



# EMERGENCY COMMUNICATIONS SUCCESS DURING THE TENNESSEE FLOODS

*A Report from Louis Friedmann  
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When Tennessee was hit with a record flood in early May, public safety mounted a coordinated response based on strong relationships and effective training. Two days of torrential rains reached totals of more than 19 inches in some areas. The Cumberland River crested at 52 feet in Nashville, breaking a 1937 record. The flooding damaged notable Nashville landmarks, including the Grand Ole Opry House, the NFL Tennessee Titans' LP Field, and the NHL Nashville Predators' Bridgestone Arena. By the fourth day, flooding had damaged an electric substation in downtown Nashville and the power went out. In Nashville-Metro Davidson County, more than 100 firefighters and police officers went door-to-door in flood-ravaged neighborhoods to check on the welfare of residents and offer assistance. The effort was led by emergency services personnel specially trained in Urban Search and Rescue procedures and supported by additional firefighters, police officers, and police officer trainees.

An event of this magnitude requires a large-scale, coordinated response. According to the Tennessee Emergency Management Agency (TEMA), more than 3,000 State and 20,000 local jurisdiction emergency response personnel responded to the event; 1,000

mutual aid responders from unaffected jurisdictions assisted; 15 Federal agencies, including the Department of Homeland Security (DHS), responded with personnel and equipment; and more than 50,000 volunteers participated in the response.

Not only does the response to a flood of this enormity require significant manpower, but it also requires reliable and effective emergency communications between emergency response personnel from local, State, and Federal agencies. To achieve this, TEMA activated its existing communications plans and procedures as they managed the State Emergency Operations Center (EOC).



*Photo Courtesy of Tennessee Emergency Management Agency*

Some of the training and resources that supported the plans and procedures in place were provided through DHS funding and training programs.

## Communications are Critical

TEMA Operations and Communications Director Louis Friedmann explained that it is TEMA's job to coordinate requests for help. "A county will ask for swift-water rescue teams; we locate (teams) and send them where they are needed," he says. Rescue teams responding to the calls for help must be able to communicate with local officials in the area they are serving, so TEMA also assists with coordinating emergency communications efforts. "When a team comes from East Tennessee to assist, communication plans need to be in place." Friedmann serves as the Statewide Interoperability Coordinator for Tennessee, working with the DHS Office of Emergency Communications (OEC) to align Tennessee's efforts to improve emergency communications by implementing the Statewide Communications Interoperability Plan (SCIP).



*Photo Courtesy of Tennessee Emergency Management Agency*

At a major incident, communications involve coordinating potentially hundreds of channels and talk groups across multiple bands and disciplines. Tennessee follows the Incident Command System (ICS), as recommended in the National Incident Management System (NIMS). During the flood response, TEMA worked with local agencies to establish interoperability options using mutual aid and

interoperable channels. The State had several ICS 205 communications plans in place associated with various regions. In addition, Tennessee had a cadre of dedicated Communications Unit Leaders (COMLs) who ensure operations are supported by communications. Under ICS, a COML is responsible for establishing field communications between the Incident Command Post and dispatch centers, monitoring field communications and effective use of radio channels or talk groups, programming and deployment of cache radios, and interference mitigation. A dedicated COML to coordinate needs and ensure resources is critical during a multijurisdictional response.

## Training and Exercises Prepare Responders for Disasters

In his role as the Statewide Interoperability Coordinator, Friedmann is responsible for securing and delivering grants, training, and technical assistance. Over the last few years, Friedmann has focused on increasing the availability of training and exercises for State and local officials, so they are prepared for the coordination required in a multijurisdictional response.

Only in the past few years have COMLs become standardized roles within the field. Since November 2008, OEC has trained more than 2,000 first responders as COMLs. In July 2009, Tennessee hosted the first COML Train the Trainer course. OEC offers the course to expand the number of COML training sessions held throughout the Nation. States can now organize their own COML classes and use grant funds to pay for this critical training. According to State and local officials, in the months before the flood, Interoperable Emergency Communications Grant Program (IECGP) grant funds were used to provide COML training throughout Tennessee. The use and depth of trained COMLs was invaluable in all areas of the State to establish communications plans and configure resources, which helped support the operational and tactical sides of the incident management teams.

In addition to providing funding for COML training, IECGP funds had been used for three large-scale practical communications exercises in West, Middle, and East Tennessee. These exercises provided first responders in Tennessee with an opportunity to prepare for a major response effort. When the flood devastated half of the State, first responders were prepared with effective communications plans.



*Photo Courtesy of Williamson County, Tennessee*

"The timing of the communications events leading up to the historic 1,000-year flood we experienced in Tennessee during the first week of May proved to be impeccable," says Bill Jorgensen, 9-1-1 Director of the Williamson County Department of Emergency Communications. "The IECGP has provided the means to make training, exercising, and relationship-building a reality."

Jorgensen also credits relationships built in COML classes for supporting a coordinated response to the flood. COML training provides responders with the opportunity to spend time with communications officials from other jurisdictions. In class, COMLs learn about standard operating procedures and established communications plans in other counties.

Jorgensen says, "We have just begun navigating the communications highway with bigger and better things to come. IECGP and COML provide essential educational pieces that have been missing in public safety since its inception. The most important aspect of all of these is the relationship- building that took place," he adds.

"[The COML class] is giving a new conduit to entities that previously have not worked together," Jorgensen says. "They have been given the opportunity to sit down at the table and talk about the Incident Command System, and realize that coming together to provide for better planning enhances the response and recovery to events and incidents."

## **Effectively Coordinating Grant Funds**

In addition to grant funds for training, funding from the Department of Commerce (DOC) National Telecommunications Information Administration and DHS FEMA has helped build new interoperable communications systems and provided needed radios and portable systems vital in an emergency situation. DOC/DHS Public Safety Interoperable Communications (PSIC) grant funds were used to help support development of the Tennessee Valley Regional Communications System (TVRCS), a fixed-trunked interoperability system covering Tennessee and parts of north Georgia.

TVRCS covers Hamilton, Bradley, McMinn, Meigs, Rhea, Roane, Anderson, Loudon, and Knox counties in Tennessee. In the State of Georgia, Catoosa, Dade, and Walker counties have joined the partnership. The Tennessee Department of Correction and Middle Tennessee State University have also linked their digital systems with the TVRCS. The system is connected through a series of almost two dozen radio towers that are mounted on the highest mountain tops and ridges throughout the I-75 corridor in the Tennessee Valley, operating in the 700- and 800-megahertz frequency bands. The capability is critical for major events that need all hands on deck like fires, severe weather events, hazardous materials catastrophes, or major highway accidents.

For example, the TVRCS allowed swift-water rescue teams from Bradley County, deployed to Nashville, to coordinate response efforts with their county. The PSIC-funded LETS Talk System (VHF-UHF 800-MHz interconnected interoperability system in the metro Nashville-

## ***Volunteer Effort: Response, Rescue, and Recovery***

During the flood, TEMA response officials worked with representatives from various Federal, State, and local agencies including the Highway Patrol, departments of transportation, environment and conservation, wildlife resources, military, and general services. As Nashville city officials monitored the rising water level, a massive volunteer effort was launched to minimize damage and assist with the rescue efforts.

In 48 hours, more than 7,000 volunteers registered online with Hands On Nashville. Volunteers manned a sandbag brigade at the county's one remaining water treatment plant. The volunteers later staffed Disaster Information Centers as well as distributed Emergency Food Boxes from Second Harvest in affected areas. Local community members responded to the disaster by using social media, such as Twitter and Facebook, to communicate and share information on everything from water conservation needs to information on which businesses were open.

Volunteers throughout the State played a critical role in the response and recovery efforts, including assisting with emergency communications. In Houston County nearly all regular communications were lost when a critical telecommunications central office was flooded, which caused public safety radio networks and nearby cell networks to go down. "The ham operators established communications with the State EOC," says John Johnson, a radio system analyst with TEMA.

Davidson County area) was used for general multi-agency interoperable communications among agencies involved in the flood response, and a portable Site on Wheels (SOW), a 700-800 MHz system operated by TEMA, connected to the State corrections radio system switch, supported communications in Davidson County.

### **The Importance of Multijurisdictional Coordination**

"During the response phase and recovery I saw many ICS 205 communications plans being shared among responders and counties," says Williamson County's Jorgensen. "This would not have been possible if the relationship had not been established previously through COML class. Even though this flood is one of the biggest disasters that we have ever faced, the communications training that we have been working on so hard paid off many times over." Jorgensen says IECGP grant funds that make

COML training, planning, and exercise possible are of the utmost importance to the overall public safety response system.

"The training made possible by the IECGP is reaching the 'boots on the ground,' those who need to understand the importance of ICS and the National Incident Management System (NIMS)," Jorgensen says. "These programs are the future of this Nation's homeland security."

The use of DHS funding through grants and training proved invaluable in all areas of the State during the response to the floods – to establish communications plans and configure resources, which helped support the operational and tactical sides of the incident management teams, according to State and local officials. Despite the immense challenges presented by the flood, the public safety community achieved success thanks in part to the resources provided through DHS grants and training.