Local and assisting first responders and National Guard troops search the wreckage of a mobile home park in Evansville, Indiana, after an F3 tornado ravaged the community, last November.

Emergency Management in Evansville

Iornado

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n the morning of Sunday, November 6, 2005 an F3 Tornado ripped through our community, taking with it nineteen lives. Traveling at a velocity of around sixty miles per hour, the tornado cut a path forty-one miles long and, in some places, 400 yards wide. Wind speeds exceeded 200 miles per hour as the twister moved across the border of two states and three counties. The storm's path of death and destruction would not end in our community. In forty minutes time, several hundred homes would lay in ruin and a total of 23 people would be lost. It would be the deadliest tornado in the United States since 1999 and the worst Indiana has endured in over thirty years.

The response to this disaster would force local emergency services to overcome several challenges. Our communications center was not immune. Our staff, which played a pivotal role in the incident, actively managed disaster communications for a period of over 60 hours and faced many trials along the way. The lessons learned from this tragedy are just now starting to be looked into and will no doubt impact local emergency planning and communications for years to come.

The Calm Before the Storm

Saturday night, November 5, 2005: Third Shift reported in just before 11:00 PM expecting a moderately busy shift. Saturdays are almost always one of our busiest days and this night would be no exception. The unusually warm weather had no doubt contributed to our increased call volume. The first hours of the shift were spent responding to numerous fights, shots fired, and disorderly conduct calls. Our first Saturday night in November was not destined to be a quiet one.

Around 1:15 AM, a noticeable lull in our call volume ensued. This slow-down gave us a chance to start monitoring the weather situation. The television in the operations room was tuned to a local news station that had started covering the approaching storm and we began monitoring local National Weather Service (NWS) radar from the Internet. The storm looked to be moving quickly and was making its Eastward approach to the Indiana/Illinois border.

By 1:35 AM, Posey & Knox Counties in Indiana were under a Severe Thunderstorm Warning. Posey County, directly west of us and directly adjacent to the Illinois border, was also under a tornado warning. Strangely enough, our NOAA weather radio, which normally alerts us to approaching storm activity, had been eerily silent thus far. It was also around this time the strong winds that precede a storm picked up and our center started receiving the first of a barrage of burglar alarm calls. A quick check of the radar indicated the storm had entered Vanderburgh County.

At 1:49 AM, The Indiana State Police post #35, located just north of Evansville, broadcast a weather warning message for Vanderburgh County across its regional point-to-point law enforcement frequency. Simultaneously, the local news switched to the Emergency Alert System (EAS). On queue, our center quickly activated the county's weather warning sirens and issued a radio broadcast across our primary talkgroups. Vanderburgh County was now under a Severe Thunderstorm and Tornado Warning.

The Warning is Issued

When the warning was issued, there had been no tornado sighted yet. The National Weather Service was issuing



Top: Firefighters coordinate the delicate use of heavy equipment to lift heavy segments of mobile homes in the search for live victims and the recovery of the deceased. Middle: The November 6, 2005 tornado was the worst twister to strike Indiana in thirty years, demolishing several hundred homes and killing 23 residents. It was the US's deadliest tornado in six years. Bottom: Rescuers and support personnel converge upon a mobile command post in the Eastbrooke mobile home park.



Firefighters endeavor to recover a civilian fatality whose life was lost in the deadly tornado that flattened the mobile home community in Evansville, Indiana.

the alert based on the rotation they were seeing on radar. Shortly thereafter, dispatcher Deanna Daubs received the first call confirming the threat was real. Her caller was reporting that a tornado had just struck the grandstand at the Ellis Park thoroughbred race track. Located in Henderson, Kentucky, Ellis Park sits on the north side of the Ohio River and is affiliated with Churchill Downs, the same track that hosts the Kentucky Derby. Daubs transferred the call to Henderson's PSAP and because of its proximity to our jurisdiction the information was also relayed to law enforcement units in the area.

Around 1:58 AM, another call was received by a storm spotter on the south end of the city reporting that he could hear the "freight train" sound that is often associated with a tornado. The caller advised he could not see anything, but that it sounded as if there was a tornado in the river bottoms area, south of his location, an area that is mostly agricultural farmland. While the updated information was being relayed to field units, the weather warning sirens were set off for the second time, exactly 10 minutes after their initial activation as per our operating procedure for storm or tornado warnings. It was at this moment, just a few seconds past 2:00 AM that we started receiving the first calls reporting the worst possible news: Eastbrooke Trailer Park had taken a direct hit.

Fire Department Dispatched

The Knight Township Fire Department operates two stations on the eastern edge of Vanderburgh County and would be the first department to respond to an emergency in the Eastbrooke community. Their closest station, Company #7, was located just one half-mile away northeast of the mobile home park. Unfortunately, just as they were being dispatched, we received a call from their crew informing us they had taken a direct hit to the station and were unable to respond any apparatus. Their roof had been blown off and the building heavily damaged. The crew was unhurt, but the heavy debris and fallen trees that littered the roadway blocked them in.

With Knight Township Fire Depart-

ment's response coming from their northern station several miles away, deputies with the Vanderburgh County Sheriff's Department were the first to arrive. Deputy Aaron Hunter and Deputy Ray Reason arrived and began surveying the scene. Their size-up indicated they had several trailers heavily damaged and destroyed. American Medical Response (AMR) had been notified almost immediately of the situation and sent an initial response of four paramedic ambulances to the scene while at the same time calling in additional personnel and coordinating the effort to obtain more EMS resources from outside the county. In addition, the county's Emergency Management Agency (EMA) was notified to begin mobilizing for a disaster situation. Access to the mobile home community was hindered due to the debris on the roadway forcing emergency responders to park their vehicles far away from the hardest hit areas and walk in.

Deputy Chief Scott Foreman with the Knight Township Fire Department was the first fire unit to arrive. Incident Command was established and a request was quickly placed for a second alarm assignment with a special request for additional heavy rescues and an extra line-up from the Evansville Fire Department under mutual aid. Additional units from the Vanderburgh County Sheriff's Department and the Evansville Police Department began arriving on scene and a unified command system was established to manage the now apparent disaster situation. Within hours, over 500 fire and emergency services personnel would be on-scene and assisting in the rescue and recovery efforts.

Challenges Faced by the Communications Center:

Staffing

Just after 2:00 AM it was apparent in the communications center that we were dealing with a large event. The incoming calls were ringing in at an overwhelming rate; more than our staff of seven could process. Realizing that more help was going to be needed in the communications center, a call was placed to JoAnne Smith, the communications center director, at home informing her of the situation. A request was made for at least two more telecommunicators and for a second dispatch supervisor to report to the center. The director began an emergency call-in procedure and within 30 minutes we had all available consoles staffed.

Teamwork & the Communications Bottleneck

Ordinarily, our telecommunicators have certain primary and secondary responsibilities depending on the position they are working on any given day. A calltaker's primary responsibility is to answer incoming calls while their secondary responsibilities include supporting any of the radio dispatch positions and making any necessary outbound phone calls for them. A dispatcher's primary responsibility is to manage the radio traffic on their talkgroup and then assist the call takers with incoming or outgoing phone calls as necessary. All of this is possible because each of the ten consoles in our operations room is configured identically. Added with teamwork, this allows our staff to handle routine scenarios on our busiest days.

Unfortunately this would also prove

to be a bottleneck for us. With only ten consoles in operations, eleven 9-1-1 lines, twelve non-emergency incoming phone connections, and five telecommunicators assigned to primary dispatch positions, we needed more help. At one point, we had more staff in the communications center than we had consoles and at times, we still needed more calltakers and more radio operators. Each of the calls we were receiving were of the highest priority. Mothers were calling in saying their infants and small children were missing, others reporting people

Evansville-Vanderburgh Central Dispatch

The Evansville-Vanderburgh County Central Dispatch center serves the City of Evansville and Vanderburgh County, Indiana. Located almost at the very tip of Southwestern Indiana, Vanderburgh County has an estimated population of just over 173,000 with 117,000 people living in the City. This makes Evansville the third largest city in the state.



Operating on a budget of \$2.8 million dollars, the communications center is its own separate agency, jointly administered by the City and County. Operating since the late 1980s, the agency dispatches for all law enforcement and fire services in the city and county, answering an average of 1,100 phone calls and dispatching just under 600 calls for service daily.

The communication center is staffed by 31 telecommunicators, seven supervisors, one director and three support staff. There are at least six telecommunicators and one supervisor on duty in the operations room at all times, staffing three radio dispatch positions (two for law enforcement and one for fire dispatch) and two 9-1-1 calltaking consoles. A fourth telecommunicator works an "Info" position, supporting law enforcement with database inquiries, etc. All dispatchers are cross-trained in every position and operate on a rotating schedule.

Mike Mitchell



The Evansville-Vanderburgh County Central Dispatch in Evansville, Indiana. With neighboring PSAPs affected by the tornado, Evansville dispatchers had to handle the bulk of the storm-related 9-1-1 calls on Nov. 6th.



19 lives were lost when the tornado leveled the Eastbrooke mobile home park - this man was not one of them. He was one of more than sixty live rescues made at the collapsed trailer park.

trapped and seriously injured. In these situations, our training and instinct would usually have us keep the caller on the line until help can arrive, but in dealing with the overwhelming size of the event we had to adapt. With each call answered being of an emergency nature, the inter-personal communication and teamwork that we normally relay on was strained. All telecommunicators were answering calls at this point, dealing with individual emergencies. As a result of everyone's attention being focused on their own calls, the situational awareness we all normally posses was blurred.

Backup Site

Our county lacks a dedicated backup site that can take over uninterrupted operations of our center. However, our county does have an Emergency Operations Center (EOC) located in our local EMA office that has a dedicated communications room accommodating two radio positions. It includes a computer on the city/county network that will allow us to have access to our Computer Aided Dispatch (CAD) System. With the lack of consoles in the communications center, a decision was made to send one telecommunicator to the EOC to take over incident communications from there and to assist EMA in coordinating their response, which would in turn, give us an extra workstation in the communications center for call-taking.

As it turned out, however, the CAD connection was not functional at the EOC when our dispatcher arrived. Without access to CAD in the EOC, we could not transition incident communications out of the communications center and we were unable to free a console in the communications center for call-taking.

Neighboring Warrick County

Warrick County, with a population of just over 55,000, borders eastern Vanderburgh County and is located just over a mile and a half from the Eastbrooke Mobile Home Park. Shortly after the tornado struck the mobile home community our communication center began receiving the first of many 9-1-1 calls

from Warrick County residents. Already overwhelmed with the calls from those trapped and injured in Eastbrook, our call takers now had the added volume of calls that would normally be answered by the Warrick County Sheriff's Department. Attempting to transfer calls to Warrick County were fruitless, as we only received a busy signal. Attempts to contact the Warrick County Dispatch Center to relay incident information to them were also equally ineffective; their phones were down. Unbeknownst to us at the time, the Warrick County Dispatch Center had lost power; their backups did not come online, and their phone and trunked UHF radio system were out of action. Attempts by our staff to contact individual fire stations and police officers in Warrick County were also in vain as now it seemed most of the regular phone lines in the affected area were also out of service.

With no resources available to send into Warrick County, our staff compiled a list of their calls and made sure to note where we had people that were reported as injured in need of medical care. We eventually did make contact with Warrick County Dispatch later in the night when their phones came back up. We faxed them a list of all the calls we had fielded for them while they had been offline. Unfortunately their radio system was still out of action and would remain so until late morning.

Lessons Learned

Keep Updated Contact Information. Not only for your staff and the agencies in your jurisdiction, but also for the surrounding counties or agencies that you may need to call in a disaster. Obtain and keep home phone, cell phone, and work numbers of ranking officers at individual fire and EMS stations. The information could be useful when you are unable to contact that jurisdiction's communication center in an emergency.

Get Involved in Disaster Planning and Exercise Drills. Most of the drills conducted here have been designed to be the least disruptive to normal communication center operations. Unfortunately that is not how it will be in a disaster. The communications center needs to assert itself in the planning and participation of drills and future responses. We need to train in the same manner we will work a disaster and when the time comes, work the disaster the same way we have been trained to.

Have Multiple Sources of Information. On this night, our NOAA Weather Radio, which we have always relied on to notify us of approaching weather, failed to activate due to a "computer glitch" in the local NWS office. Our warning came from a regional state police radio broadcast. A television in the operations room and Internet access were also vital assets in making sure we were kept up-to-date with weather information.

Plan for Communications Center Evacuation. Under what circumstances would you evacuate your communications center? During this tornado, the closest fire station and crew to the Eastbooke Mobile Home Park were disabled due to a direct hit to the station. What if the communications center lay directly in the path of a tornado? At what point do you have your staff stand down and take shelter? What steps would you have to undertake to make this possible?

Dispatching to Non-Existent Address-

es. Our primary job in its simplest form as dispatchers is to relay information. Most of the time this means relaying information from the public to the units in the field. During the tornado we received scores of calls from people who were reporting others as trapped and injured and in turn we would relay the address of the location to the responders on the scene. What we didn't realize until later was that all these addresses no longer existed where they once did. Mobile homes were blown apart and scattered across a large area. The caller who thought he was still on his own street was now actually three streets over - he just didn't realize it because he was still in his home and surrounded by his

operate if your communications center took a direct hit from a tornado or earthquake and had several injured dispatchers?

Without under-emphasizing the tragedy from the loss of nineteen lives in the Eastbrooke Mobile Home Park, local emergency planners would later remark that the tornado incident in our county was an ideal disaster in that all of the destruction was confined to a localized area. From a response point-of-view we could have had it much worse, like neighboring Warrick County where the trail of destruction crossed the entire county, leveling almost every structure and tree in its path and disabling routine emergency communications for hours.

On the night of the tornado more things went right than went wrong.

belongings. Much information we were relaying to responders was practically useless because of this.

Test Your Backup Plan. If you have a backup site, test it regularly. If you don't have a backup site, test whatever backup system you have. There is no substitute for experience and it's better to know that backup system will work when you need it, rather than finding out that it doesn't in your time of need. Our agency found this out the hard way at the EOC. Warrick County was also in a similar situation.

Expect the Unexpected. None of us knew what we would be in for when we came in to work Saturday night. As with any disaster, tragedy can strike unexpectedly. Working a disaster will present any number of possible challenges that must be overcome for a successful outcome. As a supervisor, the best defense in addition to planned drills and exercises is to mentally run through practical scenarios of possible problems. What steps do you take if the phone system crashes? What will you do if the power goes out and the UPS or backup generator does not come on? How would you Taken all together and coming just months after Hurricane Katrina, the overall response would be lauded by Indiana Governor Mitch Daniels and by Acting FEMA Director R. David Paulison as being a successful example of how local emergency officials respond to a community-wide area disaster.

At the heart of that response were two communications centers and a handful of dispatchers. On the night of the tornado more things went right than went wrong. Even though we all faced our challenges and learned many lessons from our experience, our dispatchers made a difference that night and no doubt contributed to saving several lives.

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