Amateur Radio

Emergency Communications Plan

Iowa Section

American Radio Relay League

March 2010

Concept

1.1 The Amateur Radio Service is capable of providing emergency communications when normal methods are damaged, disrupted or overloaded. The Amateur Radio Emergency Service (ARES) is how this service is provided to agencies such as the American Red Cross and the Federal Emergency Management Agency. Any Amateur Radio operator with a sincere desire to assist in an emergency may register to participate, which is administered by the American Radio Relay League (ARRL) for the public good.

1.2 FCC Rule 97.407 authorizes such Amateur Radio stations to also be enrolled with their local emergency management agency in the Radio Amateur Civil Emergency Service (RACES) to provide emergency communications support to local, county, and state government. Amateurs also support the Federal Government's National Weather Service (NWS) as storm spotters in the Skywarn program.

1.3 In the Iowa section, the preferred method of operation is for one combined county organization to perform all three functions (ARES, RACES & Skywarn), allowing for the quickest response, most flexibility and coordination in operations and for our limited resources to be allocated and trained most effectively. Such a combined effort is commonly referred to as Amateur Radio Emergency Communications (EMCOMM). This is reflected in the latest guidance from the ARRL and aligns well with the Incident Command System (ICS) that is used in Iowa and nationwide.

Purpose

2.1 Amateur Radios primary emergency service missions are to provide supplemental communication channels and to tie disparate systems and agencies together. In addition, Amateur Radio operators have a degree of technical ability that can assist in quickly establishing emergency communications. Each emergency is different. Flexibility to provide an adequate response to each is a necessity.

2.2 All drills, training, and instruction should be carried out to insure readiness and quick response in providing effective communications when needed. Each EC
should arrange to participate in or create an effective annual Simulated Emergency Test (SET) to test his organizations capabilities.

2.3 The agencies that could be served during a communications emergency include, but are not limited to, government, the American Red Cross, Salvation Army, other Iowa Voluntary Agencies Assisting in Disaster (IAVOAD), hospitals, Offices of Homeland Security/Emergency Management (HLS/EM), police, fire, rescue squads, schools, military, National Weather Service, etc. Contact should be made with selected agencies prior to crisis situations to develop mutual understandings and plans to action. Memoranda of Understanding exist between ARRL and some of these organizations and are available from ARRL at http://www.remote.arrl.org/FandE/field/mou/.

2.4 Amateur Radio serves as back-up communications to established services and often is not called upon immediately if normal communications circuits are intact and adequate. Members should monitor developments and be prepared for swift deployment should such a request be received.

Organization

3.1 The primary level of organization in the Iowa Section is at the county level. The IA Section Emergency Coordinator (SEC) appoints an Emergency Coordinator (EC) for each county who is responsible for organizing the local amateurs into an effective and flexible team supporting both governmental and non-governmental agency emergency needs at the county and local levels. The EC should appoint Assistant Emergency Coordinators (AEC) to take the lead in supporting the various types of organizations within their county. AEC’s may also be appointed for various organizational functions such as administration, training, logistics, etc.

3.2 RACES operations in IA are under the County Radio Officer, who is appointed by the head of the County Office of Homeland Security/Emergency Management per the IA State RACES Plan. Whenever possible, the ARRL EC and the County Radio Officer should be the same person. As an alternative, the HLS/EM County Radio Officer should be appointed as an ARES AEC for RACES, and the ARES EC should be appointed as a RACES Assistant Radio Officer. This ensures that the Amateur Radio response to an emergency is well coordinated and allows more flexibility in the use of frequencies and operators.

3.3 Skywarn operations in Iowa are coordinated by the Skywarn coordinator appointed by the NWS Forecast Office (NWSFO) that has responsibility for your particular area in Iowa. This person should work with NWSO personnel in providing information to the amateur community of NWS Skywarn training. To find the NWSO that serves your area, go to www.weather.gov When the US map comes up click on the area of Iowa that you are in and that will give the weather office that serves you.

3.4 The ARRL section level exists primarily to support these county level EMCOMM
organizations and provide a mechanism for their coordination and mutual support. The Section Emergency Coordinator (SEC) is appointed by the elected Section Manager to organize this support and coordination. The SEC also arranges for mutual support with other ARRL sections when so required.

3.5 The Iowa Section uses the optional district level and District Emergency Coordinators (DEC) as there are ninety-nine counties within this section. The district level is designed for very large sections that encompass entire states, where grouping of counties into districts is required to achieve a reasonable span of control (see attachment A).

3.6 Counties or districts may form ARES Mutual Assistance Teams (ARESMAT) if they have sufficient, trained personnel who are available and equipped for extended deployment as a self-contained communications team to assist counties in Iowa or adjacent states. Such teams should be capable of deploying 3 to 6 operators for 72 hours with only six hours notice. Organization and training requirements are described in the ARRL Public Service Communications Manual, Emergency Coordinator Manual and ARRL Emergency Communication Certification Courses (AECCC). The leaders of such teams will be listed on the IA EMCOMM Leadership Roster. ECs will report the status of such teams to the SEC in the comments section of their monthly reports. Deployment of such teams in or outside of the section requires the approval of the SEC, SM or designate.

**Personnel**

4.1 All FCC licensed Amateur Radio operators who wish to assist in public service are encouraged to register with their county EC. While membership in the American Radio Relay League is encouraged, it is not required, except for persons holding ARRL Field Service appointments such as Emergency Coordinators and Official Emergency Stations.

4.2 The issuance of identification cards and vehicle placards by the EC or county HLS/EM is encouraged. As a suggestion the Iowa Department of Transportation (DOT) has an “emergency responder” card program. County Homeland Security/Emergency Managers can obtain forms from the local DOT driver’s license station to be filled out with the name of the agency and the personal information of the applicant. The completed form is then taken by the applicant to a local DOT licensing station and for a small fee (now $1.00) an emergency photo ID card is issued. This card is similar to an Iowa driver’s license. With these privileges comes the responsibility to be trained in emergency procedures, be willing to regularly participate in practice and actual emergency operations, and to always act in a manner that reflects favorably on Amateur Radio. Participation is a privilege and can be denied by the EC at any time.

4.3 All Amateur Radio operators are encouraged to maintain currency as Skywarn Spotters through training offered by the NWSFO’s.

4.4 ARRL members may also apply for designation as an Official Emergency Station
(OES) from the ARRL. The EC can determine the exact duties of such stations, but they should include certain training requirements and emergency power capabilities. An OES certificate is available. OES appointments are also appropriate for stations functioning as primary liaison to other communication systems, such as MARS, CAP, etc.

4.5 Each EC should prepare a one-page reference card describing their counties Amateur Radio Emergency Procedures for their members. This can also be used for informing other hams how to respond in an emergency and as a recruiting tool for potential new members.

Operations

5.1 Support of Government Agencies

When operating in support of state, county and local government, Amateur Radio operators will normally function as RACES operators in accordance with FCC Part 97.407 and under the IA State RACES Plan published by the IA Office of Homeland Security/Emergency Management (HLS/EM). When operating in support of the National Weather Service, Amateur Radio operators will function in accordance with procedures established by the NWSFO for the Skywarn program in their area.

5.2 Support of Non-Governmental Agencies

When operating in support of non-governmental relief agencies such as the American Red Cross, Salvation Army, etc. Amateur Radio operators will function as ARES operators in accordance with the guidelines published by the ARRL Public Service Manual, the appropriate MOU and their EC.

5.3 Support of Public Gatherings

Support of public gatherings such as walkathons, parades, etc. can provide valuable operational experience. As these events become more numerous, consider using them to gather new members and to train new leadership in an ARES organization. Advice on supporting such events can be found in the ARRL Special Events Manual, which is available online at http://www.remote.arrl.org/FandES/field/spevman/index.html

Planning

6.1 Each EC will develop a written emergency communications plan to define how emergency communications are to be handled within the county. The plan should allow for the support of government operations between towns and the county EOC and between the county EOC and the state EOC on RACES circuits, while simultaneously supporting operations between shelters and the local Red Cross chapter and between the local Red Cross chapter and the Red Cross State Lead Chapter on ARES circuits. Additional ARES circuits may also be needed to support other IAVOADs or agencies.
6.2 The county emergency communications plan should establish alerting procedures and self-alerting procedures when communications fail, as well as mutual support arrangements with adjacent counties. For example, a telephone call-out tree might be used as well as a common rallying frequency to assemble on if telephones fail. A repeater of simplex VHF/UHF frequency should be designated.

6.3 Arrangements with local repeater operators to support these operations should be made in advance and renewed annually. Plans should also be made for simplex operations in the event of repeater failure or for long-term operations so as to release repeaters back to normal use. 146.52 MHz should not be a primary channel for these operations. If 146.52 MHz is used it should only be a frequency to establish contact with another amateur station and then move to another frequency.

6.4 The county emergency communications plan should also identify stations for regular liaison with the ARRL National Traffic System (NTS) for message handling out of the area (see 8.2 for frequencies and times).

6.5 A copy of the county emergency communications plan should be filed with the County Office of Homeland Security/Emergency Management, local Red Cross Chapter and any other served agencies. Copies should also be sent to the SEC and the adjacent county EC’s. The plan should be reviewed annually.

6.6 A roster of registered amateur operators should be sent to the IA State RACES Officer once a year by January 31. A copy of the latest roster should be attached to the county emergency communications plan.

Training

7.1 Each member is expected to be trained and proficient in appropriate emergency communications procedures. The exact training requirements will be determined by the EC, but as a general rule, they should be based on achieving AECCC Level 1 certification as well as practical on-the-air experience in formal and tactical message handling, exercises and nets. Maintaining annual proficiency in formal message handling and the equipment and procedures used at the local EOC, Red Cross chapter and other served agencies is encouraged.

7.2 Leadership officials (EC’s, AEC’s, OES’s) are encouraged to additionally obtain AECCC Level II certification. Incident Command System, FEMA and Red Cross training is also encouraged.

Networks

8.1 Amateur Radio networks to support local emergency operations, support of local Red Cross operations and shelters, and other served agencies will be described in the county emergency communication plan developed by the county EC. A summary of the
primary VHF frequency used in each county is shown in the IA Emergency Communication Leadership Roster.

8.2 Statewide networks to link county EOC’s to the State EOC are described in the IA State RACES Plan. Statewide networks to handle health and welfare traffic via NTS are described in liaison from their local county VHF net is maintained in an emergency with the statewide RACES and/or NTS, as needed. Key frequencies for these statewide operations include:

**IA State HLS/EM RACES HF Nets:**

- 3990.5 KHz, LSB
- 7250.0 KHz, LSB

**IA Statewide NTS Nets:**

- 3970.0 KHz LSB: 12:30 PM and 5:30 PM CST/6:00 CDT Daily, Monday through Saturday. Sunday at 5:30 PM CST/6:00 PM CDT
- 3700 KHz (Slow CW Net) 8:00 PM Daily
- 3560 KHz (Tall Corn CW Net) 6:30 PM/10:00 PM Daily

8.3 Intentional interference to nets is best handled by ignoring it and making no on the air references to it. Accidental interference is best handled with tact and courtesy.

8.4 If possible, the net control should attempt to contact the section’s Official Observer Coordinator to have Official Observers monitor and make a record of the interference. The OOC for Iowa is Tom Brehmer, N0LOH.

8.5 If interference to actual emergency operations becomes particularly grievous and there is no alternative solution, an EC may request the SM, the SEC or the State RACES Officer to request the FCC declare a Communications Emergency under FCC Rule 97.401. The SM, SEC or State RACES Officer will make this request through the District Director of the FCC Kansas City, MO Field Office at 1-816-926-5111. The initial request should include the name and phone number of an Emergency Management or Disaster Relief official who believes the declaration is essential to relief operations, the necessary frequencies, desired start time, and estimated end time of the declaration.

**Logistics**

9.1 Each EC should make arrangements for adequate trained personnel, equipment, repeater and simplex channels to simultaneously support both RACES and ARES operations within their county for a minimum period of 72 continuous hours. The IA Section RACES net on 3990.5 or 7250.0 KHz is available for mutual aid coordination or
other section wide emergency operations. ARES traffic will be moved to 3970 KHz or
other designated frequency. Each EC should establish a liaison station on this frequency
in the event of a multi-county emergency.

9.2 Each member is encouraged to use 30 Amp Anderson Powerpole connectors on all
portable 12 VDC powered radios, batteries and power supplies to facilitate quick
response and the ability to share resources in a disaster. Information on this
ARES/RACES standard can be found at http://www.ocraces.org/powerpole.html. One
vendor providing the connector in bulk and small order quantities is
www.powerwerx.com. Local clubs and organizations are encouraged to buy the
connectors in bulk for resale to their members.

9.3 Each member should assemble a 24-hour go kit to allow them to rapidly respond to
local emergencies. Each is also encouraged to develop a 72-hour go kit to allow response
to longer-term emergencies. Members of ARES Mutual Assistance Teams must maintain
such a 72-hour go kit. Suggested contents of such kits are described in the AECC Level
I course.

9.4 Each EC should work with their served agencies to ensure the establishment of
permanent radio stations and emergency power at the EOC’s, Red Cross chapters and
similar locations. The development of portable shelter radio kits is also encouraged.

**Reporting**

10.1 Each EC will submit the following reports as required by the ARRL:

- The monthly EC Report (FSD-212) is to be sent to the SEC by the third day of
each month, so that the SEC may send the combined IA report to ARRL. It can
be sent via e-mail.

- The annual EC report (Form C) is to be sent to ARRL HQs and the SEC by the
31st of January each year. It’s available at
http://www.arrl.org/FandES/field/forms/ec_ann.pdf

- The Annual SET report (Form A) is to be sent to ARRL HQs and the SEC by
The 31st of January each year. It’s available at
http://www.arrl.org/FandES/field/forms/ec_set.pdf

10.2 Any actual emergency activation should be reported to the SEC as soon as
possible. The SEC will in turn notify the SM, PIO and ARRL HQ. If the SEC can not be
contacted, the EC will notify the SM and ARRL HQs. Phone numbers are maintained on
the IA EMCOMM Leadership Roster. If time permits, use the online FSD-157 format
Otherwise, use any means possible.

10.3 IA HLS/EM requires each county RACES officer to submit a roster of authorized
RACES operators to the IA HLS/EM Communications Officer yearly by January 31. A copy of this roster should also be sent to the IA SEC.

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Tom Brehmer, N0LOH, Section Manager, Iowa Section, ARRL

References

FCC rules, Part 97, Amateur Radio Service
http://www.arrl.org/FandES/field/regulations/rules-regs.html

The ARRL Public Service Communications Manual
http://www.arrl.org/FandES/field/pscm/

The ARRL Emergency Coordinators Manual

The ARES Field Resources Manual
http://www.remote.arrl.org/FandES/field/aresman.pdf

The ARRL Special Events Manual
http://www.remote.arrl.org/FandES/field/spevman/index.html

ARRL Net Directory http://www.arrl.org/FandES/field/nets/

ARRL Emergency Communications Certification Courses, AECCC Level I
http://www.arrl.org/cce/

Offline References

The ARRL Emergency Coordinators Manual

Last updated on March 7, 2010