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Hurricane Katrina: Ham Radio Operators to the Rescue!

Amateur or "ham" radio operators are often heroes in times of emergencies and natural disasters. This was definitely the case when Hurricane Katrina hit the Gulf coast in August 2005, earning praise for "the largest disaster response by U.S. amateur radio operators" ("Amateur Radio Emergency" 1).

Hurricane Katrina first made landfall on August 25, 2005 north of Miami, Florida as a Category 1 hurricane, eventually moving southwest and strengthening to a Category 5 over the next four days. When Katrina came ashore early on August 29, it caused heavy damage and over 120 deaths from high winds and flooding across Louisiana, Mississippi and Alabama ("Amateur Radio Volunteers" 1). After Katrina passed through, power lines were down and roads were inaccessible, hampering rescue efforts and communications. Wireless service, including many cell phone towers, was down for days, and an estimated two million people were without power in the three states affected by the intense storm ("Emergency" 1).

When terrestrial-based systems failed due to the hurricane, amateur radio was used to coordinate disaster relief activities. In all, more than a thousand ham operators from all over the United States traveled to the area affected and assisted with emergency communications ("Amateur Radio Earning" 2; Deitz 2). Radio amateurs moved quickly to work with state and national agencies, such as the American Red Cross (ARC), the National Weather Service (NWS), the Salvation Army, the Military Affiliate Radio System (MARS) run by the Department of Defense, the Amateur Radio Emergency Services (ARES) sponsored by the American Radio Relay League (ARRL), and the Radio Amateur Civil Emergency Services (RACES) coordinated through the Federal Emergency Management Agency (FEMA). Ham operators also volunteered to help at many Emergency Operating Centers for evacuees across several states, to relay messages from survivors to family members, as well as transporting food, water, radio equipment, and other critical supplies into the areas that were hit the hardest (Deitz 2; "Earning" 1, 2; "Emergency" 3, 4).



Amateur radio equipment and supplies donated to ARRL for the Hurricane Katrina response is unloaded at the volunteer staging area in Montgomery, Alabama for deployment to the field by volunteers from all over the U.S. (Allen Pitts, W1AGP, photo)

Even more amazing were stories of people stuck in rising floodwaters that were rescued directly due to the efforts of amateur radio operators. For example, on August 29, a call for help relayed by phone calls and amateur radio led to the rescue of 15 people stranded on a roof in New Orleans. One of the people on the roof tried calling 911 on a cell phone but could not get through the overloaded system, so called a relative in Baton Rouge. That individual called another relative, Sybil Hayes in Broken Arrow, Oklahoma. Hayes contacted the American Red Cross, which contacted the Tulsa Repeater Organization (TRO). TRO member Ben Joplin, WB5VST, used his local ARC chapter's amateur station to relay a request for help on the 20-meter SATERN (Salvation Army Team Emergency Radio Network) net via stations in Oregon and Utah, and then back to Louisiana. The ARES net in Louisiana contacted local emergency personnel. By that evening, all of them were safe at a Red Cross shelter (Krakow 2; "Volunteers" 2).

Also on August 29, another amateur operator heard about a family of five trapped in an attic in Diamond Head, Louisiana. They had used a cell phone to call the Salvation Army. Bob Rathbone, AG4ZG, in Tampa, Florida, heard the call over the SATERN net on his radio and checked the address on a map. Rathbone called the Coast Guard search and rescue station in Clearwater, explained the situation and relayed the address. The Coast Guard tried to contact its office in New Orleans, but it was out of commission. They then contacted the South Haven Sheriff's department in Louisiana, who organized a rescue operation (Krakow 3).

Ham radio operators already in Mississippi and Louisiana immediately began working to establish communications. On August 31, 2005, Mississippi Section Manager Malcolm Keown, W5XX, was reported on the air using generator power and makeshift antennas in Gulfport ("Volunteers" 3). Similarly, other radio operators in the areas directly affected by the hurricane, such as volunteer Matt Hackman, KB1FUP, in Pensacola, had to erect antennas and use car batteries or generators for power in the days following Katrina to establish communications ("Earning" 2).



Rhode Islander Matt Hackman, KB1FUP (center), and youth from a local Baptist church erect a VHF Yagi for use in Pensacola, Mississippi. The antenna helped establish a VHF link to Ocean Springs, Mississippi. (Matt Hackman, KB1FUP, photo)

Accordingly, amateur radio was the "primary means of contact with the outside world" for shelters and those that lacked reliable communication in the days after Hurricane Katrina hit ("Earning" 2). The Hurricane

Watch Net secured operation on 14.235 MHz during the initial 48 hours of Hurricane Katrina landing ashore at Louisiana and Mississippi, working in cooperation with WX4NHC at the National Hurricane Center to gather weather data as it occurred and in trying to predict the storm's behavior ("Volunteers" 3, 4). After Katrina, the West Gulf Emergency net was active on the frequencies of 7.285 MHz days and 3.873 MHz nights. However, a high volume of personal requests slowed critical tactical and emergency traffic, so "health and welfare requests" were moved to 7.290 MHz days/3.935 MHz nights (1). The SATERN net on 14.265 MHz also handled health and welfare inquiries; it reported receiving more than 700 requests in the first 12 hours after Hurricane Katrina hit (1). Meanwhile, an HF station at the Montgomery Red Cross staging area, N4AP, used frequencies of 3.965 and 7.280 MHz to keep in touch with other Red Cross shelters in the region ("Earning" 2).

Many individual radio amateurs later earned national recognition for their relief efforts. These included Brice Phillips, KB5MPW, who helped keep communications going in Hancock County, Mississippi during Katrina. Phillips was featured in an interview on National Public Radio on April 13, 2006 (Pitts). Another one was SKYWARN volunteer Donald Morris, KG4JHH, and his team of ham spotters who were honored by NOAA (National Oceanic and Atmospheric Administration) in April 2006 for their work during Katrina (Pitts). Among others, National Public Radio interviewed Ben Joplin about his experience in facilitating the rescue of 15 people stuck on a roof for the "All Things Considered" program on August 30, 2005 ("Volunteers" 2).



Alabama Section Manager Greg Sarratt, W4OZK (left), checks in Jim Aylward, KC8PD, from Ohio, at the Red Cross center in Montgomery. Aylward returned from volunteering in Ocean Springs, Mississippi. (Dennis Motschenbacher, K7BV, photo)

Ham radio operators, proven to be a "lifeline" in times of emergency, are to be applauded for rescuing people and facilitating communications in the aftermath of Hurricane Katrina ("Volunteers" 2). Jim Aylward, KC8PD, a volunteer from Ohio who traveled to Mississippi, summed it up best when he stated: "Even though we all prepare for events we hope never occur, the hams I worked with from all over the country demonstrated that 'When all else fails, Amateur Radio is there' is a lot more than a slogan...It was the reality for thousands of people who needed effective emergency communication" in a terrible natural disaster ("Earning" 4).

Works Cited

- "Amateur Radio Earning Praise, Respect in Hurricane Katrina Relief." <u>ARRL Web</u> 16 Sept. 2005: 1-5. 18 Apr. 2007. http://www.arrl.org/news/stories/2005/09/16/100/>.
- "Amateur Radio Emergency Communications." <u>Wikipedia Encyclopedia</u> 17 Apr. 2007: 1-4. 18 April 2007. http://en.wikipedia.org/wiki/Amateur_radio_emergency_communications.
- "Amateur Radio Volunteers Involved in Katrina Recovery." <u>ARRL Web</u> 31 Aug. 2005: 1-4. 18 Apr. 2007. http://www.arrl.org/news/stories/2005/08/30/1/?nc=1.
- Deitz, Corey. "Ham Radio Operators Relay Messages, Help Save Lives After Hurricane Katrina." <u>About: Radio</u> 4 Sept. 2005: 1-3. 18 April 2007. http://radio.about.com/od/amateurshortwave/a/aa090405a.htm.
- Krakow, Gary. "Ham Radio Operators to the Rescue after Hurricane Katrina: Amateur Radio Networks Help Victims of the Hurricane." <u>MSNBC News Online</u> 6 Sept. 2005: 1-4. 18 April 2007. http://www.msnbc.msn.com/id/9228945/>.
- Pitts, Allen. "Media Hits." QST July 2006: 12.