

After Action Report / Hurricane Irene / August 27 - 29, 2011

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INTRODUCTION:

This is the raw information and opinions that came out of Irene. The document is being shared with the ERC-East Leadership Principals with the understanding that it is not to be copied, distributed or shared with anyone else. This has not been approved for distribution. It has many good recommendations and many that are not feasible for various reasons.

Chris Pixton

HURRICANE IRENE BACKGROUND:

On August 15, 2011, a tropical wave exited the African coast, and emerged into the Atlantic Ocean. Four days later on the 19th this tropical wave's convective structure began to show signs of organization as the atmospheric pressure lowered. The following day the National Hurricane Center (NHC) noted that tropical cyclone formation was imminent as the wave neared the Lesser Antilles, and a reconnaissance aircraft confirmed the presence of a small surface circulation center. At 23:00 UTC that same day (the 20th) Tropical Storm Irene formed.

By August 21st, Irene had moved close to Saint Croix, U.S. Virgin Islands. The following day Irene made landfall at hurricane strength near Puerto Rico, where high winds and rain bands caused significant property damage.

During August 23rd Irene tracked just north of Hispaniola as an intensifying Category 1 hurricane, skirting the coast with heavy precipitation and strong winds that killed several people. After crossing the Turks and Caicos Islands, in the warm waters of the Caribbean Irene quickly strengthened into a Category 3 major hurricane.

Irene made landfall on August 27th over Eastern North Carolina's Outer Banks at 7:30 am EDT (11:30 UTC) near Cape Lookout with winds of 85 mph and moved along southeastern Virginia, affecting the Hampton Roads region.

After briefly reemerging over water, Irene made second US landfall at 05:35 EDT (09:35 UTC) near Little Egg Inlet in New Jersey during the morning of August 28th, becoming the first hurricane to make landfall in the state since 1903.

Irene was downgraded to a tropical storm as it made its third US landfall in the Coney Island area of Brooklyn, New York, at approximately 9:00 AM (13:00 UTC) on August 28th.

Current preliminary estimates indicate that Irene caused widespread destruction with property losses to the Caribbean as high as US\$ 3.1 billion US mainland losses of \$7 billion and at least 54 deaths.

COMMUNICATIONS BACKGROUND:

On the afternoon of the 26th Chris Pixton, KC9EIZ received a call inquiring about ERC-East being a net control station and the western leg of a triangle net to support the Church's communications efforts, New York and Washington DC being the other two legs. Within ninety minutes we had organized the net and in less than three hours had our first successful net.

We initially had planned to hold a net at the top of each hour on 40m but determined prior to the first net that a net every other hour at the top of the hour for 40m and the bottom of the hour on 75m would be a better choice.

The initial net occurred at 5:00 PM (21:00 UTC) followed by 7PM, 9 PM, 11 PM, 2 AM Saturday morning, 5AM Saturday every two hours till 11 PM Saturday, 2 AM Sunday and 5 AM till 11 AM Sunday morning.

LESSONS LEARNED, FINDINGS, SUGGESTIONS AND RECOMMENDATIONS:

1. ERC-EAST, ST. LOUIS AREA PREPAREDNESS NET, Chris Pixton (CCP), Eric Nelson (EWN), Chuck Healy (CEH)

- A. This entire event again demonstrated the lack of information we have about LDS Emergency Communicators / Amateur Radio Operators (ARO). For instance, during Irene Charles Hargrove learned that a member of the Stake Presidency of one of the New York City Stakes is an Amateur Radio Operator with a General Class license.

Recommendation: A concerted effort needs to be undertaken across the USA to find LDS EmCommer's / AROs. (CCP)

- B. The National Hurricane Center (NHC) had predicted for five days that Irene would make landfall along the east coast. However, it was seventeen hours prior to landfall when KC9EIZ was asked to organize a net. Doug Reneer had been in seminars in the days prior to Irene. Knowing he was out of pocket someone should have contacted him to ask about communications.

Recommendation: One or more persons should be designated to start the communications process in Doug's absence. (CCP)

- C. With the short notice we did not have time to organize backup net control stations (NCS) outside of the St. Louis area.

Recommendation: Backup NCSs outside of the St. Louis area should be used when possible to provide relays into the NCS. (CEH & EWN)

- D. Because of the short time to organize the net we had little situational awareness of

outside events.

Recommendation: During future nets of this type, a person should be designated to be a liaison to the National Hurricane Center high frequency nets, another to the Weather Channel, another to Fox News and all this information be fed into one central point. This will require advance notice and planning for future events. (CCP)

E. Based on this experience there are several items we should look at before the next event.

Recommendation: 1) We propose that with future events in addition to using the standard ERC (Emergency Response Communications) designation we also use the name of the event ie, ERC - Irene. (CCP, EWN) We should have an approved usable generic net control script prior to the next event. (EWN)

F. During this event we had extremely limited participation on the early morning and late night nets.

Recommendation: The scheduling of nets early in the morning (5 AM ET, 4 AM CT) and late at night needs to be reviewed prior to each event, factoring in the amount of anticipated traffic and severity of the disaster / emergency. (CEH)

G. Many storehouses currently have Kenwood TS-430s and 440s in suitcase kits for portable use. These radios have demonstrated over the years that they need to be exercised on a regular basis to prevent cold solder joints and pot issues.

Recommendation: Where available, the TS-430's & 400's be set up and used as a backup to the storehouse primary HF radio and should used at least once a month. (CCP)

H. In some applications, vertical HF antennas have significant advantages over traditional Yagis and dipoles.

Recommendation: Where feasible and appropriate, install both vertical and traditional HF antennas. (CCP)

I. The choice of frequencies again was problematic due to an ARRL contest and long time nets on the frequencies we chose. Also the 40 & 75m frequencies proved to be unusually challenging during the daytime.

Recommendation: Frequency use is very dynamic. A frequency could be open today and fully utilized tomorrow. Nevertheless, now is the time to identify four to six frequencies on various bands as a starting point for future use. In the future we need to have 20m frequencies available for daytime. We also need to identify multiple start points in the digital bands, 75, 40 and 20 meter voice. These start points should then be reviewed quarterly. During the event changes should be announced and also sent via text messages, IRLP and such. (CCP)

2. WASHINGTON DC STOREHOUSE, Dan Goodson: (Recommendations added by CCP)

- A. The weekly emergency radio exercises helped to prepare us for this event. Many operators throughout the eastern U.S. have been participating.
- B. Using the St. Louis area as a command & control center was beneficial. Irene caused no immediate concerns in their local area so they could concentrate on assisting our area.
- C. The design philosophy of the DC storehouse radio system prepared us for the power interruption. When commercial power failed the transition to battery power was easy and quick. We maintained full radio power as well as the use of our satellite phone.

Recommendation: A study should be made at those storehouses with communications rooms to determine the level of additional backup power and lighting needed. (CCP)

- D. Having one or more scanners for those storehouses with radios would be extremely beneficial.

Recommendation: Make a bulk purchase for all storehouses that currently do not have scanners. (CCP)

- E. Staffing was weak in DC. We still need more General Class licensed operators.

Recommendation: At meetings such as the Dayton Hamfest, seminars, in training emergency communications specialist and on VHF (very high frequency) nets we need to place an emphasis on licensing General licenses. (CCP)

- F. We need internet access in the DC storehouse communications room. It was frustrating to not have access to current news, weather, and e-mail.

Recommendation: Consideration needs to be given to installing the internet in storehouse communication rooms. (CCP)

- G. We need to provide TV and AM/FM radio in the storehouse communications rooms.

Recommendation: Consideration should be given for select storehouse having full cable/satellite TV capabilities. (CCP)

- H. We need a backup HF rig for the DC storehouse. Two identical transceivers would be a good idea. That would reduce the amount of training needed to operate them.

Recommendation: In those storehouses where there is no back-up radio, an additional radio should be purchased. (CCP)

- I. We need to have a standard digital communications method. Several times when voice

communications were weak, a digital alternative would have been convenient.

Recommendation: The AROs in the Northeast have standardized on WIHKJ's "Fldigi" digital mode with great success. We need to review what's available and consider a digital standard for the Church. (CCP)

- J. There needs to be a current contact list for all area stake presidents in the storehouse communications rooms or a method to instantly access such a list.

Recommendation: There needs to be a simple, quick way for select emergency communications specialists to access parts of the leadership directory. (CCP)

- K. We need the ability to contact stake presidents without using traditional communications methods.

Recommendation: EmComm personnel should be well versed in alternative communications methods such as texting, Facebook, Twitter and other social media. (CCP)

3. NEW YORK CITY, Charles Hargrove: (Recommendations added by CCP & CEH)

- A. Power supplies, power strips, computer cases and any other critical equipment needs to be kept off the floor. Even though Charles had never had flooding at his house, his basement ended up with a foot of water.

Recommendation: At meetings such as the Dayton Hamfest, seminars, in training emergency communications specialist we need to stress the importance of protecting our equipment. (CCP)

- B. Having a central point for finding information about storehouses, coordinating councils & stake ECS's is not only beneficial, but is very important during a disaster / emergency.

Recommendation: Have an internet central clearing house accessed by your Church log in. (CEH)

4. THE FOLLOWING RECOMMENDATIONS ARE PROPOSALS FOR FUTURE ACTIONS AT CHURCH HEADQUARTERS, Chuch Healy.

Recommendations:

- 1) A clear plan of expectations for future events from HQ and matching actions required at each level down to the stake. (CEH)
- 2) Develop a generic plan with advance notification of implementation of various stages (96 hrs ahead, 72 hr ahead, 24 hrs ahead, etc). (CEH)

- 3) Full contact info for all positions from ward up to the Area 70. (CEH)
- 4) Framework of logical voice and data frequencies for use in regions and relays. (CEH)
- 5) Full buy-in of emergency communications and other forms of communications by leaders and a push for member training. (CEH)
- 6) Regular nets VHF / UHF / HF with all modes (voice & data) for local / stake / coordinating councils / area groups. (CEH)
- 7) Method of sharing of information for station setups and best practices. (CEH)