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Streamlining Emergency Management: Improving Preparedness, Response and Cutting Costs

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Written Testimony

Thank you for the opportunity to discuss improving Emergency Management, especially in the areas of Preparedness, Response and Cutting Costs. This discussion will, of necessity, focus on the EF-5 tornado which struck Joplin and Jasper County on May 22, 2011 as well as the Emergency Management response as represented by the Federal Emergency Management Agency.

Joplin, situated in far Southwest Missouri, has a night time population of approximately 50,175 and a day time population of about 240,000. That the tornado struck on a Sunday evening and not a regular business day was instrumental in lessening the number of injuries and deaths, which currently are over 1,000 injured and 162 dead.

As to the tornado: The 13 mile long tornado path included a swath thru Joplin of approximately 6 miles long, at times almost one mile wide, from the far west edge of Joplin through the city to the far east edge plus several miles past into the City of Duquesne. The tornado was an EF-5, with sustained winds of an estimated 205 miles per hour, affecting homes and businesses in both Jasper and Newton Counties in Missouri.

Nearly 7,500 residential dwellings, about 1,000 of them in apartment complexes, were damaged by the storm, affecting more than 17,000 people or 35% of the population of Joplin. The storm did not discriminate, destroying some of the highest priced homes in Joplin as well as those in low and moderate income neighborhoods. Unfortunately, those lower income neighborhoods are also some of Joplin's oldest with small houses on small lots, 14 to 16 homes in a block. Obviously these are very densely developed and populated areas. The tornado devastated those neighborhoods.

Also in the direct path of the storm were nearly 500 places of employment, from St. John's Regional Medical Center with more than 2,000 employees, to scores of mom and pop operations. Overall, nearly

5,000 job positions were impacted directly. Hundreds of other businesses in our area have also been touched by the storm, from being physically damaged, to being without power for days, to being completely unharmed yet losing a good portion of their customer base.

The tornado generated an estimated 3 million cubic yards of residential debris throughout the disaster area. Over 85,000 registered volunteers have provided over 423,000 hours of service, mainly in the area of debris removal. 14 area health departments along with other local medical partners, including over 125 staff, aided in giving out over 17,000 tetanus vaccinations. 1,308 pets displaced by the tornado were picked up and taken to an emergency pet shelter by local animal control staff and partner agencies including the ASPCA and Joplin Humane Society.

These few pages are inadequate to describe the extent of the devastation as well as the resiliency of the human spirit to survive such an incident. I have yet to mention the 539 registered agencies that responded to our call for aid, the Non-Governmental Organizations that aided in mitigating the human consequences of losing everything, and the faith-based community that rose up to take on the task of being points of distribution for supplies. The response truly was, and continues to be, a communitywide, area wide, effort. For this we are most grateful.

I have been asked to testify to how Emergency Management can improve with regards to preparedness, response and cutting costs. I understand that this committee is particularly interested in FEMA's response to this disaster, and, how the local agencies viewed that response. I am pleased to speak to this subject.

Let me begin by stating that I have been in the business of Emergency Management for 19 years. I have been through several natural and manmade disasters during those years, none of which compare to the Joplin Tornado, as it has become known. I have worked with State Emergency Management Agencies from two states as well as FEMA and have become familiar with their mission and methods of operations. I have had extensive hands-on experience in managing disaster scenes as well as being an instructor in the National Incident Management System as well as the Incident Command System, both standards of the industry for disaster management.

I therefore feel qualified to state that, without a doubt, the FEMA of today is NOT the FEMA of yesteryear. In times past they have been accused of being slow to respond, distant when on scene and hard to work with. Some of this I experienced firsthand, some I have received anecdotally. Not this time. I can truly say that FEMA's response to the Joplin Tornado was a positive experience.

The Joplin Tornado struck at approximately 1730 hours on Sunday evening, May 22. I was already in the Emergency Operations Center located in the Justice Center. I put out the call for aid to our local partners, then to the Missouri State Emergency Management Agency, both calls being standard operating procedure per our Local Emergency Operations Plan. When I asked the State about FEMA, I was informed that they were already in route.

FEMA personnel began to arrive within hours of the tornado, with initial response personnel on scene no later than early the next morning. We were most pleased to see them in the EOC as we understand

the crucial role FEMA plays in partnering with the State and local entities to ensure a quick and adequate response to the current and ongoing needs of our citizens.

FEMA personnel immediately met with our elected officials, administrative personnel and response agencies to get an overall view of what had happened and what their role might be. We found them to be neither invasive nor authoritative, but rather supportive and collaborative. This was a breath of fresh air to us.

Some excellent examples of what FEMA was able to do for us at the local level, providing us information and resources we would have had no other chance to receive:

1. GIS Mapping: FEMA provided satellite imaging of the debris area to strengthen our Search and Rescue efforts. This mapping also became crucial to us during the debris removal planning and implementation phase of the recovery effort. They were able to identify which specific structures were damaged, and, to what extent.
2. FCO on scene: Having the Federal Coordinating Officer on scene was a tremendous boost, not only to our confidence level that FEMA was planning to be here long term, but to enabling us to have a major decision maker close by during our discussions and negotiations for services.
3. FEMA Liaison to our City Manager: This person was central to our City Manager and Mayor's efforts in dealing with FEMA. She stayed in our EOC, worked our hours, and had the name and number of anyone in FEMA we needed to contact.
4. Mobile Housing Units: While this means of providing interim housing to some of our displaced citizens has been used in other places, it is obvious that certain lessons have been learned and incorporated into this particular program: the efficiency with which citizens were screened and qualified (some 566 families to date); the speed of construction of the various Mobile Housing Sites; providing of storm shelters sufficient to shelter all the residents of the Site; fencing of the Site; conversations with local Police/Fire/Health/Emergency Management to ensure those so sheltered would receive such services; including providing a MHU for Police to use as a sub-station. Each of these policies and procedures evidence a very real concern and effort at improving on past performance as well as adapting to current situations.

That said, there are always ways to improve response and recovery efforts, especially on incidents of this scale. The real enemy in such situations as the Joplin Tornado is time. Once the Search and Rescue is complete, people are treated and accounted for, shelters are established, food and clothing are distributed, along with the myriad efforts required to affect a successful immediate response, comes the question "What's next?" For us the immediate answer was "Debris Removal". Obviously we then look to State and Federal partners for expertise, programs and funding. Again, I need to say that FEMA was most customer friendly in this area. Simply put, the time period allocated to debris removal was short.

The expedited Debris Removal program was to be completed by August 7. We accomplished the task by August 06, thanks in particular to our large number of volunteers.

While hardly unique to our situation, an overriding problem we faced was the realization that there were three separate entities on scene, each trying to work the problem at hand. These three were: Local Government, State Government, and FEMA. Trying to communicate between these three was a continual chore, especially when the human element was factored in. State and Federal people were continually changing out, resulting in some confusion as to who occupies what roles. Beyond the fact that new introductions needed to be made all around, each new person seemed to have a somewhat different understanding of the rules and program, resulting in more time needed to integrate them into the current effort.

May I suggest three observations which I feel would decrease the amount of time required to facilitate the response and recovery efforts? I realize that these are neither far reaching, nor national in scope, but I assure you they are of concern to we who find ourselves at the "tip of the spear" during such an incident as the Joplin Tornado.

1. A current roster of all FEMA personnel involved in the response/recovery effort. This could be similar to the standard NIMS "Incident Communications Plan" and "Incident Organization Chart" so that it could be integrated into our daily Incident Action Plan for distribution to all involved agencies. This document would be updated daily, commensurate with changes in personnel and duties.
2. A menu of services provided by FEMA in its effort to recover/restore the local situation. This is a big concern to us. It seemed like we spent a lot of time trying to guess what FEMA could and could not do. We even called several other jurisdictions that had gone through similar incidents to see what questions we needed to ask FEMA and what programs we needed to request. A list of available programs would have saved us a lot of time and consternation.
3. The Expedited Debris Removal program. We understood from the beginning that this was a new and continually developing program. However, rolling the demolition phase and the debris removal phase into one effort would have saved a huge amount of time and effort, to say nothing of eliminating a great deal of duplication of effort. Additionally, to combine the two would have been very beneficial to our citizens who were having to process a great deal of information after the disaster, and, help them understand the process of clearing their property as well as what benefits the program has to offer.

In summary, I was most impressed and pleased with the role FEMA played and continues to play in our response and recovery efforts. We are thankful for the effort of our Federal government and our elected officials in facilitating a response/recovery that can only be described as successful.

Thank you for the opportunity to testify.



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Joplin, Missouri hit by EF-5 Tornado on May 22, 2011

GENERAL INFORMATION

October 3, 2011

- Joplin population approximately 50,175 (2010 Census)
- Day time population approximately 240,000
- Located in Southwest Missouri between U.S. Highway 71 and I-44
- EF-5 Tornado was ½ mile to ¾ mile wide, traveled approximately 13 miles;
- Touched down at edge of western city limits, traveled on the ground throughout all of City to eastern city limits plus several miles past into the City of Duquesne
- Tornado winds estimated at 200 mph + ; NWS indicates may have moved as slowly at 10 mph in some places
- Affected homes and businesses in both Jasper and Newton Counties in Missouri
- 162 lives lost due to tornado (current as of September 21, 2011)

Residential Structures:

- Estimated 7,500 residential dwellings damaged by storm
- More than 17,000 people affected by tornado
- 4,000 homes approximately in the Expedited Debris Removal area (extensive and catastrophic damage as defined by FEMA) – Initially uninhabitable; causing an estimated 9,200 people to be displaced (see housing information on page 2 for details)
- Approximately 3,500 more structures damaged in periphery of EDR area

Debris, August 25, 2011 stats:

- Tornado generated an estimated at 3 million cubic yards of residential debris throughout the disaster area
- FEMA introduced EDR initiative - allowed government-funded contractors to remove loose tornado debris from private property within a designated tornado-damaged area, and offered 90% federal match to a 10 % local and state match for costs incurred. Gov. Nixon announced state would pick up the 10% match.
- FEMA mission-assigned the U.S. Army Corps of Engineers to execute the debris management process.
- EDR area was cleared by FEMA deadline of August 7.

- As of Aug. 7, Corps contractors removed a total of 1,462,044 CY of debris.
- Many property owners used insurance proceeds to hire contractors for debris removal; and/or utilized the 75,000 + volunteers who have been active in the cleanup of the City.
- Estimated 1.5 million CY of debris removed in this manner. See below for exact volunteer numbers.

Demolition & Recovery:

- Prior to completion of debris removal, on July 28, City announced Building Permits available for entire storm-damaged area (rolled out two areas prior to entire area being opened for building: West of Picher Ave opened July 8; West of Main St opened July 22)
- City rolled out Demolition Plan with 3 options for property owners on, August 8:
 - Do It Yourself – if owner has insurance
 - Skilled volunteers affiliated with the Voluntary Organizations Active in Disaster (VOAD) carry out the demolition of residential structures and/or foundations on behalf of home or property owners.
 - Dangerous, tornado-damaged structures and/or foundations that are *not* removed another way will be processed through the dangerous structures provision of the Joplin City Code.

Permits Issued since the disaster through September 30, 2011:

Permits Through	<u>8/31/2011</u>	<u>Week of 9/15/2011</u>	<u>Week of 9/23/2011</u>	<u>Week of 9/30/2011</u>	<u>Totals</u>
Demolition	923	20	12	71	1037
Residential repairs	2,152	35	45	42	2293
Residential New / Rebuild	227	30	25	22	329
Commercial New / Rebuild	78	5	4	12	104
Apartment Rebuild/Repair			15	0	15
Total permits	3,380	90	90	147	3778

Last four (4) years combined had only 3,365 permit altogether.

Temporary Housing – September 30, 2011 stats:

- Under the Individuals and Households Program (IHP) more than \$19.7 million in disaster assistance has been approved for eligible applicants in Jasper and Newton counties for Housing Assistance and for Other Needs Assistance
 - Housing Assistance includes Rental Assistance and Home Repair or Replacement funds:
 - Housing Assistance Approved for 2,957 applicants
 - Housing Assistance Approved: \$7,358,146.
 - Other Needs Assistance provides assistance with needs other than housing (for example: medical, dental, lost eyeglasses, transportation, etc.)
 - Other Needs Assistance Approved for 2,616 households
 - Other Needs Assistance Approved: \$12,396,411
- 585 households identified as needing temporary housing
- Total of 566 families currently placed in Temporary Housing

- FEMA has leased 149 pads in area commercial parks to place Temporary Housing Units; 144 of those are occupied
- City providing land for three Group Site Locations for Housing – in north Joplin.
 - Hope Haven Village and Officer Jeff Taylor Memorial Acres support 346 housing units; Hope Haven 2, the third site accommodates 51 units.
 - 370 units are occupied in the three group sites.
- 597 units currently placed (including commercial parks and three group sites)
- The City of Joplin estimates 88% of families affected by tornado had provided a contact number that indicated they were living within 25 mile radius.

Volunteers, as of September 19, 2011:

- 84,792 registered volunteers have provided 422,506 hours of service.

Medical Services:

- By 5-23-2011 Joplin and Jasper County Health Dept. medical services staff worked with other local partners (health departments, clinics, hospitals, etc.) to develop a tetanus vaccine administration plan for residents and workers in the debris area to provide protection from the tetanus disease many times associated with debris injuries. The plan included stationary and roving vaccine distribution locations moving throughout tornado affected neighborhoods.
- On 5-24-2011 tetanus vaccinations began and in following weeks over 17,000 tetanus vaccinations were administered by many medical partners in community.
- 14 area health departments along with other local medical partners aided the local tetanus administration effort including over 125 staff.

Animal Control statistics:

- 1,308 pets displaced by tornado picked up and taken to emergency pet shelter by local animal control staff and partner agencies (other animal control agencies, Humane Society of Missouri, etc.)
- 529 pets returned to owners from emergency pet shelter operated by ASPCA and Joplin Humane Society
- ASPCA able to place remaining tornado displaced animals at end of emergency sheltering operation in new homes through their “Adopt-a-thon” and other placement activities.
- Pet “co-location” shelter with human American Red Cross shelter opened by Joplin Animal Control within few hours of tornado. Staffed by Joplin Animal Control for first days until relieved by Humane Society of Missouri staff upon arrival in community. Per co-location shelter operated for over a month until ARC human shelter moved to smaller location.
- Within hours of the tornado, Joplin Animal Control worked with Joplin Humane Society staff to open a temporary pet triage clinic at the Humane Society to provide emergency medical care for animals transported to the emergency pet shelter.
- Within 24 hours, the Humane Society of Missouri was on scene working with Joplin Animal Control to develop a plan for animal rescue operations. Within 2 days these operations began.

- ASPCA arrived the day after the storm to handle the emergency pet sheltering operation, working with the Joplin Humane Society.

Information from Joplin Area Chamber of Commerce:

- More than 500 businesses affected by tornado
- 4,500 – 5,000 employees in Joplin affected
- Tornado generated approximately 1.1 million CY of commercial debris

City Property Receiving Damage:

- | | |
|------------------------|--|
| • Emergency Management | Emergency Sirens |
| • Fire | Two Fire Stations - No. 2 & No. 4 |
| • Parks | Senior Citizens Center |
| • Parks | Cunningham Aquatic Center & Park |
| • Parks | Parr Hill Park |
| • Parks | Garvin Park |
| • Parks | Mohaska Park |
| • Parks | Ewert Park |
| • Police | South Police Branch (minor damage) |
| • Public Works | MAPS Trolley shelters (multiple) |
| • Public Works | Curb, streets and Sidewalk, lights, Signs and Signals |
| • Public Works | Building structure located at 20 th & Connecticut |
| • Information Systems | CISCO Aironet blown off |

Joplin EF 5 Tornado Graph and Map Information

EF Scale	Wind MPH	Fujita Scale	Wind MPH	Fujita Freq.
EF0	65-85	F0	40-72	38.9%
EF1	86-110	F1	73-112	35.6%
EF2	111-135	F2	113-157	19.4%
EF3	136-165	F3	158-206	4.9%
EF4	166-200	F4	207-260	1.1%
EF5	Over 200	F5	261-318	<0.1%

