



# CITY OF METROPOLIS EMBRACES MOTOROLA'S WAVE FOR INCIDENT PLANNING AND RESPONSE



The city of Metropolis is located in rural Massac County in the southern portion of Illinois. It is home to just over 15,000 residents, as well as a large uranium conversion facility less than two miles outside the city's center. The facility specializes in processing raw uranium ore into uranium hexafluoride, used in applications including nuclear power generation and the development of nuclear weapons.

The presence of the plant and its nuclear materials and chemicals so near to Metropolis' population center means that local emergency management teams, first responders and the plant's own staff and management must work closely together to plan for potential incidents and emergency scenarios, ranging from tornadic or seismic impacts to industrial incidents. Furthermore, like the nuclear industry as a whole, the Metropolis facility has come under increased scrutiny from regulators, demanding even higher standards for incident planning and response. In planning for and responding to such incidents, instant and efficient communication is critical to saving lives.

Effective emergency response in such a rural location requires collaboration between emergency officials at the city and county level, as well as with staff from the nuclear facility itself. The city faced a number of challenges to doing this. For one, city and county emergency management teams relied on disparate communications systems, creating roadblocks to efficient communications. Within these groups, individual first responders carried a variety of devices, including two-way radios, smartphones and desktop PC setups. Additionally, the presence of a nuclear facility meant that city officials needed a direct line of communications with plant staff.

## WAVE BENEFITS TO THE CITY OF METROPOLIS

### **Mission-critical collaboration:**

To plan for and respond to potential emergency scenarios involving the city's nearby uranium processing facility, Metropolis needed a system that would allow for collaboration between disparate groups, ranging from private facility staff to city first responders and county officials. WAVE brings these systems under one roof, giving officials the ability to collaborate seamlessly, under the most testing of circumstances.

### **Leverage existing assets:**

WAVE enabled the various organizations involved in disaster response to leverage existing communications assets—from smartphones to LMR two-way radios. This ability was crucial not only as a cost-effectiveness measure, but also in allowing these groups to communicate effectively without requiring them to make significant new infrastructure investments.

### **Potential for expansion:**

Public safety agencies are often finding budgets stretched thinner and thinner. This was true for Metropolis, and for many agencies in surrounding counties. Using WAVE, area public safety officials are looking for new ways to collaborate and share systems capacity with surrounding counties, allowing for improved emergency response times dispatch capabilities.

## **FINDING A SOLUTION**

With all of these requirements in mind, the city approached Motorola Solutions about implementing its innovative WAVE Work Group Communications solution to enable instant voice communications between first responders and emergency management teams. As a software- and IP-based communications solution, WAVE would allow emergency personnel, Metropolis' police and fire departments, staff at the nuclear facility and county first responders, to communicate with one another in the case of an emergency.

## **RESULTS**

Using WAVE, Metropolis was able to bridge its communications system with various groups, including Massac County's emergency management personnel, staff at the uranium processing facility and disparate agencies within the city itself. Under the new setup, emergency managers (such as fire and police chiefs) are able to access emergency communications channels via the WAVE Mobile Communicator app, run on smartphones operating over multiple carriers' data networks. The city also leveraged the WAVE Dispatch Communicator alongside its IP-based emergency 911 system to let operators display and manage hundreds of channels and communications from an industry-standard desktop PC.

"The city of Metropolis and our 911 board realized that IP-based systems are the future of emergency communications," said Keith Davis, director of the Metropolis Emergency Management Agency. "The next generation of emergency communication systems will be IP-based, and we wanted to be on the cutting edge. The WAVE system takes you well beyond the normal limitations of the typical radio system."

The ability to enable seamless communications among city and county emergency personnel and staff at the city's nuclear processing plant was also a critical component of any communications system. While the plant operated on a UHF radio system, the city was running a VHF system. As a solution, the city installed an off-site repeater which enabled their control center to interface the two communications systems through WAVE. Additionally, the city was able to

extend its network through a secure wireless link to the nuclear facility, so that all relevant staff can share data and information and maintain a secure line of communications in the case of any incident.

Moving to a software-based voice communications system also allowed the city to maintain an always-available backup communications system. The system serves as a fail-safe for communications between first responders. Should one channel fail, a dispatcher can easily move users into a new channel via drag-and-drop functionality, using the WAVE Dispatch Communicator.

The WAVE system stood out during a recent full-scale exercise in preparation for an incident at the city's nuclear processing facility. The United States Nuclear Regulatory Commission required the city's emergency personnel to demonstrate their ability to react efficiently to a seismic event in the area—including a complete communications and telephony failure. Using WAVE, the city's and plant's emergency responders were able to effectively communicate and orchestrate a response under the simulated circumstances.

Implementing WAVE has modernized the city of Metropolis' emergency communications and has opened doors to expansions of the system in the future. The 13 counties that make up Illinois' southern tip are now in the process of linking all emergency management communications over WAVE via a fiber network. Should an overload of calls occur in one area, overflow emergency calls will be redirected to the next adjacent county. With WAVE software eliminating the boundaries of radio range, the system will allow first responders to be dispatched to more remote locations in the case of emergency. The system is also more budget-friendly, allowing for greater collaboration between area first responders to fill in gaps left by tightening budgets.

Davis noted that the cutting-edge system rivals emergency management systems being used in much larger metropolitan areas across the country. "In small town USA, WAVE gives us the capability of what they're doing in larger cities," he remarked. "That is absolutely amazing."