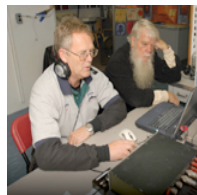


# Amateur Radio Operators Provide a Critical Communications Link During Emergencies

by Corey McKenna on June 23, 2010



Immediately after the Jan. 12 earthquake in Haiti that killed 230,000 people, injured an estimated 300,000 more and destroyed much of Port-au-Prince, medical teams from the University of Miami Project Medishare program had sporadic communication with the United States and the nearby U.S. Naval Ship (USNS) Comfort's Medical Treatment Facility — until teams of amateur/ham radio operators arrived, that is.

"They had already lost one satellite link. The other one was not reliable," said Julio Ripoll, an architect for the University of Miami Medical School, who coordinated amateur radio communications during the disaster. "So they were worried that they would not be able to communicate to Haiti from Miami in case they lost their other satellite link."

What was initially designed as a backup system soon handled all local emergency communications. Before Ripoll's teams of radio operators arrived, the field hospital had very little communication directly with the USNS Comfort. "They would send an e-mail by using a BlackBerry," Ripoll said, "and sometimes it would sit there for quite a while before someone saw it."

The amateur radio station became a critical communication link. "When we had patients who would come in and needed emergency surgery that we couldn't handle, we called the Comfort," he said, "and then we would coordinate either the helicopter medevac or [transport] a few times by speedboat if it was in the middle of the night."

That's just one example of how amateur radio operators, who use various types of radio communications equipment for nonprofit purposes, can provide a valuable resource during a disaster.

## Links with Emergency Responders

Volunteer radio operators assisting emergency personnel fall into two groups: Radio Amateur Civil Emergency Service (RACES) and Amateur Radio Emergency Service (ARES) members. Many people participate in both organizations, but the main difference between the two is that ARES members provide emergency communications before an emergency has been officially declared, while RACES operators, which are registered with state and local governments, are activated after an emergency declaration. RACES members may operate from state emergency operations centers (EOCs).

The American Radio Relay League (ARRL), a U.S. organization of amateur radio operators,

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has memorandums of understanding with numerous organizations, including FEMA, the American Red Cross, National Weather Service and the Association of Public-Safety Communications Officials International. As a result of those agreements, the ARRL trains with and works to develop these organizations' amateur radio communications capacity. It also builds relationships with these organizations to collaborate during disasters.

About 156,000 amateur radio operators are ARRL members. The best way for these ham operators to connect with local responders is to participate in their local Community Emergency Response Teams (CERT). "We may, in our case, probably connect with CERT, and so we'll probably be linked up close with the fire department," said Charlie Lum Kee, founder of the Virgin Valley Amateur Radio Club in Mesquite, Nev., and leader of the local CERT program. "We do have a little bit of a plan for our area as to where we would locate individuals [in an emergency]."

Amateur radio operators can also get special license plates displaying their call signs, which identify them to emergency crews, getting them past roadblocks and into the affected area to provide communications assistance.

In Oregon, about 1,800 RACES volunteers are authorized to work in state and county EOCs facilitating communication during disasters. For example, during the Great Coastal Gale of 2007 that knocked out communications to the state's Columbia, Clatsop and Tillamook counties, ham radio operators used a radio frequency messaging system called Winlink to transmit the counties' requests for assistance to the state's Office of Emergency Management. "Monday morning the governor came in and we were briefing and later on called amateur radio operators 'angels' because that was the only source of communication we had to the coast," said Marshall McKillip, the Emergency Management Office's communications officer.

Following the storm, Oregon Gov. Ted Kulongoski funded improvements to the state's amateur radio infrastructure with a \$250,000 grant for Winlink systems in each of the state's 36 county-level EOCs. "We bought the appropriate equipment and then organized the delivery, the set up, the training and everything with amateur radio resources," McKillip said. "It was quite a task for the amateurs to take on, but they did a great job."

## Assorted Roles

Amateur radio operators can play a variety of roles that allow public safety officials to maximize their resources, including facilitating communications; providing emergency managers with on-scene situational awareness; and helping manage large-scale events, such as state fairs and marathons.

Earlier this year as blizzards blanketed Delaware, RACES members manned ham radio stations at the Sussex County EOC, and 60 ARES members drove around the county's 958

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square miles reporting what they were seeing and confirming reports from the National Weather Service. “While [the police and emergency medical services] were moving around, they had better things to do than stop and measure the snow,” said Walt Palmer, public information officer for the ARRL in Delaware. “So that’s where amateur radio’s guys were coming in.”

At one point during the storms, the county set up two shelters for approximately 70,000 residents, all of whom were without electricity, and deployed an amateur radio operator to the larger shelter to facilitate communication with the EOC. “We were able to get good information back from the shelter as to how many people were there, were they making out OK and that kind of thing,” said Sussex County EOC Director Joe Thomas. “We actually tried to get an operator in the second shelter, but we never did get to that point because of the snowstorm.”

In the aftermath of a disaster, amateur radio operators are often the first to report what happened to emergency managers so they can start formulating a response. “Let’s say up the street a nuclear facility has an issue, and we start losing power here. The ham operators would start reporting that because we would be the ones on the ground,” Palmer said. “Our job is to communicate that to public officials. Our mantra for that is, ‘Provide the right information to the right people at the right time so they can make the right decisions.’”

Communities countrywide have signature large-scale events like state fairs, marathons and food festivals during which amateur radio operators can work with public safety personnel so the departments can maximize their resources. “Rather than use police or other county or state officers, ham radio operators will come together and we’ll get assigned to different points around, let’s say, a 26-mile race course,” Palmer said. “We’re there just to observe. If somebody has a problem, if a runner goes down or a bicycle falls apart or whatever, our guys are there and they’re able to report back so a proper response can be orchestrated to help that runner.”

If Delmarva Peninsula — a popular resort area on the East Coast with a winter population of 700,000 that can swell to 4 million in the summer — needs to be evacuated, ham radio operators can monitor traffic or facilitate communications between shelters and EOCs.

“While the Red Cross does a terrific job with the shelters, they’re there helping to prepare food and taking care of the residents of the shelter,” Palmer said. “They don’t always have the communication needs to get information back to the EOC — we have this many special needs people; we need more insulin because we have a problem here with a lot of diabetics. Amateur radio folks will be assigned to shelters to move that kind of traffic.”