

Hamilton County NET Guard 2010 Full Scale Exercise

Version 1

AFTER ACTION REPORT (AAR) / IMPROVEMENT PLAN (IP)

July 12, 2011



CONTENTS

Handling Instructions	1
Contents	2
Executive Summary	3
Section 1: Exercise Overview	5
Exercise Details	5
Participating Organizations	6
Section 2: Exercise Design Summary	6
Exercise Purpose and Design	6
Exercise Objectives, Capabilities and Activities	6
Scenario Summary	7
Section 3: Analysis of Capabilites	7
Capability 1: Activation	7
Capability 2: VHF Packet Operations	8
Capability 3: HF Packet Operations	8
Capability 4: Communications Capabilities	9
Capability 5: Email Services	10
Section 4: Conclusion	10

EXECUTIVE SUMMARY

As part of the development process for the NET Guard team, the primary missions and supporting documentation need to be validated and reviewed through an operation based exercise. To accomplish this milestone, a controlled exercise was developed that allowed the program team the chance to assess the current status and refine the remaining requirements for the program. Also, as part of the grant process for the NET Guard pilot program, an exercise is part of the requirements to review and evaluate the viability of the NET Guard team for a county and the supporting documentation, guides, and procedures that should be included in a NET Guard template.

The NET Guard exercise followed the District 5 Hospital exercise on October 30th, 2010 and was a continuation of the response for the Hamilton County Health Department. The exercise was based on a devastating earthquake that took out utilities, transportation, basic support infrastructure, and left central Indiana in a state of National Emergency declaration. To support the citizens of Hamilton County, after two days of initial life safety response, the local Emergency Management Director has activated the NET Guard team to support the local health department to assist with communications and information technology support.

Over the course of the exercise the team successfully completed a briefing on the specific support requests from the Health Department, established an action plan, and completed tasks that illustrated the ability to complete the mission requests.

This was a significant step in the program development as it validated the need for a NET Guard team and allowed the program management to understand key areas for improving the documentation and policies and procedures.

Significant Findings

Based on the goals and objectives, the following were identified as significant findings.

- Validated the need during a significant event for the NET Guard team to provide and/or perform communications and IT support, which would not have been available to the Health Department through any other means. The assistance also extended to the Medical Reserve Corps for Hamilton County as well.
- The exercise confirmed the skills required to meet a just-in-time determined mission. It is highly unlikely that the team could train to perform just a specific task as the request will be made based on the events that have taken place. The base skills confirmed are:
 - Communications – must have a current knowledge of amateur radio VHF and HF operations and a continually updated knowledge of packet radio
 - IT – must have a current knowledge similar to supporting a small office and short of enterprise level support
 - NIMS – the team will need to be familiar with and prepared for deployment and understand the incident command structure and the terms and language used during a response.

- There will need to be developed a Field Operations Guide and a Deployment Guide to use to train and exercise the NET Guard Team.

Major Strengths

The major strengths identified during this exercise are as follows:

- The resources obtained for the NET Guard pilot project to illustrate its functionality were accurate.
- The required skills on the pilot team were as needed and can be used to base the remaining volunteers teams.

Primary Areas for Improvement

The primary areas for improvement, including recommendations, as it relates to throughput are as follows:

- The ability to pass information over amateur radio as digital information and not voice requires a continuously updated set of skills. Indiana Department of Health was just beginning to try and understand this ability and Indiana Department of Homeland Security had not fully blessed a particular protocol.
- The communications equipment will require ongoing familiarization by the team to be effective.
- The IT support will almost always be determined upon arrival. A base set of old equipment that can be utilized for training and exercises would be beneficial for the team to practice various missions on.
- With much of the equipment arriving very shortly before the exercise, ongoing testing and setup exercises need to be conducted to be prepared to deliver.

SECTION 1: EXERCISE OVERVIEW

Exercise Details

Exercise Name

NET Guard Fall 2010 Full Scale Exercise

Type of Exercise

Full Scale Exercise

Exercise Start Date

October 30, 2010

Exercise End Date

October 30, 2010

Duration

Exercise began at 1400 and concluded 1700

Location

Exercise conducted at Hamilton County Health Department

Sponsors

Hamilton County Emergency Management

Mission

Activate the NET Guard Team to evaluate its ability to provide its targeted missions.

Primary Tasks

- 1) Run through the activation, deployment, setup, and establishment of a NET Guard Team.
- 2) Run through the setup documentation for the VHF Packet abilities, and pass digital traffic with either Indiana Department of Homeland Security or Indiana Department of Health.
- 3) Run through the setup documentation for the HF Packet abilities, and pass some digital traffic with either Indiana Department of Homeland Security or Indiana Department of Health.
- 4) Evaluate the communications abilities of the NET Guard equipment.
- 5) Perform a digital and voice communication test message for one of the ESF's in Hamilton County that includes email support.

Scenario Type

Natural Disaster - Earthquake

Participating Organizations

Hamilton County NET Guard

Hamilton County Emergency Management Agency

Hamilton County Health Department

Indiana Department of Homeland Security

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

As the NET Guard team takes form, a requirement exists to have its primary missions and the supporting documentation reviewed by a real world activity. Also, as part of the grant process for the NET Guard pilot program, an exercise is part of the requirements to review and evaluate the viability of the NET Guard team for a county and the supporting documentation, guides, and procedures that should be included in a NET Guard template.

Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items. The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

The exercise planning team selected the following objectives and activities for the exercise:

- 1) Run through the activation, deployment, setup, and establishment of a NET Guard Team.
- 2) Run through the setup documentation for the VHF Packet abilities, and pass digital traffic with either Indiana Department of Homeland Security or Indiana Department of Health.
- 3) Run through the setup documentation for the HF Packet abilities, and pass some digital traffic with either Indiana Department of Homeland Security or Indiana Department of Health.
- 4) Evaluate the communications abilities of the NET Guard equipment
- 5) Perform a digital and voice communication test message for one of the ESF's in Hamilton County that includes email support.

Scenario Summary

The NET Guard exercise followed the District 5 Hospital exercise on October 30th, 2010. The hospital exercise was based on a devastating earthquake that takes out utilities, transportation, basic support infrastructure, and leaves central Indiana in a state of National Emergency declaration.

To support the citizens of Hamilton County, after two days of initial life safety response, the local Emergency Management Director activated the NET Guard team to support the local health department. With the establishment of local shelters and the influx of state and federal support groups, the Health Department requested an additional means of self-sustained communication within the county, and the ability to pass secure, precise information to the state agencies.

The exercise commenced with the request of communication resources from the Hamilton County Health Department to the Hamilton County EMA. Upon notice, EMA notified the NET Guard team that their assist was requested and to report to the specified location to support the Health Department.

Once the team assembled and was established, a briefing of objectives took place, outlining the events that had taken place during the morning earthquake exercise, the current status and requirements, and the mission objectives that are required to support the Health Department.

The NET Guard team was asked to pass simulated welfare traffic over digital VHF and HF frequencies to state agencies on the behalf of the Health Department, and assist in any means in providing email capabilities.

SECTION 3: ANALYSIS OF CAPABILITIES

Based on the exercise objectives of the exercise, this section reviews the analysis of each of the identified capabilities.

CAPABILITY 1: ACTIVATION, DEPLOYMENT, SETUP, AND ESTABLISHMENT OF NET GUARD TEAM.

Activation – The identified means of notification is through an automated notification system that can place phone calls, send emails, and text pages. For the exercise, a manual notification was made via email and telephone. Primary information was passed for knowledge of the exercise and where to report. Upon reporting, our point of contact was relayed as the Emergency Preparedness Coordinator for the Hamilton County Health Department, and to report to the parking lot in front of the offices. Use of the local repeater was used for coordination for assembly.

Setup and Establishment – The teams were formed based on the pilot group of volunteers for the project. The team was organized as command with EMA, and operations were broken into communications and IT, with logistics handling the coordination of physical setup and record keeping. The first task was to receive the briefing from the Health Department on our missions, and this was relayed in hard copy with ICS 213 form.

Analysis: These tasks were accomplished in a fairly straight forward manner. If the team were to be deployed outside of the home county, it would have been more challenging to arrange a team, coordinate the deployment, and then work with the point of contact in the visiting jurisdiction. The procedures for activation and deployment, and the specific aspects of deployment will need to be captured and trained upon in a Field Operation Guide and Deployment Guide.

CAPABILITY 2: REVIEW PROCEDURES AND CAPABILITIES FOR VHF PACKET OPERATION.

VHF packet is a means of passing digital or textural information over VHF frequencies. It is used in close range (50 miles) transmission of information in direct, non-repeated instances. For this exercise the team was asked to pass digital information to available state agencies. The Indiana Department of Health does not have the means to receive the information, and Indiana Department of Homeland Security (IDHS) has an electronic bulletin board on its VHF packet station. Prior to the exercise it was arranged to have an IDHS person there to validate and reply back.

Setup – The team was able to setup the VHF radio, VHF antenna, and connect and configure the laptop for digital communications successfully from the documented procedures. Once the information was made available from the Health Department, the connections were established and information passed successfully.

Analysis: A stumbling block in the exercise was the team’s ability to have an antenna high enough to make direct communications with IDHS. The mast was still on order that would have placed the antenna at roughly 50 feet, which would have allowed direct communications. For the exercise the team actually connected with a random station operating midway to IDHS and then completed the final leg of the connection through that station (a via connection). Once the mast arrives, the team needs to validate coverage and training on the erection of a portable mast that requires guying.

CAPABILITY 3: REVIEW PROCEDURES AND CAPABILITIES FOR HF PACKET OPERATION.

HF packet is a means of passing digital or textural information over HF frequencies. It is used in long distance (50 miles and up, with up to 1000 miles typical) transmission of information in direct, non-repeated instances. For this exercise the team was asked to pass digital information to available state agencies. The Indiana Department of Health does not have the means to

communicate on HF, and Indiana Department of Homeland Security (IDHS) has a HF station that operates, but does not have the ability to pass digital traffic. The preferred means for the team to pass digital traffic is to configure a laptop and communications infrastructure to utilize email as the input for the information, and then the communications side would pass this to a remote location, which would then take the email and send it through its internet connection to the final destination. For this exercise contacting a remote station to pass email was the selected solution.

Setup – The team was able to setup both the laptop to be an email station and the HF radio to work with the laptop to send digital HF. The antenna for the HF station unfortunately had just arrived and it was determined that while it had the flexibility and portability the team needed, specific setup and tuning for frequencies would need to be worked out and documented to make it a reliable solution that can be erected in a timely basis. Therefore the team was not able to pass the emails over HF as planned based on the antenna not being tuned for transmissions.

As a work around, the team was able to utilize the laptop configured for email and instead route the traffic over an available wireless internet connection and pass the email along via these means. It was noted that the only way to provide the IT capabilities would be to work on a non-government restricted computer such that you had administrative rights to load software and perform configurations. Had the laptops not been configured previously with wireless internet access to a government network, there would have been no means to do this in the field.

Analysis: With the additional distance for transmission comes the complexity of tuning the radio and the antenna to match the receiving station’s operating frequency. The team will need to hold specific training and configuration sessions to be able to predetermine the configurations for the antenna to support various operating frequencies that the digital transmissions occur over. These should be documented and then utilized in training sessions for the HF email capability.

CAPABILITY 4: REVIEW COMMUNICATIONS CAPABILITIES.

This capability is for the team to be able to provide self-repeated communications within a 50 mile radius. The radio that was acquired for the pilot has the specific ability to perform “cross-band repeating”, which allows individuals to transmit on one frequency, and then the radio will rebroadcast the traffic on another frequency at a much higher output.

Setup – This capability requires first for the radio to be setup properly, then for the antenna to be erected that provides the coverage. For the exercise the mast to perform this function had not arrived, so the distance capability could not be tested. The procedures on setup of the radio were followed and the radio functions as required.

Analysis: A limiting factor for the exercise was the team’s ability to have an antenna high enough to effectively test the coverage of this ability. Once the mast arrives, the team needs to validate coverage and training on the erection of a portable mast that requires guying.

CAPABILITY 5: PERFORM A DIGITAL AND VOICE COMMUNICATION TEST MESSAGE FOR ONE OF THE ESF'S THAT INCLUDES EMAIL SUPPORT.

For the exercise the team received on ICS form 213 the message that needed to be sent to IDHS. To complete the message over voice and digital means required two unique efforts. The first was to be able to communicate over amateur radio directly with IDHS to pass voice communications. The second would be the setup of VHF or HF packet radio as described in the previous capabilities to utilize a desktop setup to provide email services.

Setup – The capabilities to establish the infrastructure has been discussed in the previous paragraphs. Unique to this capability were the challenges to pass the message over either a bulletin board on amateur radio or an outlook express email client. With the length of the message presented, it was nearly impossible to word for word relay the message over a bulletin board setup. It was very easy to enter the message into the outlook express client; however it was a significant concern that either a high word count or significant number of emails would both overcome the solution and delay messages being transmitted.

Analysis: The team was in both cases able to pass the message, however it was realized that a press release type message, which contains significant information, is not structured to be passed as emergency communications messages, which require a much more conservative use of words. This additional step of reducing the information from the supported agency to the message for the team will need to be included in training and practiced in field operations.

SECTION 4: CONCLUSION

The exercise allowed the NET Guard team to provide a proof of concept of the team and its missions, the process of how to activate and deploy the team, and the value that the team can provide to an agency that it may not otherwise be able to receive. It also gave the team some specific insight into providing emergency communications and information technology support, including message handling and restricted non-administrative access to computers. As the team develops and policies and procedures are documented in guides, training and hands-on work sessions will need to be conducted on a regular basis to keep an evolving volunteer base current on the missions and equipment for the NET Guard Team.