Massachusetts Statewide Hurricane Drill-
Hurricane Hannah
RACES/ARES/SKYWARN Exercise

Revision: 2

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Date and Timeframe of Exercise

Monday August 8th, 2011
Start Time 7 PM
End Time: 9 PM
Duration: 2 Hours
-Please allow time for setup/take down of any equipment during this exercise and the potential that the exercise goes longer than planned. EMA Directors and those controlling the exercise will ultimately determine the length of the exercise.

Purpose and Scenario

To exercise communication networks during the response phase of a severe storm scenario in the face of significant infrastructure damage to landline and cellular telephone, and loss of commercial power. EMA's should strive to report damage assessments to state and federal authorities before and simultaneously with resource requests. EMA Managers are also encouraged to practice simulated recovery operations at their discretion as a training opportunity.

Eastern and Western Massachusetts ARES will participate in the Hurricane Hannah RACES Exercise for Monday August 8th, 2011 from 7-9 PM. The purpose of this drill will be the following:

- Local RACES and ARES team coordination and deployment as well as local NTS and tactical message handling.
- Amateur Radio players are encouraged to use voice frequencies to pass information over nets and to utilize digital liaisons to pass information via winlink wherever possible. Cities and towns are requested to use resource voice frequencies for coordination and information sharing and that liaisons be designated from each voice net to pass traffic via email/digital modes after traffic has been shared by voice.
- EMA's without embedded amateur radio operators can request actual amateur radio support ahead of exercise by contacting Rob Macedo at kd1cy@ema.arrl.org for Eastern Massachusetts cities and towns and can contact John Ruggiero at n2yhk@wpi.edu for Western Massachusetts cities and towns.
- EMA's without embedded amateur radio operators can also request simulated amateur radio support during the exercise.
- Amateur radio operators should communicate with MARS liaisons where possible.
- Intra district and interdistrict tactical and formal message handling.
- Utilization of HF, VHF, UHF, Packet, WinLink, IRLP and Echolink modes of communication.
- Utilization of EOC or Simulated EOCs at various points across the state and interfacing with other EOCs, Simulated EOCs and SKYWARN liaisons in other sections where appropriate.
- Local SKYWARN Net activations for passing of data to NWS Taunton.

- Utilization of the integrated conference server, which is the Echolink *NEW-ENG* conference node and IRLP Reflector 9123 as a command net for communications with WX1BOX-NWS Taunton.
- Utilization of the MEMA VHF-Radio system for cities, towns and agencies wherever they have access. The VHF-system can be utilized to check-in with their EOC activation status, damage report information and requests for assistance.
- Utilization of Web-EOC for cities, towns and agencies wherever they have access. Web-EOC can be utilized to put in their EOC activation status and contact information, damage reports and requests for assistance. Use event titled “Exercise 2”.

For this exercise, it is expected that all ECs, SKYWARN Liaisons or their designees support this drill and what is to be exercised. As always, at the local level, message handling and formation is critical and keeping Hams at the local level busy must occur. Be creative and at the same time be realistic. Net Controls are asked to read the messages that are to guide the scenario over their net frequency. Net participants are asked to respond with information based on the messages and how the hurricane is evolving as the message will guide us through the exercise.

Amateurs are asked to then build tactical messages, particularly SKYWARN messages as well as NTS traffic messages for the exercise. For this drill, the Eastern Massachusetts ARES SEC (KD1CY) will be located at the National Weather Service in Taunton Massachusetts (WX1BOX) and he will be on the air running the command net to be held on VoIP and as needed he will assist with drill direction for teams within the section and for inter-section communications as needed and “oversee” the exercise as much as possible.

The Western Massachusetts SEC (N2YHK) will be located at the Worcester EM Communications Center/Region 4 Station.

Rules of Play

- Use battery/emergency power wherever possible during the exercise so you can see if those systems work (or don’t) before an actual emergency.
- In order to experience significant play in a very short time, please focus on message response to your local issues, and reporting damage.
- Use messages put out by the net control stations and exercise controllers to stay informed of exercise progression. Incoming information messages about the scenario are to cue responses from your area on damage and problems from the hurricane.
- If you should fall behind, always work on the most current (real world time) events first. Catch up on un-played events when you can.
- Please report your local damage status even if you don’t have specific resource needs. Current information is always needed at the state and federal levels to guide their response.

- Consider delegating damage reporting to amateur radio personnel such as the SKYWARN teams where available. Please refer to SKYWARN frequencies listed here in your exercise package if you don't have amateur radio operators embedded.
- Consider delegating communication duties on state frequencies to embedded amateur radio personnel.
- Amateur radio operators should have radios ready to communicate on simplex frequencies at a moment's notice. Repeater outages may occur randomly as prompted by the exercise controllers/net control stations.
- Amateur radio operators should always start with the regional SKYWARN or RACES repeater and activate your (prearranged and pre-published) network(s) from there.

If you, as a participant, are having trouble generating tactical/formal message traffic on damage reports, recall past events where you have reported damage activity and use those reports that best fit a hurricane scenario in a way to generate traffic on the net at appropriate times during the exercise.

Exercise Objectives

The objectives of this exercise are as follows:

- Have all teams have one liaison that monitors their local RACES Repeater in addition to their local operations.
- ARES teams willing to deploy away teams are asked to do so where possible, provided benign weather conditions on the drill date.
- Establish district wide communication utilizing the following modes:
    - IRLP and/or Echolink nodes.
    - Utilizing the integrated Echolink *NEW-ENG* Conference Node (Node #9123) and IRLP reflector 9123 as a command net for contact with NWS Taunton (WX1BOX)
    - HF
    - Utilizing Various 2 Meter Repeaters that the ARES teams will be utilizing in the area when necessary and being prepared to 'failover' to simplex as required.
    - Utilizing SKYWARN frequencies to give mock tactical reports that meet SKYWARN criteria.
    - Monitoring RACES Nets active during the exercise and communicate with RACES stations when/if needed.
    - Establish a digital means of contact via Packet or WinLink between areas for those that have WinLink and/or Packet capability.
- Establish contact with other ARES districts and EOCs via HF (3943 or other designated 75 Meter frequency and/or 7245 KHz if propagation is present).
- Test and evaluate the range of Home stations for relay operations.
- Having mobile "roving" Amateurs wherever possible.
- Practice sending and receiving:
    - NTS format requests for assistance and status reports to ARES leadership and for RACES stations to send requests for assistance and status reports to their Region I, II or III/IV Managers.
    - Tactical messages to ARES leadership
    - Tactical messages to RACES leadership.
    - Tactical SKYWARN messages to NWS Taunton.
    - Bulletins and statements from NWS Taunton
    - Traffic between ARES members within an ARES team.
    - Traffic between local EOCs
    - Traffic between adjacent section ARES/RACES/SKYWARN personnel, where appropriate.
- Assure MARS Liaisons have a way to gather SKYWARN and ARES reports to formulate into EEIs (Essential Elements of Information).

Operational Ground Rules

The following are some operational ground rules for this exercise:

- All communications options should be utilized. Exercise controllers will throw in “failures” to test out “failover” of communications wherever possible as long as they are properly communicated up and down the ARES leadership.
- Many messages of both a tactical and NTS formal nature should be sent within the teams participating, between teams and between districts wherever possible.
- Frequent usage of the phrase “**This is a Drill**” *must* be incorporated with any messages, traffic or announcements relating to the drill.

Operational Players List

The following is a list of agencies and a general list of EOC’s that will be playing in the exercise.

National Weather Service in Taunton Massachusetts (WX1BOX)

The National Weather Service in Taunton Massachusetts will be active on the Echolink *NEW-ENG* (Node #: 9123) and IRLP Reflector 9123 systems as well as roving local repeaters to pick up crticial mock reports of weather and damage reports. We will also attempt to monitor HF and 6 Meters given the current limitations with the radio system setup at NWS Taunton.

MEMA State EOC and Region I, II and III/IV Offices

The MEMA State EOC and Region I, II and III/IV offices will all be active during this event supporting communications from their respective areas and back to the State EOC.

Numerous EOCs in MEMA Region II and Other MEMA Regions across Massachusetts

There will be numerous EOCs concentrated in Region II but also scattered about in other MEMA regions that will be active during the exercise. They will be active on their RACES frequencies and will be encouraged to be active on their SKYWARN Repeaters, HF and VoIP using the EchoLink *NEW-ENG* conference node #9123 and IRLP Reflector 9123 utilizing links on Echolink and IRLP and using individual PC’s that can utilize the Echolink program.

MARS Stations

MARS stations are encouraged to play along with the exercise to assist with ARES/RACES/SKYWARN support and to utilize information presented in the exercise for the formation of Essential Elements of Information or EEIs where possible.

Home Stations

We encourage home stations across Massachusetts to monitor and check into nets across the region for ARES and SKYWARN assistance. Some home stations can act as “simulated EOCs” or net controls where appropriate. We encourage stations to generate tactical message traffic for SKYWARN and formal message traffic for ARES where possible.

Mobile Stations

Mobile stations are encouraged to participate utilizing all modes at their disposal and can be utilized as roving stations and can report conditions that they might see if a real hurricane is occurring from their mobile station. We encourage stations to generate tactical message traffic for SKYWARN and formal message traffic for ARES where possible.

Served Agency Stations

Several hospital stations may participate including one or more hospitals from the South Coast Hospital group, South Shore Hospital, Sturdy Hospital and several hospitals on Cape Cod. We also expect participation from hospitals in Western Massachusetts, as well as some ambulance groups from Eastern Massachusetts.

Amateur Radio Frequency Plan

The frequency plan will utilize existing SKYWARN and RACES repeaters that are well documented via the web. The following links detail these frequencies:

SKYWARN Frequencies:
http://www.wx1box.org/node/37

RACES Frequency Listing and Map and Simplex Frequencies:
http://ares.ema.arrl.org/node/400
http://ares.ema.arrl.org/node/399
http://ares.ema.arrl.org/local/ICS217A_RACES-MISC.pdf
http://ares.ema.arrl.org/local/ICS217A_RACES_2M.pdf

It is noted that IRLP and Echolink nodes maybe connected either to the *NEW-ENG* Conference node or IRLP Reflector 9123. This will again serve as a command net for the National Weather Service in Taunton Massachusetts, WX1BOX, to facilitate contact with ARES-SKYWARN liaisons, possibly a liaison to the National Hurricane Center station, WX4NHC, MARS Liaisons, and city/town EOC's who have the capability to liaison via this system. Individual Hams and Spotters are welcome to listen and if they have no other means to pass their information, they can pass it over this system but are otherwise asked to use their local SKYWARN, RACES and ARES repeaters to pass their traffic and allow the liaisons to pass the information to NWS Taunton, Massachusetts. In addition, NWS Taunton will be roving the various local repeaters to pick up information per the normal SKYWARN Activation process along with monitoring the command net. We will also attempt to have a station monitor both 6 Meters and HF simultaneously.

It is also noted that some SKYWARN, RACES and ARES frequencies overlap with one another. Past exercises have proven that there have been no issues with such overlap. This exercise will test that theory once again and will require net controls and ARES/RACES/SKYWARN management to manage their repeater and frequency resources.

The MMRA Repeater System will be linked up for the two-hour period of the drill and we will attempt to have a Net Control monitoring the system full-time and facilitate traffic at a section level for Eastern Massachusetts. Below is the link for the frequencies that can be linked up utilizing the MMRA System:
http://www.mmra.org

The following are important regional frequencies via HF for this drill:

Regional ARES/RACES Net Primary for this drill:
3943 KHz LSB

Regional ARES/RACES Net Secondary for this drill:
Likely another 75 Meter frequency after meeting up on 3943 or 7245 KHz LSB though it is unlikely that 40 meter LSB will propagate.

The following are important Packet Frequencies on VHF/UHF and HF for this drill:

WinLink Frequencies:
http://www.winlink.org

Packet Frequencies:
145.01: Packet Frequency supporting MEMA Regions and State EOC
145.09: BBS infrastructure supporting MEMA and NWS main Packet Freq.

Regional Simplex Frequency:
It is possible that some control points may ask stations to go to 147.42 Simplex and run a roundtable of stations to determine the range of specific served agencies utilizing simplex. This would be done at a timeframe/desire of the controllers of the exercise.

There are additional local frequencies that maybe utilized in this drill at your local town/city level or at a regional level. Please contact your ARES DEC or EC or RACES/MARS/SKYWARN counterpart for further information on additional frequencies that maybe utilized in your specific area during the drill.

Appendix A: WinLink Operational Pointers & Resources

The following is some information on Winlink Operational Pointers and Resources that will be helpful during the exercise.

General things to remember when using Winlink2000
Winlink2000 and it's client user programs allow a VHF or HF radio connection to send and receive email from other Winlink2000 users or any internet user. If you are not yet familiar with Winlink2000, go to the following url and download RMS Express as your good basic introductory user client program.
http://www.winlink.org/ClientSoftware

RMS Express supports Packet, Pactor, the Winmor soundcard HF mode as well as internet (telnet) access. RMS Express will download frequencies and callsigns of available Packet, Pactor or Winmor servers to connect to over HF or VHF. When you setup RMS Express, you get an email address of <yourcallsign>@winlink.org

When sending an email from any regular internet email address into the winlink.org system, be sure to include the text of //WL2K/ in the subject line to get past the spam filters. The message will not be delivered without this in the subject line (unless the email address is in the winlink users whitelist.

Generic Winlink Resources

Winlink HF Nodes
http://www.winlink.org/RMSHFPositions

Winlink VHF Nodes
http://www.winlink.org/RMSPacketPositions

VHF Node Frequency list:
http://www.winlink.org/RMSpacketStatus

HF node frequency list:
http://www.winlink.org/PublicRmsHFList

Usage of //WL2K at the start of the Subject of each message
To assure that Winlink messages get through to the intended party, please be sure to put //WL2K at the start of the subject of each message. This will insure that the message gets through to all intended parties either within the Winlink/Airmail system or into or out of the system. Failure to put this tag-line at the beginning of the subject of the message could result in either the message never getting delivered.

Useful Winlink2000 Addresses

State EOC: wc1ma@winlink.org

Region 1 EOC: wc1maa@winlink.org
Region 2 EOC: wc1mab@winlink.org
Region 3 EOC: wc1mac@winlink.org
Region 4: wc1mad@winlink.org
National Weather Service Taunton: wx1box@winlink.org

Appendix B: NTS, ICS and EEI Message Forms

Various message forms can be utilized and sent as a tactical text message, a NTS formal message or an EEI message. The following links take you to the various message forms for reference:

Massachusetts RACES Message Form/NTS Message Form:
http://www.qsl.net/n1cpe/racesmsgform.doc

ICS Message Form:
http://training.fema.gov/EMIWeb/IS/ICSResource/assets/ics213.pdf

EEI Message Format:
http://www.afmars.net/EEIformat.html