



Hot-Wash: ARRL National Earthquake Drill 19 December 2008

By Alabama Section Emergency Coordinator Les Rayburn, N1LF

Overall status: Yellow



Alerting Message

From: Dura,Dennis, K2DCD [mailto:k2dcd@arrl.org]

Sent: Thursday, December 18, 2008 6:01 PM

To: Lasley, Jim (SM, Iowa); Bagley, Dale (SM, MO); Norris, David. (SM,AR); Keown, Malcolm (SM, MS); Isbell, Jay (SM,AL); Clayton, Glen (SM,TN); Brooks,Jim, KY4Z; Phillips, Joe (SM, Ohio); Sellers, James K9ZBM; Ciciora,Tom (SM,IL)

Subject: DRILL DRILL DRILL EARTHQUAKE 8.1 MAGNITUDE DRILL DRILL DRILL

Importance: High

THIS IS A DRILL MESSAGE THIS IS A DRILL MESSAGE THIS IS A DRILL MESSAGE

AT 2332Z 18 DECEMBER 2008, A 8.1 MAGNITUDE EARTHQUAKE CENTERED IN THE TOWN OF CHARLESTON, MISSOURI OCCURRED. DESTRUCTIVE SHOCKS HAVE IMPACTED THE STATES OF IOWA, MISSOURI, ARKANSAS, MISSISSIPPI,

ALABAMA, TENNESSEE, KENTUCKY, OHIO, INDIANA, AND ILLINOIS. MAJOR DESTRUCTION OF INFRASTRUCTURE FOLLOWING THE VALLEYS AND PLAINS OF THE MISSISSIPPI AND OHIO RIVERS HAS OCCURRED. A HIGH INTENSITY AFTERSHOCK OF 6.7 OCCURRED AT 2347Z IN ST LOUIS AND A 6.6 AFTERSHOCK IN MEMPHIS AT 2352Z

THIS IS A DRILL

THE FOLLOWING ACTIONS ARE REQUIRED TO COORDINATE A NATION WIDE RESPONSE TO THIS EVENT.

ALL SECTION MANAGERS ARE TO IMMEDIATELY CONTACT THEIR SECTION EMERGENCY COORDINATOR AND ANY SUBORDINATE LEVELS BY ALL MEANS AT THEIR DISPOSAL WITHIN THE SECTION. WITHIN THE PARAMETERS OF THE SECTION EMERGENCY PLAN (IF IN PLACE), ASCERTAIN THE AVAILABILITY OF ARES RESOURCES TO RESPOND. FIRST PRIORITY IS TO MAKE CERTAIN IF POSSIBLE, THAT FAMILY MEMBERS IN THE IMPACTED AREA ARE SAFE ALONG WITH MEASURES TO SAFEGUARD LIFE. ONCE THE AVAILABILITY OF ARES RESOURCES HAS BEEN DETERMINED, FOR EACH COUNTY, DISTRICT, OR OTHER GEOGRAPHICALLY BASED REGION IN THE SECTION, THIS INFORMATION NEEDS TO BE SENT BACK VIA E-MAIL TO ARRL HQ. RESOURCES ARE DEFINED AS PERSONNEL, INDIVIDUAL EQUIPMENT, FIELD DEPLOYABLE STATIONS, AND MOBILE COMMUNICATIONS VEHICLES.

THIS IS A DRILL

EACH SM SHOULD REPORT THE FOLLOWING INFORMATION BACK TO DENNIS DURA, K2DCD, MANAGER EMERGENCY PREPAREDNESS AND RESPONSE AT ARRL HEADQUARTERS AS SOON AS THE INFORMATION HAS BEEN DEVELOPED FOR EACH SECTION. K2DCD@ARRL.ORG

SM'S MAY DESIGNATE ANOTHER INDIVIDUAL WITHIN THE SECTION TO REPORT THE COMPILED DATA TO ARRL HQ. INDIVIDUAL SUBORDINATE LEVELS WITHIN EACH SECTION SHOULD NOT REPORT DATA DIRECTLY TO ARRL HQ.

1. SECTION NAME, REPORTING INDIVIDUAL/CALL/TITLE, TIME/DATE OF REPORT
2. TIME SM OBTAINED AND REACTED TO INFORMATION
3. TIME SM CONTACTED SEC
4. METHOD OF CONTACT WITH SEC
5. WAS CONTACT SUCCESSFUL?
6. IF CONTACT WAS NOT ESTABLISHED WITH SEC, WHAT ACTION(S) DID THE SM TAKE TO NOTIFY THE EMERGENCY COMMUNICATIONS RESOURCES IN THE SECTION?
7. HOW LONG AFTER THE ORIGINAL CONTACT WITH THE SEC WAS THE REQUIRED RESOURCE INFORMATION DEVELOPED AND RETURNED?
8. RESOURCE INFORMATION: TOTAL ARES PERSONNEL AVAILABLE WITHIN SECTION BASED UPON SUBORDINATE LEVELS (COUNTY, DISTRICT OR REGION)?
9. RESOURCE INFORMATION: NUMBER OF AVAILABLE FIELD DEPLOYABLE STATIONS FOR HF/VHF/UHF WHICH HAVE EMERGENCY POWER CAPABILITIES TO INCLUDE DIGITAL MODES WITHIN SECTION ?
10. RESOURCE INFORMATION: NUMBER OF AVAILABLE MOBILE COMMUNICATIONS VEHICLES WITHIN SECTION? (FREQUENCY INDEPENDENT)
11. RESOURCE INFORMATION: AVERAGE TIME OF RESPONSE OF ARES VOLUNTEERS FOR DEPLOYMENT?

DRILL PLAY WITHIN EACH SECTION IS ENCOURAGED WITHIN THE CONFINES OF THIS SCENARIO.

DRILL PLAY SHOULD FOCUS ON AVAILABLE AND DEVELOPING INFORMATION AND RESOURCES. AND NOT THE MODE THE INFORMATION WAS DELIVERED TO EACH SECTION.

THIS DRILL TERMINATES AT 0000Z 20 DECEMBER 2008

THIS IS A DRILL MESSAGE THIS IS A DRILL MESSAGE THIS IS A DRILL MESSAGE

Overview

Shortly before seven p.m. on Thursday, December 18th, 2008 the usual pace of the holiday season was shattered by a simulated 8.1 magnitude earthquake that struck near Charleston, Missouri. Much as in a real world event, this no-notice nationwide amateur radio exercise set in motion a dedicated group of Amateur Radio Emergency Service (ARES) volunteers.

The Drill was originated by Dennis Dura, K2DCD the Emergency Manger at the American Radio Relay League ([ARRL](#)) headquarters. This drill activated ARES volunteers and communications systems in eleven states that lay within the New Madrid earthquake danger zone.

Alabama Section Manager (SM), Jay Isbell, KA4KUN received notification of the simulated earthquake at 6:32PM, only minutes after it's start time of 6:01PM. He immediately telephoned Les Rayburn, N1LF the Alabama Section Emergency Coordinator (SEC), and set in motion the actions called for in the Alabama ARES Emergency Action Plan.

http://www.arrl-al.org/ARES_Section_Plan3_v5.pdf

Quickly ARES leadership, ARRL Emergency Coordinators (EC), District Emergency Coordinators (DEC) and many hams around the state rose to the challenge and manned both local and statewide nets on High Frequency (HF) radio, the new [D-STAR](#) digital network, and on local VHF/UHF repeaters around the state. Other tools such as the Winlink 2K HF e-mail network, and Automated Position Reporting System (APRS) messaging were also pressed into service.

The response was far from perfect. From the earliest moments it was clear that the SEC, Les Rayburn, N1LF had not adequately planned for such an event. The "telephone tree" notification system was completely manual, and much of the contact information was hopelessly out of date.

Many amateur radio Emergency Coordinators received no notification of the drill until they checked their e-mail accounts in the days that followed. The Emergency Action Plan itself is out of date, as it does not accurately reflect current assignments. The Alabama Section web site does reflect current assignments and leaders, <http://www.arrl-al.org/ARES.html>.

While some tools that would have been helpful such as a real time "blog" for the SEC to communicate directly with volunteers are in place (<http://al-ares.blogspot.com/>) these tools were not used by the SEC during the drill.

ARES Mutual Assistance Teams (ARESMAT) was not called or activated.

Recently emphasis had been placed on updating contact information in the on-line ARES database, but again, the SEC had failed to make it a high level priority. There were numerous other problems that were identified by both amateur operators, and Emergency Mangers at our served agencies. These problems and correction actions will be detailed later in this report.

Despite the problems, and lack of leadership in preparing for such a crisis, there were considerable bright spots in the drill. Many ARES leaders stepped up to the plate and activated local, HF, and D-STAR Nets.

In many instances, assistant EC's backed up their county EC. The drill was conducted less than one week before Christmas, and many EC's were out of town, or involved in holiday occasions at after-work functions.

During this drill, we provided successful information flow and communications per our ARES plan from National, State/Section, District and County. Our exercise and training programs paid off in this drill, amateur radio operators proved reliable, innovative, resourceful and fully capable in this near holiday surprise disaster event.

Some of our EC's were even attending their spouse's college graduations, but quickly responded once being alerted to the drill. Talk about dedication! Many left parties or holiday functions after only just arriving, and did so without a word of complaint.

A summary is included below, made up of the after-action reports that I've received to date. Many others participated but did not submit a report to journal their service. Detailed reports follow the summary, and then a "lessons learned" section will conclude this report.

Amateur Radio in Alabama is blessed with close knit relationships with our served agencies. Many county EMA offices activated and participated in the drill, even though it was specifically for amateur radio. Others called to offer support, or see if they could render other aid. We are extremely grateful for these relationships. I can assure all that corrective action is already underway, and that problems identified will be addressed early in 2009.

My personal thanks to all who so selfishly served their communities, their counties, and the State of Alabama.

County or EMCOMM Group	Nets	ARES Response	Field Deployable	Mobile Comms Vehicles	Comments
D-Star Digital Network	D-Star	14	10	11	Ken Atkinson, WB4FAY did yeoman's duty as NCS, backed up by W4MD. Linked the entire state from Huntsville to Mobile via our D-Star Digital Network. Our State EMA and two local EMA's also checked into this net.
HF ARES Net & Lee County	HF, VHF, APRS,	34	N/A	N/A	Mike Watkins, WX4AL NCS and many others braved awful band conditions to log 34 total check ins, including 19 counties in Alabama, and several states. Lee County had a total of four check-ins. Great work, Mike!
Shelby County	VHF, D-Star, HF	20	16	14	With Shelby County EC Tom Appleby, K14PPR out of town, AEC Jim McLester, WA4YXU manned the VHF net and helped to spread the word about the drill.
Jefferson County	VHF, HF, D-Star, APRS, Winlink 2K	43	35	38	Jefferson County EC Hub Harvey, N4HUB and AEC Alex Davies, W4AVD were the true stars of this event. From their posts at the Jefferson County EMA and home stations, they manned the phone tree, activated numerous local nets, coordinated HF, E-mail, and APRS relays for the State EMA in Clanton, and

					numerous other tasks. BZ to these strong leaders!
Calhoun County	Local VHF, HF ARES Net	14	14	14	Calhoun Co. has one of the best trained and equipped ARES groups in the state. No surprise that they responded quickly and in good numbers.
Coffee County	HF, VHF, D-Star	5	4	4	EC Jim Garrison provided a much needed "big signal" on HF helping to relay weaker signals. Thanks for the assist!
Tuscaloosa County	VHF, HF, D-Star, APRS	3	3	3	SEC notification failed miserably here, failing to notify the EC or even DEC for this important county. Despite that the assistant EC's managed to represent the county on both digital and analog nets, and lead the way in key relays.
Blount County	VHF, HF, D-Star	31	26	29	Ken Moore, AB4WL helped to rally a great response from Blount County, and also surrounding areas.
Lamar County	VHF, HF, D-Star	N/A	N/A	N/A	EC David Bash, KI4IKM has drilled for an actual earthquake event on the New Madrid fault line for years. This experience showed as they quickly involved their EMA Director and local hams.
Montgomery County	VHF, HF, D-Star, APRS	N/A	N/A	N/A	Mike Mimms, K4IZN lead the ARES charge at State Capitol. Showing outstanding leadership he manned the phone tree, HF net, and activated several local VHF Nets. Only hams in this top notch ARES groups filled in the gaps as well.
St. Clair County	VHF, HF	18	16	17	Hub Harvey, N4HUB not only manned the phone tree, but also activated local VHF nets in several nearby counties including St. Clair.
Houston, Coffee, & Geneva County	VHF, HF	6	NA	NA	A lack of notification limited participation, but DEC James Nelson did manage to rally the troops late in the evening.
Limestone County	VHF, HF,	13	N/A	N/A	Joe Ivey, W4JSI has a close working relationship with their local EMA, and it showed in their quick response to this drill.
Baldwin County	VHF, HF, D-Star	5	4	4	DEC Patty Link, KI4JEO and Joe Smith, WA4VSH received a very late notification, but quickly sprung to work linking us to the Gulf Coast using both D-Star and HF. Great work down there in District 1!

Lessons Learned

This region wide, multi-state exercise was the first of its kind in our area for the amateur radio service. It depicted an entirely realistic possibility of a large magnitude 8.1 earthquake along the New Madrid fault line. Such a scenario is not only possible, but likely at some point in the future.

The drill was conducted with no prior notification to either amateur radio operators or emergency management officials. It quickly pointed out gaps in several areas, which are detailed below. For ease in identifying corrective actions needed, we've segmented these into areas of responsibility.

Lessons Learned (General)

- Lack of an automated notification system for District and County level emergency coordinators resulted in an inadequate response. Our manual "telephone tree" notification system was slow and suffered from outdated contact information in many cases.
- Emergency Coordinators must delegate authority to their subordinates to be effective. In some cases, EC's tried to perform multiple tasks such as serving as local net control, making phone tree notifications, and liaison with EMA officials.
- Use of digital communications modes such as PSK-31 and RTTY could have overcome propagation problems on the high frequency (HF) nets. We must increase our usage and deployment of digital modes to be effective.
- Our internal ARES database must be updated to be effective. DEC's must insure that EC's and volunteers complete this information immediately.
- The Alabama ARES Emergency Plan has out of date or incomplete information. It should be updated ASAP to include key resources such as the use of D-STAR Reflector 002 for state wide emergencies, and the deployment of D-Rats software for slow speed data traffic.
- All ARES leaderships should include "signature files" in their routine e-mail communication containing contact information including home, work, and cell phone numbers. SMS Text E-mail address to send short text messages to their cell phones via e-mail, etc.
- Each County EC will have a lessons learned list that they will work from

Lessons Learned (State EMA, Clanton, AL)

- The Emergency Coordinator and Assistant EC were neither available for deployment to the State EMA (KF4LQK). The callout list of six additional operators was outdated, and while all six were contacted, none were available for deployment. A new group must be recruited and trained ASAP. Notification systems must also be developed.
- KF4LQK station lacks the power necessary for reliable voice communications during poor propagation. We should consider the installation of a medium power (500 watt) amplifier to aid communications in poor conditions.
- Digital capabilities including APRS, PSK-31, Slow Speed data via D-STAR, RTTY, and Winlink 2K are not fully deployed at the State EMA. These modes must be completely installed and tested ASAP.
- The direct telephone number to the State EMA amateur radio room needs to be made widely available to both local EMA directors and ARES leadership. For your records, please note that 205-280-2355 is that number.

- The VHF beam antenna rotor did not appear to be functioning correctly during the drill. This needs corrective action.
- More VHF analog repeaters need to be programmed into the 2 Meter radio at the station. Several important repeaters that are within range such as Shelby County (146.98mhz (-) offset) were missing.
- The National Weather Service "NWSCHAT" instant messaging software is an important communications tool and should be installed on the KF4LQK computer immediately.

Corrective Actions

Steps to address the weaknesses noted during the exercise are already underway. We are currently negotiating for the use of an automated notification system that will allow us to alert amateurs using telephone broadcasts, SMS text messaging, e-mail, and fax.

Additionally, the Alabama Emergency Action Plan is being revised, and a new emphasis is being placed on updating our internal ARES database. County ECs are being urged to review their plan and local telephone trees and discuss alternative means of notifying volunteers to include e-mail, text messaging, and the local repeaters.

Our EC to the State EMA will be completing installation of digital capabilities there, and updating our volunteer responders. The SEC and SM are working with state and local EMA directors to address a variety of other issues.

All ARES leadership will have backups trained and ready to respond.

Detailed Reports

After-Action reports continue to flow in from around the state, so this list is in no way complete. However, we believe that it is critical to provide meaningful feedback to both amateur radio operators and our served agencies quickly. To that end, we've included detailed reports exactly as received. Some of the jargon may be confusing, but there is vital information to be gleaned from these reports from the field.

Section Manager, Jay Isbell, KA4KUN

At 1803 CST last evening, I received the only message via email from Dennis Dura, K2DCD, at ARRL Headquarters in Conn. I noticed the email at 1835, and went to announce it on the Traffic Net which should have been starting five minutes earlier. It never met. I read the email on 3965khz and on 146.88 in BHM. I contacted Les Rayburn, N1LF, SEC at about 1845 by phone and forwarded him the announcement via email.

He then began to contact the DECs where available and ECs where not. I did nothing more except to monitor 3965 and the surrounding local repeaters to see when they came online. By 1930, a good UHF/VHF net was developing along the central I-20 corridor including Montgomery and Auburn. Extreme north and south Alabama were later coming up. Thanks to Ken WB4FAY, Tommy Howell and David Drummond, the central D-Stars were linked through Reflector 002 port B and were simulcasting the net.

As we get more reports in, we'll have a better idea of our flaws. Lots of stuff worked great, but too much didn't. Dave Hartin, KG4KRO, Tuscaloosa EMA Director, has the best suggestion so far, in the beefing up

of our phone/contact tree. I know we have many ECs with only one phone number or email. I have just set up another field on the online database to be able to put in your primary monitored repeater or frequency. Everyone has a favorite.

This has been a great exercise if we work out the flaws we found.

I'll keep everyone posted as we get more after action information.

73 and God Bless

Jay Isbell, KA4KUN
ARRL Section Manager
Alabama Section
205-910-6446

D-Star Digital Nets (Statewide on Reflector 002)

After receiving the email at 7:06PM (local) notifying me of the DRILL (Major Earthquake that 'occured' at 2332Z), The Alabama D-STAR Net was activated linking repeaters in Birmingham, Montgomery, Tuscaloosa, and Magnolia Springs via D-STAR reflector REF002-B.

WB4FAY served as NCS with W4MD as the backup NCS.

The following agencies checked into the net (from onsite at the agency):

Clanton - State EMA (KF4LQK)
Jefferson Co EMA (KF4OUS)
Lamar Co EMA (KI4IKM)

Individual check-ins:

WB4FAY Y-Y-Y Ken - Jefferson Co. (also on 146.88 and 3958)
KG4MPU Y-Y-Y Tommy - Tuscaloosa Co.
W4LHQ Y-Y-Y David - Jefferson Co.
W4ATK Y-Y-Y Jim - Jefferson Co.
AK4KS Y-Y-Y Andrew - Blount Co. (w/APRS & Winlink)
W4MD Y-N-Y David - Tuscaloosa Co.
AB4WL N-Y-Y Ken - North Jefferson Co. (via DVDongle)
KI4DHS Y-Y-Y Mark - Jefferson Co.
WA4VSH Y-Y-Y Joe - Baldwin Co.
KG4PNL Y-Y-Y Rick - Montgomery Co.
K4DJL Y-Y-Y El - Montgomery Co. (check-in on 3958 from mobile)

Total of 14 check-ins.

For the individual check-ins (11), 10 were deployable, 10 w/Emergency Power, 11 with mobile comm.
Counties represented: Jefferson, Tuscaloosa, Blount, Tuscaloosa, Baldwin, Montgomery

The net was secured and the repeaters unlinked at 22:58 local time.

Ken Adkisson - WB4FAY

HF ARES Net & Lee County

ALABAMA EMERGENCY NET AFTER ACTION REPORT
December 19th, 2008

by

MIKE WATKINS, Esq.
Lee County EC
Alabama ARES District 4 EC
Alabama Emergency Net NCS

I was contacted by phone by the Alabama Section Manager at approximately 1920HRS. I then returned home and began net operations by activating the Alabama Emergency Net on 3965khz and was ready to take traffic on Tactical Voice and APRS. I also had email constantly open for the sending of alerts and updates to the ARES membership.

I began operations at 1937HRS CT. 3965KHZ proved to be unusable this time of year at 2000HRS CT as well as the digital MONDIAL station using multiple data carriers spread over 10khz on 3965khz. 7243khz is also unusable at that time of night but would have worked well in the daytime. I finally found a clear spot on 3958khz even though a couple of stations on 3962.5khz were running HIGH power and had harmonics that radiated in both directions of the spectrum for 20khz. We were able to contend with the harmonics and I began taking checkins.

STATION	COUNTY/STATE	REMARKS
1. WX4TM	LEE	
Lee County ARES Net Control		
2. WB4BYQ	LEE	
3. KF4AEJ	LEE	
4. N1LF	CHILTON	SEC
Operating as KF4LQK at AL State EMA		
5. KL0LN	COFFEE EC	Great
Signal, used for Relay of weak signal stations		
6. K04RR	GA	
7. KD4LXU	RANDOLPH EC	
8. KG4EUD	CALHOUN EC/DEC7	
9. K4IZN	ELMORE	Also
checked in via APRS		
10. KC4MOS	BLOUNT	
11. KJ4BXM	CLEBURNE	
12. K0SMO	MO	
12. KB3JNZ	PA	
13. KB5WX	NC	
14. K4ZRC	LA	
15. KF4LQ	?	
16. AK8I	MI	
17. KG4MPU	TUSCALOOSA	Also checked
in via APRS		
18. W4MD	TUSCALOOSA	Also
checked in via APRS		

- 19. KG4VSH St. Claire EC
- 20. KI4IKM Lamar EC
- 21. W4AGA Jefferson
- 22. KB4BJW Marshall
- 23. WA4VSH Baldwin
- 24. W4ALR FL

Also checked in via APRS

- 25. WB2IJH NY
- 26. K4DRQ St. Clair
- 27. KI4DHS Clay

Relayed KC4LQT

- 28. KE4GWW Houston DEC2
- 29. WB4FAY Jefferson
- 30. KG4DCE Baldwin
- 31. KE4HIE Covington EC
- 32. K4DJL Montgomery
- 33. KD4LUG GA
- 34. N4NM Madison AEC

Summary: Eight States: GA, MO, PA, NC, LA, MI, FL, NY Counties:
19

The Net terminated operations at 2300HRS CT per the instructions of the Section EC, Les Rayburn, N1LF.

Recommendations: The Alabama Emergency Plan be amended to include a back up frequency on 80 meters

as well as a secondary frequency on 40. 3965khz would have been marginally usable except for foreign broadcasts.

We need to establish a Real Time permanent blog for ARES personnel to check for status updates and to file reports.

It should be open to all registered members of ARES thus alleviating the constant email forwarding and differential delivery times. Many thanks to KL0LN as an AEN Relay and to the New Georgia Section EC for his offer of ARESMAT assistance.

Any comments are welcome.

There were numerous 2m nets in session with liasons to the AEN.

Respectfully,
Mike Watkins
WX4AL
AEN NCS
Lee County EC/ District 4 EC

EMAIL ARCHIVE RELATED TO DRILL EXERCISE

1. DRILL MESSAGE EMAIL TO THE ALABAMA ARES MEMBERSHIP AT 7:41pm

2. DRILL EXERCISE TRAFFIC 7:57pm

To the Alabama Section ARES Members,
The Alabama Emergency Net on 3965Khz is now Up despite the digital HF Foreign Broadcast Station. Stand by for frequency change information.

73,

Mike Watkins

WX4AL

DRILL EXERCISE TRAFFIC

3. RESPONSE FROM GEORGIA SECTION EC 8:13pm

Mike:

I am SEC Georgia, W4AYK, Extra Class, Eugene C. Clark. As an ARES MAT member I can personally offer the following:

I am deployable with time allotted for loading.

I have VHF/HF Mobile

I have Portable VHF/UHF/HF with generator and battery operation,

9 Gallons of gasoline in cans

Winlink on HF

SSB, CW, on HF

Tent, or camper as needed, all freeze-dried food and bottled water and other personal supplies for 1 week.

I am prepared to document my FEMA IS-100, IS-200, IS-700, and IS-800,

Plus ARRL CCEP I, II, and III.

4. EMAIL UPDATE 8:14pm

As per the emergency plan please listen to both 3965khz and 7243khz for net traffic.

Mike Watkins

WX4AL

5. RESPONSE FROM W5AUB 8:14pm

I tried calling on 3965hz but no one answered

John W5AUB Calhoun County

6. RESPONSE FROM KD4LXU 8:50pm

Mike copy drill test message-any further action for Randolph Co ec kd4lxu

7. UPDATE 8:55pm

Try to contact us if you can... conditions are very bad.

Mike

WX4AL

8. RESPONSE FROM KA5EXI 9:00pm
de KA5EXI (Calhoun County)
both primary and alternate frequencies don't sound too promising.
Monitoring and Keeping Randall, KG4EUD posted.
73
Michael G/KA5EXI

9. RESPONSE FROM ROD SCOTT N1YZ 9:02PM
Hi Mike,
I heard you earlier and called but conditions are horrible.....will
try again.
73,
Rod N1YZ

10. RESPONSE FROM KA4EXI 9:04PM
RR
Very heavy qrm close by wiping out most stations. Monitoring
KA5EXI

11. RESPONSE FROM KG4EUD 9:25PM
Mike, I keep trying on 3.964 and 7.243 with no response. Lots of
stations on
3.964.
Randall Landers
KG4EUD
Alabama District 7 District Emergency Coordinator
Calhoun County ARES Emergency Coordinator

12. UPDATE 9:35pm
Currently on 3958khz due to bad conditions and adjacent channel QRM
73
Mike
WX4AL

13. RESPONSE FROM KD4BJW 9:41PM
I have tried a few times, can't get through to you on either 80 or 40.
Jason
KD4BJW
Marshall County EC

14. RESPONSE FROM KE4HIE 10:04PM
Just got in from South Alabama Radio Club Meeting.
Tried to contact anyone on 3.965. 20 over s-9 noise level in Andalusia,
AL.
Switched to 3.964. Got interference from QSO on 3.9625 (10 over s-9)
John Brown - KE4HIE

15. RESPONSE FROM WX4TM 10:12PM
East Alabama 2M Emergency Net (Lee County) on 147.15 was in session

from

20/0300Z-0400Z Dec 08 in response to the ARRL unscheduled Test Exercise.

The following checked in to the net: WX4TM WX4MM WX4AL KF4AEJ WB4PHG WB4BW

W4GUS WB4BYQ N4MEA KE4COL W2YO W4SUE KI4LWN (total 13).

In response to the ARRL request, the following resources were identified as

available to be deployed to affected area when requested:

KF4AEJ 1-TS430 HF radio and heavy duty fully charged marine battery
WB4PHG 1 person, 1 automobile, personal jump kit, mobile and portable
2M

equipment

WB4BW 1 2M mobile and 1 2M HT

Lee Co EMA 4 VHF/UHF jump kits w/ants, 4 1000 Watt Generators, 2
portable

field mast kits and V/U Ants

Tom WX4TM

16. RESPONSE FROM KD4LXU 10:12PM

Mike made contact on 3958 and made contact with Calhoun Co vhf
need psk 31 for back up thanks Dave KD4LXU

17. RESPONSE FROM K5JTR 10:20PM

Can you give me a call or a number, I'll call you
Thom / K5JTRDistrict 6 EC
256-975-2375

18. RESPONSE FROM KE4HIE 10:42PM

Hello Mike,
Made contact at 10:35pm on 3.958.
s-9 signal from WX4AL in Andalusia, AL.
Thanks for the messages.....John Brown - KE4HIE

19. RESPONSE FROM KL0LN 11:19PM

Mike this e-mail was sent out in District 2 FYI
73's Jim KL0LN
----- Original Message -----
From: James M. Nelson
To: WB4ZPI@yahogroups.com
Sent: Thursday, December 18, 2008 10:43 PM
Subject: FW: DRILL DRILL DRILL EARTHQUAKE 8.1 MAGNITUDE DRILL DRILL
DRILL

(EMAIL CONTAINED DRILL MESSAGE)

ALSO: 2 net reports sent to Section EC were CC'ed to WX4AL

Calhoun County

Calhoun County Emergency net was active with 14 ARES members. Also Randolph County was active with us as well. KD4LXU the Randolph Co EC.

Frequency used:

146.780- EMA Repeater - Emergency Net-

Net in Operation for 1.5 hours

Frequencies check-in with:

147.090+ pl131.8 qso with N4HUB about exercise

146.880- Checked-in

3.958 LSB Alabama Emergency Net with WX4AL

145.130- pl103.5 checked-in

List of Check-ins:

KG4EUD DEC/EC	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
AI4EA	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KE4ODW	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KG4VNY AEC	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KI4DWE PIO	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
W4FMI	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
NA4BH	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KI4OZG	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KG4HXN	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KJ4CYK AEC	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KA5EXI	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
W5AUB	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
W0ZO	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S
KD4LXU RANDOLPH CO EC	EMERGENCY POWER/FIELD DEPLOYABLE/MOBILE RADIO'S

Randall Landers

KG4EUD

Houston, Coffee, & Geneva County

We had Six (6) check-ins via VHF tonight. These numbers covered three counties. Houston, Coffee, and Geneva.

Sorry the numbers are small but as you can see it was LATE before we were aware of the drill.

Hope things went well.

james\\

James M. Nelson

KE4GWW
ke4gww@arrl.net
President WARC
www.wb4zpi.org
ARES EC Houston County, AL
ARES District Two DEC
<http://www.arrl-al.org/ARES.html>

Blount County

The Blount County Emergency VHF Net had the following check-ins:

Total Check-Ins: 31

Check-Ins with Mobile Capability: 30
Check-Ins with Emergency Power Capability: 29
Check-Ins with Deployable Capability: 26
Check-Ins with Digital Capability: 4

Our net was activated at 7:33 P.M. local. We secured our net at 11:00 P.M. local.

Ken Moore
AB4WL

Tuscaloosa County

A recount of activities in Tuscaloosa County for this unannounced Simulated Drill:

19:55 - KG4MPU and W4MD discussed the email outlining the drill once we were aware of it.

20:00 - The 146.820 machine was linked into the Vernon and Walker County net. That was terminated at 20:15 PM.

20:15 - The 146.820 machine was linked into the 146.880 BARC repeater net. W4MD and KG4MPU checked into that net and the machine stayed linked until 23:00 local.

20:15 - The W4KCQ_C D-Star Repeater was linked into REF002. The Net control was WB4FAY. Repeaters linked in were Tuscaloosa, Birmingham, Montgomery, and Magnolia Springs. The link was terminated at 23:00 local.

20:20 - W4MD and KG4MPU checked into the D-Star Reflector net. KG4MPU passed traffic to the State EMA, KF4LQK. Also during the period that followed, W4MD took over the net as NCS for a period of about 30 minutes for WB4FAY.

20:30 - APRS messages were sent between KG4MPU and W4MD and to WX4AL and N4HUB.

20:30 - HF frequencies were monitored on 3.965.00 and 7.243.00. However band conditions prevented reliable communications.

22:00 - W4MD and KG4MPU checked in with Mike, WX4AL, on 3.958.00 on HF for the Emergency net. Additional signal reports were sent to Mike via APRS.

20:00 to 23:00 - The 146.98 (Shelby County) net was monitored and W4MD checked in from Tuscaloosa. The 145.350 D-Star Repeater was also monitored by KG4MPU for traffic. KG4MPU and W4MD also had direct communications with each other via 1.2 on D-Star during the period. D-Star links were also

established via 1.2 GHz from Tuscaloosa to Magnolia Springs and Huntsville.

As far as communications, that was covered with what ever the need was and we were active on all modes. We were capable of conducting a net and passing traffic as needed or required.

What seemed to be a weak point was no other participation from hams in Tuscaloosa County for this drill. The District 3 DEC and the Tuscaloosa County EC were not available as well as any of the other AECs. There was a failure in communications of this drill information to all parties for what ever the reason. As a result we had no "Play" from the the EOC or local net activity.

W4MD - David
AEC Tuscaloosa County

St. Clair County

Here are the stats for the St. Clair County ARES net:

ARES personnel available: 18
available to field deploy: 16
with emergency power: 17
with comm vehicle: 18
Average response time: 2 hours

Montgomery County

K4IZN EMERGENCY DRILL LOG

DECEMBER 18, 2008

TIME (CST)	COMMENTS
1930	RECEIVED NOTIFICATION VIA PHONE CALL FROM N1LF
1932	ACTIVATED STATION ON 3.965 LSB AND 146.840 FM
1935	TELEPHONE CALL TO: MARK WINTERSOLE, WB5NMZ, MONTGOMERY CO. EC 244-7994 N/A, LEFT PHONEMAIL
1937	RECEIVED COPY OF DRILL VIA E-MAIL FROM N1LF
1940	TELEPHONE CALL TO: JOE DAVIS, N4EJF, PERRY CO. EC LINE BUSY
1945	TELEPHONE CALL TO:

N4EJF
NOTIFIED - WILL RESPOND

1948 E-MAILED COPY OF DRILL TO N4EJF

1950 CONTACTED WX4AL ON 146.840
SAID HE WAS ACTIVATING NET ON 3.965 AND WOULD
ALSO TAKE CARE OF NOTIFYING WB5NMZ

1954 TELEPHONE CALL TO:
RICHARD BATTLES, WB4BYQ, LEE CO.
N/A, LEFT PHONEMAIL

2008 TELEPHONE CALL TO:
BARNEY BARNHILL, K4MQM, BALDWIN CO.
NOTIFIED - CANNOT RESPOND

2012 TELEPHONE CALL TO:
DAVID ROBINSON, WA4AVC, ATNM NET MGR
NOTIFIED - RESPONDING

2014 E-MAILED COPY OF DRILL TO W4AVC

2015 ATTEMPTED TO CONTACT WX4AL ON 3.965. BAND VERY
NOISY, NO RESPONSE.

2017 WX4AL CALLED ON 146.840. HE IS COPYING ME AND
HAS ME LOGGED INTO THE NET ON 3.965.

2020-2030 MONITORING 3.965. BAND VERY NOISY, HEARD
KG4HVR, W4AYX, KX4LJ ?.

2028 WA4AVC ACKNOWLEDGED RECEIPT OF E-MAIL

2033 TELEPHONE CALL TO:
AL STATE EMA HAM STN, KF4LQK, 205-280-2355
CONFIRMED N1LF HAD ACTIVATED STATION
REPORTED PREVIOUS CONTACTS

2038 TELEPHONE CALL TO:
ERIC JONES, ELMORE CO EMA MGR, 850-5611 (CELL)
N/A, LEFT PHONE MAIL ABOUT DRILL IN PROGRESS

2042 WB4BYQ CALLED ON 146.840. HE IS RESPONDING.

2048 ESTABLISHED RELAY TO WX4AL VIA WB4BYQ IN ORDER
TO RELAY MESSAGES TO STATE EMA IF REQUIRED

2055 TELEPHONE CALL TO:

AL STATE EMA, KF4LQK
REPORTED RELAY SETUP VIA WB4BYQ TO WX4AL
WAS REQUESTED TO HELP INCREASE D-STAR ACTIVITY
ON W4AP

- 2105 TELEPHONE CALL TO:
EL ERBY, K4DJL
N/A, LEFT PHONE MAIL ABOUT D-STAR REQUEST
- 2110 HEARD K4FLQK CALLING FOR WX4AL ON 3.965
RELAYED MESSAGE REQUESTING A DIRECT PHONE CALL
- 2115 ATTEMPT TO CONNECT TO D-STAR REF 2B USING DONGLE FAILED
SEEMS TO BE MY PROBLEM CAUSED BY JAVA UPDATE
- 2120 HF NET QSY TO 3958. CONDITIONS IMPROVING.
- 2121-2133 MONITORED 3958. SEVERAL CHECKINS. CONDITIONS FAIR.
- 2134 CHECKED IN TO NET ON 3.958
- 2136 COPIED DRILL MESSAGE FROM WX4AL TO NET ON 3.958
- 2145 CONTACTED WB4BYQ ON 146.840
CANCELLED VHF RELAY SCHEDULE. NO LONGER NEEDED.
SIGNALS NOW S7 FROM WX4AL AND S5 FROM KF4LQK AT
MY LOCATION. BAND CONDITIONS GOOD.
- 2150 TELEPHONE CALL TO:
AL STATE EMA, KF4LQK (N1LF)
RECEIVED PERMISSION TO SECURE OPERATIONS
- 2152 CHECKED OUT OF HF NET
- 2212 SENT APRS TEST MESSAGE FOR DRILL TO WX4AL, GOT ACK
- 2215 CLOSED ALL STATION OPERATIONS

Jefferson County

A.R.R.L. Simulated Emergency Test
19 December 2008
01:00 - 05:00 Zulu
(Local: Dec. 18, 2008 19:00 - 23:00)

HOT WASH
JEFFERSON COUNTY, ALABAMA

NOTE: ALL TIMES LISTED ARE IN COORDINATED UNIVERSAL TIME (UTC/Zulu) UNLESS OTHERWISE NOTED

CST/Zulu Conversion Table

CST	6:00 pm	7:00 pm	8:00 pm	9:00 pm	10:00 pm	11:00 pm
UTC/Zulu	00:00	01:00	02:00	03:00	04:00	05:00

Frequencies Used:

- 146.88(-) W4CUE/R - FM
- 145.41(-) K4DSO/R - DV
- 146.52 Simplex - FM
- 146.98(-) W4SHL/R - FM
- 147.09(+) WB4GNA/R - FM
- 146.7(-) W4BLT/R - FM
- 145.13(-) N4MLP/R - FM
- 146.82(-) W4KCQ/R - FM
- 75 & 40 meter High Frequency

Modes Used:

- Digital voice
- High Frequency (HF) Single Side Band Phone
- FM voice: repeater and simplex
- APRS text messaging
- Email
- Cellular Phone

Key JeffCo ARES Stations:

- N4HUB - Hub Harvey - JeffCo Emergency Coordinator
- W4AVD - Alex Davies - JeffCo Emergency Net (Net Control)
- WB4FAY - Ken Adkisson - D-STAR Net Control
- KA4KUN - Jay isbell - Section Manager and assistant NCS
- KF4OUS - JeffCo EOC - W4AVD operator
- N1LF - Les Rayburn - Section Emergency Coordinator
- KF4LQK - Alabama EOC (Clanton, AL)
- W4AGA - Ed Manley - Liaison station to HF and other nets
- KI4DHS - Mark Lawley - NCS and liaison to other nets
- W4ATK - Jim Rogers - Liaison station to HF

Stations Deserving Recognition: Hub add anyone that I forgot-Alex Davies 12/21/08 12:59 PM

N4HUB, KA4KUN, N1LF, W4AGA, WB4FAY, K4DHB, KI4DHS, KJ4FCL, W4AVD, KG4MPU, W4MD, W4ATK

Incident: ARRL Simulated Emergency Test

ARRL Text:

AT 2332Z 18 DECEMBER 2008, A 8.1 MAGNITUDE EARTHQUAKE CENTERED IN THE TOWN OF CHARLESTON, MISSOURI OCCURRED. DESTRUCTIVE SHOCKS HAVE IMPACTED THE STATES OF IOWA, MISSOURI, ARKANSAS, MISSISSIPPI,

ALABAMA, TENNESSEE, KENTUCKY, OHIO, INDIANA, AND ILLINOIS. MAJOR DESTRUCTION OF INFRASTRUCTURE FOLLOWING THE VALLEYS AND PLAINS OF THE MISSISSIPPI AND OHIO RIVERS HAS OCCURRED. A HIGH INTENSITY AFTERSHOCK OF 6.7 OCCURRED AT 2347Z IN ST LOUIS AND A 6.6 AFTERSHOCK IN MEMPHIS AT 2352Z

Timeline: -Still need time line for WB4FAY, Alex Davies 12/21/08 1:00 PM

00:55 - Hub Harvey - N4HUB (JeffCo. Emergency Coordinator) notified by email (KA4KUN) and cell phone (N1LF)

01:07 - Alex Davies - W4AVD notified via telephone by N4HUB

01:18 - Jefferson County Emergency Net Activated by W4AVD

-KA4KUN assists the net control station (net control is mobile)

01:20 N4HUB: PX from Shelby EC, KI4PPR, out of state, Tennessee. N4HUB will ramp up Shelby Emergency Net

01:21 N4HUB contact with W4YXU on 146.980 to activate Shelby County ARES Net, in route home, will activate soon

01:26 N4HUB: Contact by radio with AB4WL, will activate Blount County ARES Net

01:30 N4HUB: W4YXU activates Shelby County Emergency Net

01:33 N4HUB: Blount County ARES Net activated

01:43 N4HUB: Lamar County EOC activated

01:45 - W4AVD dispatched to Jefferson County EOC

01:53 N4HUB: first contact with station from St. Clair County

02:07 N4HUB: per WB4FAY, D-Star reflector and net up & running.

02:12 N4HUB: W4ATK is on HF: 7243

02:15 - W4AVD relinquished Net Control duties to N4HUB

02:23 - W4AVD opens JeffCo EOC (KF4OUS)

02:28 N4HUB: KG4EUD contacted by cell phone.

02:32 N4HUB: W4ATK reports 7243 is not good, will pursue contacts on 80 meters

02:33 - KF4OUS takes over net control duties

02:34 N4HUB: KG4MPU checks in from Tuscaloosa County, links repeater to 146.880

02:37 N4HUB: KF4LQK checks in with N1LF as NCS

02:45 N4HUB: W4ATK reports 3965 does not have propagation. Can barely make out WX4AL in the noise, not able to make contact

02:48 N4HUB: WB4FAY reports all D-Star repeaters are on reflector except Huntsville and Magnolia Springs. N4HUB will work on these repeaters

02:49 N4HUB: W4AGA continues to attempt contacts on 7243 without success. Will continue to try.

02:57 N4HUB: phone contact with KI4LPS, asleep, talked to wife, negative contact

03:10 N4HUB: phone contact with KG4VSH, St. Clair County EC, will activate ARES Net

03:21 N4HUB: phone contact with District 1 DEC, KI4JEO, no prior notice. Will activate nets and get Magnolia Springs on reflector

03:31 N4HUB: KI4JEO calls back by phone. While on phone with her, WB4FAY calls on 146.880 to report Magnolia Springs is on reflector and they have checked in.

03:40 N4HUB: KI4QAH checks in from Lamar County EOC

03:45 N4HUB: phone contact with Houston County EC, KE4GWW. No prior notice, will activate nets and work on HF contacts.

03:48 - KF4OUS secured. Net Control duties relinquished to N4HUB

03:52 N4HUB: phone contact with KD4BJW, Marshall County EC. Had previously been notified by K5JTR, Dist. 6 DEC. Will work on Huntsville D-Star repeater on reflector.

03:57 N4HUB: phone contact with KB7BSA. Saw email. No longer Asst. SEC?!?

03:58 N4HUB: KG4VSH St. Clair EC checks into net

04:05 - W4AVD resumes net control duties w/ assistance of KI4DHS

04:22 N4HUB: Shelby County Net Liaison station, KJ4FCL cks in, no traffic for Jefferson County

05:01 - Jefferson County Emergency Net is secured by W4AVD

Jefferson County Emergency Net, W4CUE/R, 146.880, Statistics:

- # of ARES Stations available: 43
- # available to field deploy: 35
- # with emergency power: 28
- # with communications in vehicle: 38
- average response time: 2 hours
- EMA offices checked in:
 - Jefferson
 - Tuscaloosa
 - Lamar
 - Clay
 - Alabama State EOC (Clanton)
- Nets checked in:
 - Tuscaloosa
 - Blount
 - Clay
 - St. Clair
 - Talledega
 - Shelby
 - Lamar

Alabama D-Star Net, based in Jefferson County, statistics:

- WB4FAY - Ken Adkisson - Net Control Station
- # of ARES Stations available: 14 (3 EMA offices and 11 individuals)
- # available to field deploy: 10
- # with emergency power: 10
- # with communications in vehicle: 11
- Repeaters linked via REF002-B reflector:
 - K4DSO - Birmingham
 - W4KCG - Tuscaloosa
 - W4AP - Montgomery
 - KI4SAZ - Magnolia Springs
- EMA offices checked in via D-Star:
 - KF4LQK - Alabama State
 - KF4OUS - Jefferson Co.
 - KI4IKM - Lamar Co.
- Counties represented:
 - Jefferson
 - Tuscaloosa

Lamar
Baldwin
Blount
Chilton

What went right:

- Jefferson County Emergency Net was activated in a timely manner
- JeffCo EOC was opened in a timely manner

What went wrong:

- Notifications to key personnel were haphazard
- Not enough personnel dispatched to JeffCo EOC
- No "Command Net" established
- Jefferson County Emergency Coordinator was kept away from his duties in order to notify DEC's and EC's in other counties
- JeffCo Emergency Net control station did not establish alternate frequency/repeater
- Need more trained net control stations

Lessons Learned:

- JeffCo ARES needs a database of trained volunteers that is readily accessible to the SEC, EC, and AECs
- JeffCo ARES needs a notification system (e.g. W.A.R.N.) that can rapidly notify ARES volunteers via telephone, email, sms, fax, blackberry, etc.
- Formal activation plan for Jefferson County needs to be established.
- KG4EUD, District 7 DEC needs to have liaison station monitoring 147.090 for broader area wide coverage.

Limestone County



PUBLIC SERVICE ACTIVITY REPORT

About This Form

Amateur Radio donates thousands of person hours of supplementary public service communications in civil emergencies, official drills and events such as parades and marathons each year. Such events show Amateur Radio in its best light, and it is critically important that ARRL bring documentation of this public service work to the attention of the Congress, the FCC and other public officials. Your information below is an important addition to the record. Please complete and return this form to the Public Service Branch at ARRL Headquarters. Thank you.

1. Nature of activity (Check one).

Communications Emergency. Amateurs supplied communications required to replace or supplement normal communications means.

Alert. Amateurs were deployed for emergency communications, but emergency situation did not develop.

Special exercise. Amateurs supplied communications for a parade, race, etc.

Test or drill. A training activity in which amateurs participated.

2. Brief description of activity: Nationwide Earthquake Drill

3. Places or areas involved: Limestone County Alabama

4. Number of amateurs participating: 13

5. Event start date/time: Dec. 19 0100 UTC

6. Event end date/time: Dec 19 0130 UTC

7. Duration of event (hours): .5

8. Total person-hours: 6.5

9. Number of repeaters used: 1

10. Estimated person-power cost:	<u>\$123.50</u>	(person-hours times \$19/hr)
11. Estimated cost of equipment used:	<u>\$4100.00</u>	(hand-helds, repeaters, etc.)
12. Total estimated cost of service:	<u>\$4223.50</u>	(add amounts from lines 10 and 11)

FSD-157 (1/04)

13. Nets and/or frequencies used (including repeater call signs): Limestone County ARES Net, N4SEV 145.150-600

14. Number of messages handled: 0

15. Names of agencies receiving communications support: Limestone County Alabama, Alabama EC

16. Please list call signs of amateurs who were major participants: KE5YCO (age13) NC, KD4NTK, N4EXR, KJ4HJO (age 11), KE4ZZZ, W4BWA, W4MTO, KD4FXL, KI4DGR, AI4YR, KF4TPD, AJ4EQ, KI4UQM

17. Other comments: Nationwide Earthquake drill

Please attach photos of amateurs in action, newspaper clippings or other data.

Name of Amateur Radio organization providing service: Limestone ARES

Location of organization: City or town: Athens State: Alabama

Your name: Joseph S. Ivey Call sign: W4JSI

Address: 14488 Parker Road Athens, AL 35611

ARRL appointment, if any: Limestone County Alabama e-mail address: jivey0218@charter.net

Telephone: 256 614-0218 (Days) (Evenings)

I attest that the information provided above is complete and true to the best of my knowledge.

Signature: Joseph S. Ivey

Date: Dec.23,2008

FSD-157 (1/04)

Acronyms:

APRS- Automatic Position Reporting System, similar to GIS systems used by emergency management to report real time location of mobile assets. Can also be used for short messaging direct and via the Internet.

ARES – Amateur Radio Emergency Service. Nationwide volunteer organization providing emergency communications to served agencies.

ARRL – American Radio Relay League , The National Association for Amateur Radio

EC – Emergency Coordinator. Amateur radio leadership at the county level.

DEC – District Emergency Coordinator. Amateur radio leadership at the region level.

HF – High Frequency (Long distance communications)

VHF – Very High Frequency (local communications capabilities, repeaters)

UHF – Ultra High Frequency (local communications capabilities, repeaters)

D-STAR - Digital Smart Technology for Amateur Radio. (local communications both voice and slow speed data. Can be linked to include repeaters nationwide)

Links:

Alabama Amateur Radio – <http://www.arrl-al.org/>

Alabama ARES – <http://www.arrl-al.org/ARES.html>

Alabama D-STAR - http://www.arrl-al.org/Alabama_link.htm

ARRL - <http://www.arrl.org/>

Contact information:

For additional information or comments, suggestions and questions contact your local Emergency Coordinator or:

Jay Isbell, KA4KUN
Alabama Section Manager
2290 Quail Drive
Bessemer, AL 35022
(205) 424-9993

Les Rayburn, N1LF
Alabama Section Emergency Coordinator
121 Mayfair Park
Maylene, AL 35114
(205) 253-4867

