

# The ARRL and Emergency Communications

*Was ham radio able to contribute in the aftermath of the 9/11 attacks and Hurricanes Katrina, Rita and Wilma? Absolutely! Could our efforts have been more effective and coordinated? Absolutely! Here's what we're doing to ensure that we're fully prepared when the next extraordinary event hits.*

**Harold Kramer, WJ1B**

**In** April, *The Communications Academy*, a weekend program held at Seattle Pacific University, asked me to speak about ARRL's Emergency Communications plans. This article is based on that presentation and on the work of the ARRL National Emergency Response Planning Committee (NERPC) and its Chair, Kay Craigie, N3KN.

The aftermath of Katrina, 9/11 and other extraordinary disasters are having profound effects on what we do, how we train and how we think about Amateur Radio Emergency Communications. The ARRL is committed to advocating and supporting Amateur Radio's participation in Emergency Communications and Public Service. We believe that it is ARRL's responsibility, as the nation's leader in Amateur Radio emergency preparedness, to address these issues.

After the Katrina/Rita/Wilma disasters in 2005, our Board assembled a committee of EmComm experts, the NERPC, to recommend improvements to determine how the ARRL could better respond to future extraordinary disasters.

Why do we need this? Isn't Amateur Radio already what works "when all else fails"? The answer to that question is — not necessarily! During and after Katrina, we learned that we need to act and think differently if we are to be taken seriously as a disaster resource. Given that our ability to provide emergency communications is one key reason for the existence of the Amateur Radio Services, we cannot assume that our role will be the same as it has been in the past.

Today, citizens, including professional emergency personnel, are all connected with cell phones, text messaging and so on. Amateur Radio Emergency communications no longer means only "Please copy number one, routine," or trotting about behind an official with a hand-held transceiver on your belt.

## Where We Come In

Then what is our role? In extraordinary disasters, the scale and intensity of the disas-



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**At ARRL HQ, a team of key staff developed strategic plans to assist with the aftermath of Hurricane Katrina. The team met daily until the need subsided.**

ter quickly overwhelm local Amateur Radio resources. Local amateurs may be disaster victims themselves who are unable to volunteer for some time after the disaster occurs. Amateur Radio infrastructure becomes inoperative because of severe storm damage.

Meanwhile, a window of usefulness has opened for Amateur Radio — the time between the onset of the disaster and the restoration of conventional communications. Are we fully prepared to mobilize large numbers of qualified communicators during these extraordinary disasters? This becomes problematic when national-level relief agencies ask the ARRL to dispatch hundreds of amateurs to deployment centers for communications assistance.

What are we doing to solve this problem? For a start, we are having ongoing discussions with national-level served agencies so that we can respond quickly and provide large numbers of qualified Amateur Radio communicators to meet their needs. Both the timeliness and technical sophistication of non-amateur disaster communications technology are

increasing. We must be better organized, more capable and on the scene as quickly as possible after our help is requested.

For starters, formal training requirements are increasing. All emergency responders, including volunteers, are subject to Federal Emergency Management Agency training requirements. This makes recruitment of volunteer ops more difficult. It also turns off experienced ops who consider the training to be irrelevant. Nevertheless, increased training requirements are here to stay and we all need to keep up with them.

We also bring other skills to the table. During Katrina, Amateur Radio operators functioned as electricians, computer technicians, truck drivers, mechanics and broadcast engineers. We are highly competent and technical experts in many fields. At the scene of a major disaster, much of our value is that we are all "MacGyvers."

## High Tech or Low?

What technologies should we use? Old



At one of the Gulf Coast Emergency Operations Centers staffed by ham volunteers, a radar map showing Hurricane Katrina provides a chilling backdrop.



A team of Katrina volunteers from Rhode Island installs a temporary antenna.

tech, new tech or high tech, or a combination? We need to encourage new technologies for EmComm but not to the exclusion of the tried and true. I testified on behalf of the ARRL before the US Congress that our diversity of equipment, our use of multiple coordinated frequencies, and our redundancy and portability make us highly “operable.” The ARRL and Amateur Radio should not commit to any one technology or system. We need to balance our growing professional respectability with the creative, improvisational spirit of Amateur Radio. Disaster preparedness is a moving target. No recommendations, no plans, no systems should be considered final.

Credentialing and background checks for operations outside a ham’s home area are a difficult issue that arose during and after Katrina. This issue is here to stay. The ARRL Board has formed the Ad-Hoc Background Investigation Committee led by Director Bill Edgar, N3LLR, that is investigating these issues.

### Putting Changes to the Test

How do we implement these changes? First, Multi-ARRL Section cooperation will be required. This is not easy, since ARRL Sections vary in likely hazards, culture and history, emergency management structures, natural environments, demographics, and relations with local and regional served agencies. What is common practice in one Section may be irrelevant or unworkable elsewhere. A one size fits all approach is unworkable. Individual Section leadership must analyze their situations, plan and cooperate.

The NERPC has recommended that we create the position of Major Disaster

Emergency Coordinator. These positions will be created only when needed and MDECs will be the most experienced and trained leaders who will work in cooperation with the Section leadership.

We have also created a database of Amateur Radio Emergency Service (ARES) members for use in extraordinary disasters. Here at HQ, we had thousands of phone calls and e-mails from operators who wanted to help during

Katrina. This response from the Amateur Radio community was gratifying but nearly impossible for staff to handle. Using this database for dispatching operators during major disasters will create less confusion for volunteers, provide better service to the served agencies and place fewer burdens on HQ Staff.

### And There’s More...

*Cross-training:* What else are we doing at HQ to prepare? We learned that during major disasters, we still need to ship book orders, publish *QST* and so on. We have, therefore, cross trained employees so that other HQ personnel can fill in for those who need to devote themselves full time to disaster-related issues. We also now have more licensed and EmComm trained employees in the building.

*EmComm Manager:* We have hired a dedicated Emergency Preparedness and Response Manager, Dennis Dura, K2DCC, who will focus on emergency and public service. Dennis will be responsible for ARES and is the liaison to the Radio Amateur Civil Emergency Service (RACES), government bodies and served agencies. He will also develop an internal disaster response plan for ARRL staff. Dennis will provide more support, training and organization to the ARRL HQ staff as well as ARES and its 9000 volunteer field leaders.

*Conference call bridge:* One unexpected lesson that we learned is that our telephone conference call bridge was a major part of our communication during Katrina. We had scheduled calls twice a day with SMs, SECs and others who needed to communicate with each other. We have now updated and expanded our conference call bridge through

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As Steve Coffey, KB1NRP, demonstrates, part of the response from ARRL HQ involved shipping repeaters and other ham gear donated by manufacturers to the stricken areas along the Gulf Coast.

a Corporation for National and Community Service (CNCS) grant.

*Backup generator:* Murphy's Law plagued us here at HQ during Katrina when we had a major power failure. We currently have a backup generator for W1AW but we learned that our telephone system and Web access had only very limited backup power. We have since added an additional backup generator for these critical services.

*Public relations:* We need to use the story of Amateur Radio's emergency communications successes to support our regional and national advocacy goals. Katrina generated an enormous amount of public relations about Amateur Radio. Allen Pitts, W1AGP, and the volunteer PR Committee have improved and updated our EmComm media materials and kit of PR tools. These materials are now available to over 430 Public Information Officers and Public Information Coordinators.

*W1AW:* During Katrina, we learned that W1AW was a valuable Amateur Radio resource. W1AW relayed critical messages and provided an on air meeting place for

agencies and volunteers. We have upgraded W1AW's capabilities to better prepare it for emergency operations. The funding for the upgrade is from a CNCS grant and the W1AW Development fund.

At W1AW, we have upgraded the transceivers and linear amplifiers so that we can run higher power and multiple modes on VHF and UHF. D-Star, Echolink, APRS and other digital modes are now up and running. We also replaced W1AW's 17 year old Yagi antennas. These upgrades have significantly improved W1AW's capabilities and preparedness.

*Improved online training:* We have updated our online EmComm training courses with the latest information to reflect the changes since Katrina. We plan to offer a Digital EmComm Course later this year. We also initiated the QST EmComm Honor Roll for those who have passed all three EmComm courses.

*Ham-Aid:* Based on our Katrina experience in dispatching equipment to the field, we created the Ham-Aid program. We have preassembled and tested HF/VHF go kits that are ready to ship out quickly, if needed. These

kits are available on loan from the ARRL to support ARES volunteers and other Amateur Radio groups.

*Publications:* We have also increased the amount of EmComm editorial content in our publications. This special EmComm issue is one example. We have added practical EmComm information to the *ARRL Repeater Directories*. The *ARES E-Letter* continues to grow under the editorship of Rick Palm, K1CE.

## **We're Ready!**

The ARRL is working hard to make these changes to improve Amateur Radio's disaster readiness and preparedness. While no one wants to experience another disaster of the magnitude of 9/11 or Katrina, we must do all we can to prepare for a worst-case scenario. We know that if "lessons learned" are not followed by "behaviors changed," then the lessons have not been learned at all.

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