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Emergency Preparedness: Are we ready for a 21<sup>st</sup> century Hugo?

During Hugo, I was Company Commander of A Company, 122<sup>nd</sup> Engineer Battalion and the Columbia Operations Manager for South Carolina Electric and Gas. During the electrical restoration efforts, I was responsible for electrical restoration in Columbia, S.C. In less than a week we restored Columbia and I moved to the coast where I was responsible for Folly Beach, Sullivan's Island, Isle of Palms, Awendaw and McClellanville. My Company headquarters was in the shadow of the Ben Sawyer Bridge. My military company was commanded by my executive officer but I had extensive contact with the National Guard concerning access, clearance and security. Today, I am responsible for the S.C. Emergency Management Division, the S.C. National Guard and the S.C. State Guard. Similarly, a majority of the senior staff and command elements of the S.C. National Guard were present as company level officers during Hurricane Hugo 25 years ago.

As we examine our ability to respond to another major Hurricane like Hugo, we must do a thorough assessment of how the environment, urban and business development and landscape have grown since 1989. Our main concern is always the protection of life and property. The population density on our coast has increased 40% since Hugo and represents 20% of our state population equaling almost a million people, almost double the six hundred thousand present during Hugo. Much of this growth is in the Grand Strand Area and Beaufort.

This population must be evacuated prior to a major storm. The road systems are largely unchanged except for some widening efforts. Our ability to communicate with the population has improved greatly due to the density and expansion of social media. Recent exercises and smaller events indicate that the road systems are sufficient as long as the evacuation order is given in a timely manner. This is a critical element.

The housing construction and zoning codes are more oriented to resisting the effects of a major hurricane. We would not expect as much property damage per capita as Hugo, but the density is certainly greater. Our electrical grid and communications grid are much more robust due to growth and redundancy efforts.

Hugo was a source of distress but our ability to overcome is a source of pride for South Carolina residents. We prided ourselves on being able to recover internally and with independent action. Security was not a serious issue. The expectations of creature comforts were not as great as those expressed by the US population in later disaster scenarios. We can expect a higher level of expectations of our government intervention to provide security and nonessential services. The level of unorganized self-service to include amateur radio seems to have decreased while the level of organized community service has increased. Hurricane Katrina illustrated the magnitude

and immediate feedback from residents on their situations through real-time media reports and social media. We did not face this during Hugo and in today's environment, we must be prepared.

In addition to the evolution of our population, construction and infrastructure, our outside threats have evolved. The United States is involved with non-state threats that are stationed externally and internally. These threats may use a major storm as a shaping event to cause harm to our population and infrastructure. Therefore, we must be prepared for physical and cyber attacks. Our electrical infrastructure and communications networks are especially vulnerable to cyber attacks.

The organization of local resources have improved for a major storm. All disaster relief begins locally and this is especially true in South Carolina. The cities and counties in South Carolina have organized themselves to respond to major disasters. They have incorporated a combination of dedicated relief workers, repurposed governmental workers, and an array of volunteer workers organized as Community Emergency Response Teams (CERT). Many of the volunteer responders have extensive training provided by the Federal Emergency Management Agency (FEMA). This is the same training that full time emergency workers receive. All of the major cities in South Carolina and the counties participate at some level at least yearly in a state exercise to test the communications between governmental entities.

The state's ability to respond with an interagency effort is greatly improved. Not only has each agency improved its internal organization and capabilities but also the coordination between agencies is exercised at least twice a year to include the involvement of the executive branch. South Carolina has strongly embraced the National Response Framework which has the chain of command flowing from the Governor allowing the system to be more responsive in support of the local governments. Experience has taught us that it is better to get out in front of a pending disaster than to try and play catch-up. Although this approach may incur some up-front costs (possibly significant) and political risks, the value of mobilizing and pre-positioning needed assets at critical times and locations has proven to be a successful strategy.

The ability of our state and local governments to amass, process and share information is a model for the nation. Using a common internet based Emergency Management Common Operating Picture (EMCOP), along with the South Carolina Common Operating Picture Enhanced (SCOPE) enables military and civilian organizations at all levels of response to see a common picture. These systems allow us to integrate information without regard to the source. Examples include traffic cameras, streaming video from a military platform and data base information on the readiness of a potential unit from another state. With this information we are able to target areas for emphasis and to project resourcing. At the same time, we must be careful of information overload, along with our vulnerability to a cyber threat.

The S.C. National Guard has emerged from 13 years of war as the most ready National Guard in the history of our state. While our Army force structure has been

reduced from 11,000 to 9,000, our abilities to deploy the force in a timely and effective manner are increased. We have an excellent combination of the ten essential capabilities determined by the National Guard Bureau needed for state emergencies. These capabilities are Command and Control, Logistics, Aviation, Security, Engineering, Transportation, Medical, CBRN (Chemical, Biological, Radiological, and Nuclear), Maintenance and Communications. Our internal aviation lift and utility capabilities are much more robust than in 1989. In 1989 we had three UH-1 Huey Helicopters. Today we have eleven UH-60 Black Hawk Medium Utility Helicopters, four UH-72 Lakota Light Utility Helicopters, and six CH-47 Chinook Heavy Utility Helicopters. We also have access to additional aviation assets located in neighboring states. Our security force structure is similar to 1989 along with our maintenance, logistics, and medical. Communications is greatly enhanced because of force structure changes and technology. Transportation is enhanced due to the addition of a Transportation Battalion. CBRN is greatly enhanced due the training of our Civil Support Team and the addition of a Chemical Company.

Command and Control has been degraded based on the loss of our Brigade Combat Team (BCT), but that loss has been mitigated by the addition of a Maneuver Enhancement Brigade (MEB). The MEB is a capable organization but does not have the full planning or reconnaissance capability of a modern BCT.

We have added an engineer battalion to the state since Hugo, but total engineering capability has increased only slightly due to today's battalions being significantly smaller than battalions in 1989. Our current battalions are very modern but the equipment is very specialized. In 1989, engineer battalions consisted of companies of Sappers who were multipurpose. Today the companies are specialized with route clearance, vertical construction, horizontal construction and bridging equipment. These engineers will be harder to repurpose to domestic relief than the engineers of 1989 based on the equipment. The flexibility and sense of commitment of our Soldiers remain the same.

With the reduction in manpower, the Military Department has fully incorporated the capabilities of the Air National Guard. The Air National Guard brings command and control, airfield management, transportation and engineering capabilities. Additionally, the S.C. Air National Guard has a program called Eagle Vision that was not available during Hurricane Hugo. Eagle Vision consists of five DoD-deployable, commercial satellite ground stations that are located in South Carolina, Alabama, California, Hawaii and Germany. They each provide users with near real-time commercial satellite imagery of locations within their 1,300 mile visibility circle. Eagle Vision Stations are used to collect and disseminate imagery to various government agencies such as FEMA and USGS during natural disasters. They also support mission planning, time-critical targeting and non-war related operations.

The State Guard has been professionalized and brings about 600 general-purpose troops for tasks like debris clearance and search and rescue. The organization also has sections that consist of professional engineers, lawyers, medical personnel and volunteer deputies. These specialized sections can be employed in the support of a

local agency while being protected under state law.

Overall our National Guard capabilities have improved especially in the areas of aviation, transportation and command and control. Our loss of a BCT puts us behind our neighboring states in organic command and control capabilities, but we have compensated using our MEB and ad hoc augmentation. Our ability to collect and analyze data greatly enhances our response effectiveness but it also creates vulnerability.

Our Emergency Management Assistance Compact (EMAC) agreements are greatly enhanced due to increased capabilities and stronger partnerships with our neighboring states. Additionally, the coordination of these resources through National Guard Bureau increases the reliability of commitments; however, the formalizing of these EMAC requests has slowed the “leaning forward” response by neighboring states. In 1989, states would send assets without assurance of payment for services. Today that response is a slower.

Use of federal capabilities is more formalized than during Hugo and provides the opportunity for better coordination. Significant improvements have been made in the last few years to build/enhance relationships with our local, state, and federal partners especially at the federal level with FEMA, NORTHCOM (Northern Command), and DHS (Department of Homeland Security). These partnerships have allowed the valuable experience gained from minor storms/events in South Carolina and major storms (Hurricane Andrew, Katrina, and Super Storm Sandy) on the national level to be shared and exercised in various training events to include Vigilant Guard.

The use of a dual status commander within a state ensures unity of command and effort. Recent disaster response in other states using federal forces has had mixed results. These forces have the potential to fill capability gaps or shortfalls within a state. The request process is burdensome, although it is being streamlined. Often because of political pressure or relevancy issues, federal forces are prepositioned or employed without a request from the affected state. These actions can inhibit restoration efforts and waste a tremendous amount of money.

Federal funding is a big issue. Federal forces are positioned without cost to the state, however, the federal government does not fund EMAC repositioning which is quicker and less expensive. This disparity creates false economies and wastes valuable resources. Legitimate requests for federal forces can be labor intensive. Reform efforts are ongoing but are dependent on leadership and the commitment to state sovereignty. While the dual status commander position is a great start, there needs to be a legal commitment to state sovereignty, funding for EMAC positioning and responsiveness of federal forces.

FEMA is very responsive to the needs of a state during a crisis. They take a very proactive and cooperative approach. The approval of federal funds is still a very laborious process and is time consuming. It is frustrating to a state that federal funds

being sent to a state are delayed by bureaucracy while federal assets are free to reposition with little or no cost consequences. These dynamics are outside of FEMA's control but should be addressed to increase a state's ability to cooperate and respond with other states within a region.

South Carolina is better prepared to respond to a storm like Hugo than we were in 1989. Our level of training, common situational awareness and ability to command and control are integrated at every level. Aviation is much more robust enhancing our search and rescue efforts. The ability to collect and merge real time data enables us to focus our response efforts. All state agencies are much more aware of their responsibilities and are more prepared. At the same time we have to be aware of the increased expectations of the public and the threat of our enemies taking advantage of a crisis. The integration of federal assets is still being developed and has not advanced as much as our state capabilities. Funding for federally declared disasters is still slow, inconsistent and unwieldy. Hugo was a defining moment for South Carolina Emergency Management. After this devastating storm, South Carolina leaders and our citizens proved their ability to deal with such a catastrophe and their resiliency. It is clear a similar storm could have a greater impact due to population growth, increased expectations and increased threats; however, we are confident South Carolina is much better prepared than we were in 1989 because of increased capabilities, preparation, planning and partnerships.