

## **The NH-ARES Local Training Plan Suggested Classroom and Drill Session Ideas**

**General training goals for all exercises:** Regardless of the scenario, these goals should be set for every drill:

- ◆ Proper use of tactical call signs and legal FCC identification
- ◆ Plain language (no jargon)
- ◆ Use of correct ITU phonetics
- ◆ Tight and professional sounding net

**Exercising on the air? Don't forget to say "This is an exercise" often.**

### **Formatting Radiograms**

**Classroom:** Teach basic formatting & composition (Subsequent cycles – do a review rather than a full teaching session. All new incoming members should have ARECC Basic, which covers this subject in detail.)

**Drill:** Have everyone format a short sample message and send it to you via email. Reply with any corrections and suggestions.

### **Handling Radiograms**

**Classroom:** Demonstrate how to transmit a message over the air. Simulate a full exchange to let everyone hear how it's done. Use the ARECC Level I book for source material.

**Drill:** Have everyone transmit the short message they created for Drill #1, and ask everyone else to copy it. This can also be done without actual radios in the classroom.

### **Frequency Plan Familiarization**

**Classroom:** Review the repeater and simplex frequencies listed in the Section Comm. Plan for your area and the Section. Discuss what to do in the event of repeater failure or "interference." Also discuss any designated digital frequencies.

**Drill:** Hold a net and try each of your listed frequencies, moving the net from one to the other. Make note of who can and cannot reach each repeater. You can try simplex too, but there is also a separate simplex drill in this training plan.

### **Skywarn Review**

**Classroom:** List the information most often requested by NWS. Talk about the different methods of measuring rainfall, snow depth, and wind. Discuss the different means of delivering the information to NWS, and the terminology to be used. Talk about activation methods.

**Drill:** Ask everyone to create a simulated Skywarn report and transmit it via the net to a station simulating NWS. Be sure to say "this is a drill" often.

### **Net operations**

**Classroom:** Discuss formal (directed) and informal (open) net formats, and when each should be used. Talk about the rules for operating in a formal net.

**Drill:** Hold an on-air directed net and pass a number of messages.

### **Transmitting photos**

**Classroom:** Sending digital photos via repeaters and FM simplex with MMSSTV slow-scan software. Equipment required: digital camera with means to transfer image files to the computer, computer with MMSSTV software installed, optional sound card interface, radio. Walk them through the program setup and operation as needed. Discuss the protocol for sending photos and the various sending formats.

**Drill:** Using both sound-card interfaces and acoustic coupling, have everyone send a small picture to the group via a repeater or on a simplex channel, or both. *Alternative:* Several stations set up at various river observation or simulated disaster damage sites and send still images via FM or HF to a central point (EOC).

### **Disaster Intelligence Reporting (SITREPS)**

**Classroom:** Discuss protocols, methods of contacting the State EOC, message formats, information to be collected, etc.

**Drill:** Deploy stations to the field to possible damage sites (commonly flooded areas, dams, shoreline areas, etc) and have each station transmit a simulated SITREP. Be sure to state “this is a drill” *before and after* each SITREP is transmitted. **Weather Observations:** Can be used for all or part of the drill. Each station reports current conditions at their location. The training goal should be a tight, efficient and professional sounding net. Rotate NCS duties.

### **Simplex Operations**

**Classroom:** None required, unless you need to review your repeater failure/interference/jammer procedures.

**Drill:** Check primary and backup repeater coverage at all known agency locations and other critical sites. Simulate total repeater outage and test simplex paths member’s homes and served agency locations. Identify any problem paths and test work-arounds, including hilltop relays. Try various power levels and antenna combinations. Record findings for later incorporation into specific plans and equipment goals for each location. If time permits, also do a hilltop range check for a path to the State EOC.

### **Net Control Skills**

**Classroom:** The goal is to teach NCS message management (traffic cop) skills. Talk about the duties of the NCS, and the attributes and skills required. Use the ARECC Level 2 textbook for material.

**Drill:** Do the AK1K Math Drill – OR –Each station on the net will have a list of simulated messages (message number and address only) ready. They can be made up on the fly. When the net is initially opened each station can list at least one piece of traffic. The NCS will then try to route each piece of traffic to another net member, and ask them to move off to another frequency to “pass” the message. Instead of leaving the net, the two stations will just listen for

2-3 minutes and then check back into the net. Stations that have received a message will then generate a simulated reply message number and address. Each member can introduce a second or third message into the system if there is time. The net will continue until all messages and replies have been handled, or the end of the planned session is reached.

### **Field Operations**

**Classroom:** Discuss go-kits, batteries, generators and safety, temporary antenna supports, NVIS HF techniques, food and personal needs, etc.

**Drill:** Have everyone bring their go-kits for show and tell, or allow everyone to set up their field stations outdoors for an expanded show and tell.

### **Winlink (Airmail) Operations**

**Classroom:** Discuss basic setup and operation of HF Airmail, how to import and update the emcomm station list, addressing protocols, establishing white-lists, event startup procedures, etc. If there are any local RMS Packet stations, discuss their use as well. If you don't have a local Winlink expert, consider inviting one from another area for this session.

**Drill:** Have all Airmail capable stations originate two email messages: one to an Internet address, and the second to a Winlink station.

### **General Plan Review**

**Classroom:** Review the overall contents of either or both the local and Section Emergency Communications Plans. The goal is to make everyone aware of what information is contained in the plans, and how to find it – not to have everyone memorize the contents.

**Drill:** Have each station present a key operational section of a plan to the group and discuss how it relates to actual operations.

### **Specific Plan Review**

**Classroom:** Present one section of the local or Section communications plan, and take questions for discussion. Hand out copies of that section or put up on screen in large type. The goal is to make sure everyone understands the goals and methods presented, and how to apply them to a real-world situation.

**Drill:** Create a on-air short drill to test the application of the section being discussed.

**Alternate Power Sources:** Discuss various battery types, chargers and charging times, Powergates, conductor sizes, connectors, lighting, inverters, generators, generator safety, extension cords, grounding. Talk about the voltage and current requirements of various common radios and accessories. Use Emergency Power for Radio Communications book as source material (ARRL Bookstore).

**Drill:** Stations set up outdoors or at home using only their usually available alternate power sources. A training net is set up and uses the NCS Drill (see net training ideas below) to put a load on the power sources. Each station will thus have a chance to identify their powering limitations.

### **Seminar & Workshop Sessions**

Some topics don't require an actual drill to help people learn. Here are a few ideas:

**Volunteers as Professionals:** A discussion about our level of performance, attitudes, and behaviors. Talk about dealing with served-agency personnel and building a professional relationship based on mutual respect of the other's responsibilities, authority and limitations. Base this on ARECC Level 1 Chapters 1 and 2.

**Digital Saturday:** Gather at a large meeting room and conduct familiarization workshops on the digital modes listed in your local or Section communications plans. (Winlink/Airmail, packet, APRS) Participants can bring own equipment for troubleshooting and setup. Bring plenty of dummy loads.

**Skywarn Weather Spotter Training:** Contact NWS to set up weather spotter training. **Alternative:** Have a NWS-trained spotter give a mini-course to members. Also include general damage reporting criteria and techniques. Discuss tactical nets and disaster intelligence reporting protocols, referencing local and Section plans.

**Go-Kit Show and Tell night:** Several members can open up their go-kits and tell members what they carry and why. Kits can be critiqued with suggestions for improvement. Hand out go-kit check lists to those needing them.

**Table-Top Exercise:** Set up a simple emergency scenario and "talk through" the response to see if the written plan works. **Game variation:** Create "what if" situations to see if the plan can deal with problems that might creep in; look for novel solutions.

**Agency-Specific Discussion:** Pick one agency and talk about their specific needs and challenges. Look at the communications plans to see if they adequately address them. The goal is to familiarize members with the agency's needs and get them thinking about ways to help when the time comes.

**Portable Antenna Night:** Show and Tell with portable antenna rigs, both HF and VHF/UHF. Don't forget support systems and ideas, wire launchers

### **Other Drill & Exercise Ideas**

**HF Winlink field operations:** Set up several field stations on HF and attempt to send messages to each other. **Variations:** Try using Airmail to send point to point messages without going through the Winlink servers. Try it on VHF-FM or SSB or through a repeater.

**SAR Exercise:** Put stations in vehicles, and on foot and ATVs using FM simplex and APRS. Search for a "missing person." Log and track all activity on the net. Team up with CAP, a local CERT or other SAR group for even more realism.

**River Flooding Exercise:** Net is convened on a repeater and/or simplex frequency and mobile stations are deployed to predetermined key river spotting locations. Reports are solicited from each location following a format established by the served agency. (If no agency format is available, use water height relative to the banks, debris, water color, flow characteristics, etc.) Notes are kept regarding accessibility and ability to communicate from each location.

**Variations:** RRTs can be sent out initially, followed later by regular members. Reports can be sent via packet, D-Star data, or Winlink.

### **Other Drill & Exercise Ideas (continued)**

**Hospital Linking:** Hospitals present their own set of challenges. Set up a drill scenario with the hospital's emergency coordinator to simulate a loss of communications between local hospitals, with multiple patients who must be transferred to other facilities, external staging areas for casualties need to be routed to appropriate hospitals and the receiving facility notified.

**Variation:** This same drill at the Section level could simulate a massive disaster in which normal communications are disrupted statewide.

**Agency-Linked Exercise:** Piggy-back on a served agency's exercise instead of creating your own. Have all messages sent by both regular means and via Amateur Radio, or ask them to build a communications failure element into their exercise plan.

**Agency Site Tour:** Hold a meeting at a served agency's facility and/or tour the facility. Look for opportunities and challenges related to providing emergency communications and meeting the agency's needs.

**Ice Storm Antenna Drill:** A simulated ice storm has wrecked all permanently installed antennas at an agency location. Members must find a way to build and erect temporary antennas. Requires pre-arrangement with agency. **Variation:** Do it after sunset.

**Agency Site Equipment Test:** A team can meet at an agency's site to test permanently installed equipment and familiarize everyone with its operation. At least one mobile or home station should be available for remote reception testing.

**Response Drill:** Use the call tree to activate members and keep track of the time required to respond to key agency and incident locations and get on the air. **Variation:** simulate road closures so that members will have to work out alternative routes.

**Logistics and Support Drill:** Create a list of required station locations. Set up a logistics net and dispatch operators to each.

**Formal message origination:** Have one station send out a bulletin in radiogram format to be copied by all other stations. Conduct a critique on the message's formatting and the sending technique.

**Standard Phonetics:** Have each station practice sending a sentence, spelling out each word phonetically, using standard ITU phonetics.

**Pro-Signs:** Present and discuss the proper use of verbal pro-signs as used in message handling. (See FSD218 and ARECC Level I - Learning Units 5 and 7)

**Black-Out Drill:** Simulate a wide-area power failure and have all stations operate from alternative power sources. Great add-on scenario to combine with other ideas.

### **Create your own!**

Most groups require specific training to meet the needs of a local served agency or special hazard. For instance, you may need to review and practice the support plan for a local hospital or nuclear power plant, or work with a specific agency form or procedure.

*Why have classroom and drill sessions together? Experience shows that people learn material best if they have an opportunity to actually use it soon after learning it.*