50MPH with gusts until 8:00PM, and then begin to die down.
- Comcast contacted re: internet access. Advised entire area out. Phone lines tested- still working. (Both pri and wirelines)
- FD/EMS checking 600 main street on wellbeing check room to room at 15:20.
- PD Shift change 15:30hours.
 - Ofc. Washington, Ofc. Puri, Ofc. Coutchure on duty. Staake, Denaro, Harrington off duty.
- Police cruisers fueled.
- 15:30 M.Diaz assigned as safety officer
- 15:55 resident 145 Wattaquaddock Hill Road called to inform us that they have enough oxygen to make it through until Monday 11AM. Plan is to check tomorrow 9AM.
- 15:50 Generator sent to repeater site to boost batteries running on backup since 10:10AM. Fire will check every 4 hours and refuel as necessary. Generator chained to telephone pole.
- Power restored to tower site 16:10PM
- 16:20 Weather update: Winds downgraded for the following times:
 - 5:00PM 30
 - 8:00 pm 25
 - 11:00 pm 23
- Dispatchers rotated through the EOC to learn EOC operations.
- PSB Fuel consumption for generator: 7 hours loss of 7% of fuel. A Rate of 1% per hour. Roughly 7.5 gallons per hour (750 gallon supply)
- Weather update for 5:40PM
 - winds down below 30.
- 18:10PM Updated Selectman Dave Lindsay on EOC operations when he stopped by.
- 18:30 Update meeting with EOC Staff
 - Staffing reduced by fire/ems. Crews at FD sent home. Will respond as needed via pager
 - Shelly O'Toole (DPW Sent home)
 - PD keeping staff at operational level for remainder of shifts.
 - DPW has Mark Caisse on call, and Ryan Barry on standby for evening.
 - If barricades or new downed wires- call highway- If wires are involved, national grid
- 19:00 EOC back to soft condition- all communications and dispatchers sent back into Dispatch.
 - Dispatch maintaining two stations in dispatch.
- Reviewed wire and tree issues with DPW/PD/Fire. Updated list for dispatch.

- 7PM -7:30AM Dispatch summary 15 pages of calls in log
 - Calls continued for power outages, including walk ins. Numerous reports for tree on wires.
 - 21:43 Barricades replaced on Century Mill
 - 22:11 Burglar alarm
 - 22:07 Fire alarm call
 - 01:21 Burglar alarm
 - 04:09 Burglar alarm
 - 04:38 CO
 - 04:55 Fire alarm
 - 05:00 Brush fire, due to live wires igniting dead tree.
 - 05:45 Burglar alarm

Planning and Operations



Figure 1 Planning Meeting Notes



Figure 2 Planning Meeting Notes

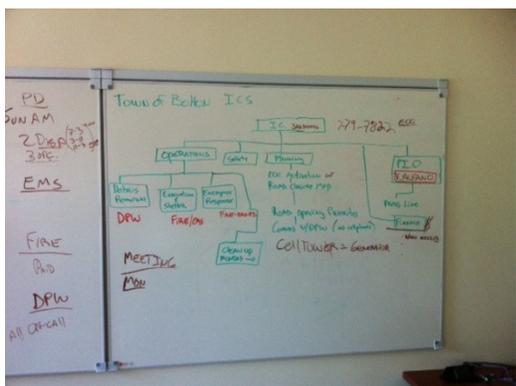


Figure 3 Planning Meeting Notes



Figure 4 EOC Setup



Figure 5 EOC Setup

Storm Damage Photos



Figure 6 64 Sugar Rd



Figure 7 Sugar Road



Figure 8 Sugar near Colonial



Figure 9 Whitcomb Road



Figure 10 Wilder Road



Figure 11 50 Hudson Road



Figure 12 145 Wilder Road



Figure 13 255 Sugar Road



Figure 14 266 Sugar Road



Figure 15 344 Long Hill Road



Figure 16 607 Sugar Road

Emergency Management Notices

Notices placed on www.townofbolton.com website, in chronological order

8/24/2011 Hurricane Irene Update

The National Weather Service official track shows Hurricane Irene impacting the Massachusetts area on Saturday and Sunday. All persons are urged to plan and prepare for this storm. Expect heavy rain and localized flooding in streams and rivers. Winds may be tropical in force. Bolton EMD will continue to update this page as the storm draws near.

UPDATE: 8/25

Hurricane Irene is expected to impact Massachusetts Sunday. The storm track is expected to land between the Hudson River Valley and Cape Cod. Homeowners are urged to complete preparations by Saturday evening at the latest. The location of the track will determine what hazards Bolton will face. If the storm tracks to the west of Bolton, expect high tropical force or hurricane force winds. If it tracks to the east of Bolton, expect heavy torrential rainfall, up to 10 inches.

Homeowners are urged to collect all loose yard items and store or secure them appropriately.

Bolton EMD has secured a shelter should the need arise for any families or persons displaced by storm or flooding. If needed, contact the dispatch center.

Police, Fire, EMS and DPW have all begun staging and preparations for the storm.

Andrew Bagdonas

EMD CO-Director

8/26

As Irene approaches, Bolton EMD strongly urges you to visit our hurricane page here on the Town of Bolton website. We have placed useful tips and suggestions from MEMA and FEMA as well as links to ready.gov.

As the storm comes into town, we ask that all residents hunker down. Please do not go out during the height of the storm, or immediately after. Emergency crews will be inspecting the damage and opening roadways. However, there is really no safe way to tell if a power line is charged or not. Citizens should not attempt to move trees or lines that may be blocking their paths.

If your house becomes severely damaged during the storm, we do have shelter options in place. Our Emergency Operations center will open Saturday evening and remain open until Monday. If you have an emergency, as always, call 911. If you have shelter needs, or require power to run oxygen or other

critical life saving equipment, please notify the police immediately at (978) 779-2276 so we can create a list.

Today and tomorrow morning would be great times to stock up on non-perishable food, water and batteries. Consult our website or www.ready.gov for further tips.

8/27

Governor Deval Patrick declared a State of Emergency for Massachusetts yesterday. You can read the release [here](#). President Obama has declared an emergency for Massachusetts as well. You may read the White House release [here](#). Federal aid is available for protective measures taken by the town of Bolton. Read about it [here](#).

8/27

Hurricane Irene has significantly lost strength and slowed slightly in her approach to our area. The storm path is now projected further west of Bolton. This means we will see less rain and more wind. The storm is expected to reach the south shore Sunday morning, and push slowly inward. Bolton can expect to see bands of torrential rain throughout the morning and afternoon tomorrow. Winds are expected to increase throughout the day, peaking around noontime and sustained throughout the afternoon and evening. Wind speeds are tropical, and the latest estimates from the National Weather Service representative at MEMA HQ is 40-60MPH sustained, with the potential for higher gusts approaching hurricane force.

Since we will be exposed to the eastern side of the storm, there will be more damage from wind than flooding. There remains the possibility of small short lived tornadoes in any hurricane/tropical storm system.

Residents are urged to stay inside during the height of the storm, and even after the storm to allow emergency crews to assess and begin cleanup. If you don't have a critical need or emergency situation, stay home if possible.

As always, contact 9-1-1 for any emergency you may have. Significant storm damage may be reported to public safety officials. EMD will post later numbers to call and the procedure for filing for storm damage assistance for businesses and homeowners.

Check this page for further updates as the storm unfolds.

Andy Bagdonas

Co-Director, Bolton EMD

8/28 10:38AM

Hurricane Irene is upon us. Numerous roads are closed or blocked with trees and wires down. Power is out throughout town. Residents are urged to stay inside until well after the winds die down- allowing officials to clear the roads.

If you have damage to your home, please call 978-779-2276 to report the damage. We have shelters available if needed.

If you require power for medical devices, please call us as soon as possible 978-779-2276 so we can make arrangements should you lose power.

Andrew Bagdonas

8/28 12:51PM

Bolton EMD wishes to thank everyone for keeping off the roadways during Hurricane Irene's visit to New England. The rain may be ending shortly, however, the heavy tropical force winds will be continuing into the evening. We are advising all residents to remain indoors. The danger is NOT over by any means.

Tropical force winds are expected to remain at 40-60MPH through the afternoon, with some gusts exceeding 70-80MPH. With the saturated soils and full foliage, this means that trees will still be coming down.

Our EOC is still active, and tracking damage to power lines, roadways and property.

All residents are reminded that power lines may still be powered while on the ground. Do not approach any downed wire.

Andrew Bagdonas

Bolton Emergency Management Co-Director

8/28 9:21PM

Bolton is estimated at 90% without power. Century Mill road and Frye road remain closed. Do not attempt to traverse these roads! Wires are energized.

The emergency operations center has scaled back operations as the storm has passed. We ask that you remain in your homes if you can to allow us unfettered access to clear the roadways.

Crews remain on call should the need arise. Bolton had close to 50 incidents of tree or wire damage affecting roadways and common driveways.

National grid is aware of our situation. We unfortunately have no timetables available for the return of power.

If you have any emergencies, do not hesitate to call 911.

Andrew Bagdonas

Co-Director, Bolton Emergency Management

8/30

National Grid reports that Bolton still has 144 customers without power. They have crews on site today at a major circuit in town, which when fixed, should correct most of these issues. They expect a solution this evening.

National Grid wishes also to remind everyone that we are in day two of a multi-day recovery project. While we may get frustrated with the delays, please think and act safely. Do not attempt to move or untangle any wires or cut or clear any trees that may be touching any wires. Safety First!

Andrew Bagdonas

Bolton EMD Co-Director

8/31

Irene gave us a good punch. On 8/29/11 at 00:00, Bolton had over 81% of its customers without power. (1561/1910). As of 8/30 15 15:30, only 144 were without power (7.5%). All power for National Grid Customers is expected to be returned by Thursday 9/1.

Statistics for Hudson Light and Power are not available at this time.