

Introduction

On September 14, 2018 Hurricane Florence made landfall in New Hanover County, NC. Approximately 1,510 New Hanover County staff members responded by implementing their emergency operations roles over a 21-day period, resulting in over 115,000 hours of time worked in direct response to Hurricane Florence.

New Hanover County staff members were tested beyond expectations and responded in incredible ways clearly demonstrating a full commitment to serving our community and embodying our core values of professionalism, innovation, integrity, stewardship, and accountability.

Consistent with our commitment to good governance, New Hanover County administration recognizes the importance of preparing and equipping our employees with the skills and resources needed to serve the public in times of disaster. In the spirit of ensuring New Hanover County employees and partners have the tools and resources necessary to respond during these events, an after action review was conducted to identify lessons learned and develop plans for future disaster responses.

The after action review included an internal assessment focused on five general topics: communications, operations, resources, staffing, and training. These topics were further broken into three time frames: before the storm, during the storm, and after the storm. Maintaining consistent topics and organizing feedback into time frames allowed the process to remain solution-focused and resulted in specific recommendations.

Given the sheer magnitude of the response from staff, each department head was asked to capture feedback from staff meetings or ask staff to participate in employee surveys. Additionally, a broad cross-section of county employees were placed into 16 different feedback sessions. Approximately 183 staff members participated in two to three-hour focus group meetings over a three-week period.

In addition to the internal assessment, an external assessment was conducted with strategic partners to ensure New Hanover County had a comprehensive analysis of key opportunities for improvement in responding to future disasters. Each external focus group concentrated on separate topics, which included sheltering, community feeding/volunteers/donations, fuel and generators, and the faith-based community. New Hanover County recognizes that these external partners are critical for a coordinated and effective response.

Communications

“A lot of employees didn’t know what their roles were or who to go to for questions. We spend our days working our regular jobs and the emergency roles are not familiar to us. For most of the time, I wondered who was in charge or who I was supposed to report to. We were ready and willing to serve, but there wasn’t a clear direction. We needed more communication to know what was expected of us and how we could help. That could come at the start of our shift with our leader sharing information face-to-face, or even in a text or email update from the county. I think when we know more, we can be even more effective.”

The topic of communications includes both internal communications with employees and external communications with the community and community partners. A clear understanding of expectations and the information needed before, during, and after a disaster is important to prepare employees and the community.

Internal Communications

Prior to the storm, employees received mixed messages from their immediate supervisors on reporting for emergency duty and “on call” employees were confused about whether they should evacuate or shelter in place. Employees that reported to the Emergency Operations Center (EOC) were unclear on what to bring, where they would sleep when off duty, and how to prepare. Some employees brought family members to the EOC, while others were unaware of this option.

Employees expressed confusion over the evacuation plan. Some employees had been told previously that the Emergency Operations Center was rated to withstand a Category 3 hurricane and were concerned about sheltering in place when the storm was projected to make landfall as a Category 4. Some employees thought that the voluntary evacuation would transition to a mandatory evacuation at some point, but were unclear on when that would be communicated or how that would affect their responsibilities.

A clear communications plan for employees prior to a disaster with roles, expectations, and employee sheltering plans will relieve the anxiety employees face while preparing to report for duty and allow them to focus on their tasks.

During the storm, employees expressed confusion over the reporting structure. Employees received direction and communications from their regular supervisors as well as from EOC and shelter managers and sometimes there were conflicting messages. Additionally, employees were unclear regarding what information could be shared with the general public versus information that was reserved for first responders that were working on behalf of the general public. This confusion occurred throughout the storm, which resulted in a few instances where information was shared publically regarding safe driving routes for residents looking to return when those routes were intended to be reserved for delivery of emergency supplies.

Employees requested more frequent briefings that are clear and concise, especially since the EOC and shelters were often loud and busy.

Operations

“We put base camp together on the fly. It was created for all of the rescue workers coming into town. Then it was transitioned into the location for DSS and emergency food stamps. It didn’t seem like there was ever a plan...just people working together and figuring it out as we went. I’m still not sure how it all came together, because it didn’t feel like we had everything we needed to make it work. I think we need more support from our Emergency Operations Center to get the resources we need. It was no easy task, and a plan outlining how to do it would have made my job less confusing.”

The overarching theme in regards to operations was that employees wanted a clearer understanding of their roles and responsibilities during an emergency event. Employees working in shelters were unclear about the goals and associated tasks associated with each working shift. Employees felt reactive instead of proactive during the storm. A planning section located within the EOC tasked with monitoring and

adapting an existing response plan is necessary for a large scale disaster such as Hurricane Florence. This planning section could aid in integrating Incident Management Teams into the operations of the EOC and ensuring that State resources are available and utilized.

Transportation was a significant challenge throughout Hurricane Florence. A plan should include transporting individuals to and from shelters, to and from medical appointments, and deliveries to and from shelters and Point of Distribution centers (POD). Additionally, this plan should incorporate staging county vehicles for maximum benefit.

Shelters have different operational requirements throughout the various stages of a storm. During Hurricane Florence several shelter locations failed due to structural damage from the storm. In addition, the capacity of the structures, an inventory of needed supplies, and emergency operating policies were needed. A detailed sheltering plan that mimics the Red Cross shelter plan will provide clarity and aid in transitioning a shelter over to the Red Cross staff after the storm passes. A universal case management system is also needed to allow for comprehensive services to our citizens during a time of great need, which will result in better service to our citizens.

Because there was significant damage during Hurricane Florence and several shelters had to be evacuated, a strategy to reinforce the structural integrity of critical buildings should be developed. This strategy should prioritize shelter sites and the EOC. Added measures should be developed for county facilities that protect tax payers' investments.

In addition to the safety resulting from structural integrity, a security and accountability plan will benefit operations during a natural disaster. There was not a security or badging system for the Emergency Operations Center and several employees felt uncomfortable sleeping in unsecure places. Further staff were unclear on the appropriate security measures at shelters with children and adults. A security and accountability plan should include an account of everyone in a County facility and a credentialing system for secure areas.

Resources

"Our shelter didn't have enough cots, medical supplies, blankets, or supplies for babies and kids. It made me feel helpless and made an already hard situation even worse. In the future, it would be good to have supplies at our shelters before we open to the public. That way there is no guessing about what we need, what we may get in the next day, or how we need to use what we have and make it last. We just need those resources there from the beginning."

During Hurricane Florence major transportation routes into the community were flooded, resulting in a delay of critical supplies. Ensuring that supplies to sustain our community for seven to ten days is vital for responding to future events.

Fuel and generators were top priorities for New Hanover County. Fuel is needed for our first responders to rescue citizens from life threatening situations. Fuel is also needed to operate generators and critical equipment such as the airport and water treatment facilities. Emergency generators are necessary to power the EOC, the Hospital, and Shelters. During Hurricane Florence, generators were used beyond their capacity. Ensuring adequate testing of generators by transferring the load is vital to the success of generator use. Further, ensuring appropriate buildings have a transfer switch and plans for utilizing a

generator is necessary. Finally, a common generator brand will be helpful for our property management staff to service generators during an event since each brand has unique maintenance procedures.

During Hurricane Florence a team of 911 staff were prepositioned in Raleigh for backup. This decision proved to be one of the great success stories of this storm. After the storm passed, the generator at the Emergency Operations Center failed. During this critical time, 911 calls were routed through Raleigh and supported lifesaving calls. Developing a plan with the appropriate memorandums of understanding will support future events.

The staff supporting shelter operations identified a number of key supplies for shelters; including blankets, cots, first aid kits and medical supplies, formula, diapers, and supplies for infants and children. Due to the length of the storm, shelter operations lasted longer than expected. Many shelter residents had medical conditions that needed attention beyond the expertise and capacity of shelter staff. Shortly after the storm, the hospital set up a special needs shelter to house individuals that had medical conditions. A plan to shelter our special needs citizens should be developed prior to another disaster.

The coordination of donations and volunteers before, during, and immediately after the storm proved to be challenging for New Hanover County. Due to the national media attention, supplies and donation offers were overwhelming for our nonemergency communications staff (EPIC). Better coordination with our community partners will help us to efficiently accept the donations and volunteers our community needs during a disaster. The county has already begun an effort with our partners to create a plan for the future.

Feeding employees, shelter residents, and the community became a significant challenge during the storm. A community feeding plan should be developed with the appropriate memorandums of understanding.

During and after the storm there was confusion regarding the assets within the county and it was difficult to quickly identify physical resources (backhoes, forklifts, trucks, etc.) In the future, using WebEOC and inventory software will maximize our emergency response efficiency.

Staffing

“Titles at the EOC sounded good, but the work didn’t align. I was a Time Unit Leader and often felt like I had nothing to do because WebEOC automatically tracks a person’s time when they log in. There has to be a better way to staff those positions. There were hours when I didn’t feel like I was contributing and I didn’t know what to do to help. I think we need to get rid of positions in the operations center that aren’t being utilized or give those people tasks that make sense and are useful. We can’t just do everything like it’s always been done, it has to make sense for our operations now.”

New Hanover County staff have a wide range of skillsets and talents. During an emergency it will be helpful to better leverage these skillsets and talents. Ensuring that we have the right staff members in the right role at the right time is critical to the overall success of our response. A detailed description of each job and the skillset needed will help to ensure staff is assigned to the most appropriate role.

Hurricane Florence was a very dynamic event. Empowering section chiefs and shelter managers with the autonomy to “staff up” or “staff down” will ensure employees do not get over utilized or underutilized.

Additionally, the day shifts and the night shifts had different work demands such as; placing orders, taking calls and delivering supplies, that results in the need for flexibility. The 911 staff was able to foresee the personnel shortage in Wilmington due to the staff that reported to Raleigh. Staff was able to quickly adjust schedules to prevent burnout and ensure staff had adequate rest between shifts. This flexibility was important and could have been beneficial at shelter sites.

Employees felt very reactive to the response to Hurricane Florence and noticed missing roles and gaps within the EOC. For example, during the storm staff were trying to figure out where to locate a base camp for the FEMA Urban Search and Rescue team and the additional first responders that were coming to our community. It would have been helpful to have a prearranged plan in place that could be modified as needed. An entire planning section dedicated to the EOC would have been helpful to ensure all the of elements necessary for a successful response were in place or were identified. A planning unit could have also been responsible for situation reports that would communicate objectives, key operations, and resources. This would have increased efficiencies in New Hanover County's response.

It was also determined that during an event such as Hurricane Florence, additional administration support for 911 staff was needed. The Emergency Management Director role was over-tasked during this event and, therefore, additional administrative support for 911 staff is needed to ensure sustainable operations.

Moving forward, a new EOC organizational chart that includes some of the missing roles, streamlines communications and reflects best practices will be an important component to implement before the next hurricane season.

Training

"I really wasn't prepared for what was being asked of me. The word "logistics" can mean so much, and I didn't feel like I had the training to be successful. We have an annual hurricane training for our emergency roles, but it's hard to learn much in just a few hours. We need training that is specific to our emergency positions, more than once a year for four hours. I think it's important that we practice how to respond in a real event and know what those expectations are."

Many employees felt unprepared for a storm of this magnitude. Ensuring our staff are trained and understand their roles and responsibilities is paramount for serving our community.

Before the storm, the County should focus on a "family first" training that educates employees and their families for how to prepare for emergency events. This includes a family evacuation or shelter plan that provides employees comfort during the storm and allows them to focus on their responsibility to the community during the storm.

In addition to a yearly drill to ensure that employees understand their roles and responsibilities, employees requested these trainings listed below:

- FEMA/ NIMS training
- First Aid/ CPR
- Mental Health/ Trauma support training
- HIPPA training
- Safety Training

- Web EOC/Table Top training
- Family, Pet and Home Preparation (Family First)
- Red Cross Shelter training

Action Plan

The action plan that follows outlines each of the recommendations in this report with a specific task, responsible party, and timeframe for completion.

Action Plan			
Strategy	Initiative	Responsible Party	Timeframe
Communications	Modify EOC Organization Chart, implement ID system	EM, HR, & Strategy	February 2019
	Clear emergency job descriptions & contact lists	EM, HR & Strategy	June 2019
	Standardized, clear and consistent briefings	EM, Planning Section & Communications	June 2019
	Staff Communications plan with annual review for pre-storm, during storm, and after storm expectations; including staff reporting requirements	Communications & HR	June 2019
	Public & Partner Communications Plan with annual review. Partners include non-profits and faith-based community, roles & responsibilities, and information sources	Communications & Recovery Office in conjunction with LTRG	June 2019
Operations	Implement and train a planning section for EOC	Risk Management, IT, and Sheriff	June 2019
	Develop a security and accountability plan for EOC and shelters	Risk Management, IT and Sheriff	June 2019
	Develop the onboarding and training to support the processes and ongoing integration of key partners and IMTS/EMACS into the EOC	EM	June 2019
	Comprehensive sheltering policy for citizens, pets, employees, special medical needs; including resources, staffing and level of service.	BoCC (with recommendations from DSS, Health, NHRMC, CJS, SRC, etc.)	June 2019
	Develop a process to integrate incident management team (EMAC or internal) into operations	EM	Dec 2019
	Comprehensive evacuation declaration guidelines	County Manager, Clerk, and Legal	March 2019
	Develop Community Disaster Transportation Plans (Intra & Inter County)	EM, Wave Transit, NHRMC, Schools, etc.	Dec 2019
	Develop a critical building reinforcement strategy	Property Management	Dec 2019
	Develop a consolidated safety center (EOC & logistics warehouse)	EM, County Management	June 2020
	Document plans for Complete Community distribution (CRRC, PODs)	New – Planning Section & Recovery Office	June 2020

HURRICANE FLORENCE AFTER ACTION REPORT

	based on Hurricane Florence Response and key learnings		
	Update site selection and document plans for response staging (Base Camp, Duke linemen/women, debris removal, fuel, critical resources)	New – Planning Section & Recovery Office	June 2020
	Integrate the JCC into the EOC operations	Sheriff, City Police	June 2020
Resources	Prepositioned critical resource contracts (fuel, food, generators, etc.)	Property Management and Finance	June 2019
	WebEOC access/ Sparta Access/ Mobile Web EOC	EM/IT	June 2019
	Develop community feeding plan	LTRG	June 2019
	Document plan to preposition 911 employees and assets outside of county	EM, New Planning Section	June 2019
	County asset inventory tracking system (identify asset by mission)	Finance, EM, IT, Strategy & Fire	June 2019
	Community asset inventory tracking system (identify asset by mission)	Finance/ EM/ IT/ Strategy	June 2020
	Develop and document plan for fuel consortium and community fuel farm	Property Management & new Planning Section	June 2020
	Universal case management system	IT/Recovery Office/DSS	
	Logistical relief and distribution plan and facility	Airport (with New – Planning Section)	
	Transportation project prioritization and support for resiliency (I-40, I-95, Cape Fear Crossing)	WMPO with County support	Dec 2022
	Develop a Business EOC to communicate and coordinate resources with local businesses	Chamber of Commerce with support from Recovery Office	Dec 2019
Staffing	New 911 Director	County Manager	January 2019
	Staff assignments for updated EOC organizational chart with clear expectations	HR & EM	June 2019
	Add new staff to support Web EOC	EM	June 2019
Training	FEMA/NIMS training	EM	June 2019
	Role based annual training, drills, and exercises	All departments	June 2019

HURRICANE FLORENCE AFTER ACTION REPORT

	Safety Training including protecting County assets	Risk Management	June 2019
	First Aid/ CPR	HR	Dec 2019
	Mental Health/ Trauma support training	HR	
	Web EOC/ Table Top Training (8 sessions including 4 shifts and 4 sections)	EM	June 2020
	Family First Training (family, pets, home preparations)	HR	June 2020
	Practice Drills	EM	June 2020
	Red Cross Shelter Training	DSS & Health	June 2019