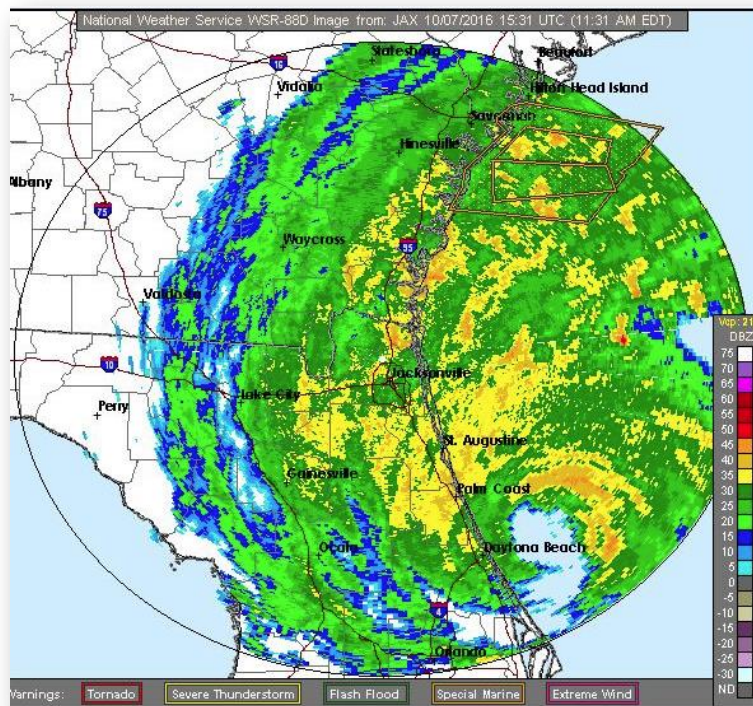




Hurricane Matthew After-Action Report

Report and Recommendations



Flagler County Board of County Commissioners

Final June 2017



Hurricane Matthew After-Action Report 2016

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Executive Summary

Matthew is believed to be the most powerful hurricane to impact Flagler County since 1893. Flagler County and its partnering agencies worked together in preparing for, responding to, and recovering from the Hurricane. The work and collaboration related to Hurricane Matthew occurred over an extended period of time and required prolonged cooperation of numerous City, County and State entities, law enforcement agencies, and other community public, private, and non-profits partners. Unusual and extraordinary incidents such as the occurrence with Hurricane Matthew have provided an opportunity to analyze the performance of emergency services in a manner that is difficult to simulate in even the most realistic training environment. The chance to conduct a review of this incident is an opportunity to reinforce effective responses and identify areas of improvement for the purpose of achieving optimal performance during future events.



A common element of every emergency requires responding agencies to learn from them in order to be more prepared for the next event. According to the National Incident Management System, as developed by the U.S. Department of Homeland Security and universally regarded as the comprehensive national approach to incident management:

Preparedness is essential for effective incident and emergency management and involves engaging in a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action to achieve and maintain readiness to respond to emergencies.

This After-Action Report will build upon the strengths of Flagler County and its partnerships with other responding agencies and identify areas for continuous improvement. This report reflects a holistic and comprehensive effort, which began while the County was still in the recovery mode (as recommended by the Federal Emergency Management Agency). Following Hurricane Matthew, Flagler County compiled and analyzed information and gathered feedback from multiple debriefing meetings with personnel involved in response and recovery efforts, conducted follow-up interviews with key staff, and met with an organized group of emergency volunteers to examine their findings. Staff also reviewed numerous planning documents, policies, agreements, training logs, and other records for consistency with the actions taken during this emergency event.

The analysis, findings, and recommendations presented in this After-Action Report are vital for continuously improving Flagler County's ability to respond and recover from future disasters. The recommended solutions focus on enhancing the County's emergency plans and overall strategies for emergency management, addresses tactical, operational, technological, and procedural components of the County's response and recovery efforts.

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Flagler County Government wishes to acknowledge and thank all the County stakeholders, partner agencies and their staff, local nonprofit service providers, the hundreds of citizens who volunteered and all other individuals and groups that have shared their thoughts and provided suggestions for this report.



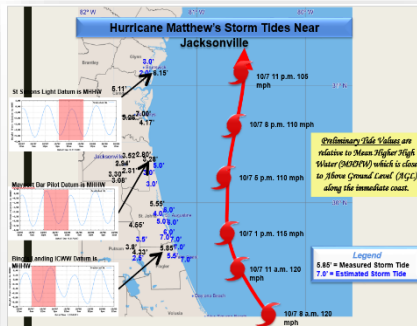
We wish to thank the citizens who took the possible impacts of Hurricane Matthew seriously and responded to the numerous “calls to action” issued by Flagler County. The County hopes that the recent memory of the hurricane inspires everyone in Flagler County to maintain a commitment to preparedness and dedication to response that will be critical to the success of the community in facing future disasters.



The Storm, Its Impacts, and Response

Introduction

During the early morning of October 7, 2016, squalls from Hurricane Matthew begin to effect all of Flagler County. Matthew's eyewall brushed Flagler County's coastline as a Category 3 storm. There were sustained winds of up to 73 mph in coastal areas; with wind gusts of over 86 mph. The sustained tropical storm force winds lasted for approximately six hours.



While the initial forecasts for Hurricane Matthew indicated the possibility of extremely heavy rainfall and significant storm surge, Flagler County received only about 5 inches of rain. High winds from the storm resulted in thousands of downed trees that blocked roads and emergency access, impaired electrical and road infrastructure systems, and flooded hundreds of homes throughout the County.

The hurricane produced unprecedented storm tides of up to 7 feet, that together with wind produced wave heights of 17 to 20 feet that ravaged the beaches and our entire coastline dunes system. The powerful waves from the tides flooded whole communities and inland freshwater ponds and canals, damaged and destroyed homes, and caused parts of A1A to collapse and crumble into the Atlantic Ocean. The west side of the County also experienced storm tide impacts from the St. Johns River that caused flooding and damage to unpaved roadways.



Overall, the storm caused widespread power outages affecting thousands of Florida Power & Light customers. Nearly 60,000 electric customers lost power immediately following Hurricane Matthew, many of whom experienced extended outages for up to six days following the storm.

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Inside the Emergency Operations Center

In anticipation of the weather related emergency associated with Hurricane Matthew, Flagler County continually monitored the severity of the threat in order to determine the appropriate course of action. The Governor issued a State of Emergency on October 3, 2016 – Order #16-230. Once the determination was made of the emergent threat to the County, the Chair signed a Declaration of a Local State of Emergency on October 4, 2016 at noon and the EOC was activated. The County initiated its plan and advised staff to take protective measures at home and prepare to report for emergency operations. Through the use of 72 conference calls, the County kept key stakeholders abreast of the storm and ensured other critical support organizations and agencies were prepared to activate and allocate staffing resources to the EOC and remain informed.



The Flagler County (EOC) serves as a central command and control facility for the effective coordination of disaster management functions at a strategic level during an emergency. The EOC is located on the Government Services Campus at 1769 E Moody Blvd. Building #3, Bunnell, Florida. In 2006, the EOC was opened as a hardened facility and allows for the full integration of staff and representatives from Flagler County and its partnering agencies during an emergency activation.



Based on the forecast track of the hurricane, along with the potential for strong winds and heavy rainfall, the EOC moved to a 24 hour activation starting at 6 a.m., October 6, 2016. The EOC was activated with full staffing for 144 consecutive hours.

Hurricane Matthew served as the first test that involved the EOC being fully integrated over multiple operational periods. This extended emergency activation required the prolonged cooperation of numerous entities and the systematic, timely execution of emergency plans, procedures, and protocols to meet the needs of the community before, during and after the storm.

This integration allowed for much greater coordination and efficient information flow during the emergency. Emphasis was placed on the core functions of the EOC which included, the collection, gathering and analyzing data; making decisions that protect life and property; maintaining continuity of government operations; and communicating critical operational information with all concerned agencies and individuals.





In all, there were 23 different agencies represented in the EOC during the hurricane. A typical shift involved 80 to 120 staff members occupying the EOC during the majority of the activation. Additionally, the County had 35 non-staff citizen volunteers providing support in the EOC kitchen and the call center. The Flagler County Emergency Operations Center facilitated a massive coordination of information, personnel, supplies, equipment, and other resources required during Hurricane Matthew in the execution of the established emergency plans and protocols.



Statewide Mutual Aid Agreement and Resource Requests

In accordance with a previously approved agreement, Flagler County requested state support through the Statewide Mutual Aid Agreement (SMAA), which enables local governments through mission request, to coordinate the sharing of resources for emergency aid and assistance before, during, or after a major or catastrophic

disaster. Pursuant to this agreement, mission requests were submitted by the County to the State. To facilitate these missions, the state developed and utilizes Emergency Management Constellation, a web-based information management platform. The EM Constellation platform is the state's official mission tasking and tracking system as well as a conduit for sharing information with state and local responders during activations. This platform allows county, state, federal and mutual aid entities to use the same operating environment when responding to and recovering from an emergency. There were 81 formal communications between the State and the County's EOC during Hurricane Matthew.

The County was blessed and will be forever thankful for the mutual aid IMT Team provided by the Florida State Emergency Response Team (SERT). This experienced team provided a helping hand throughout the functions of the EOC bolstering local efforts and supporting Flagler County before, during, and after the disaster.



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The IMT Team included of the Team Leader Brad Baker, Director, Santa Rosa County Emergency Management and team members - Jonathan Kanzigg, Northwest Region Director Florida Fire Chiefs; Tom Lloyd, Operations Chief, Santa Rosa County Emergency Management; JoAnne Maltese, Deputy Planning Chief, City of Tallahassee, Police Dept; Scott Nelson, Director, Wakulla County Emergency Management; David Odom, Operation Chiefs, City of Tallahassee, Police Department; Robby Power, Logistic Chief, City of Tallahassee, Fire Department; Joby Smith, Division Chief, Bay County Emergency Management.

Communications and Public Information

During Hurricane Matthew, the Public Information team worked around the clock in the EOC to disseminate critical information to the public about the status of the emergency, measures taken by response personnel to manage the emergency, and the progress of response and recovery efforts. Emergency-related public information efforts are guided by the Flagler County Comprehensive Emergency Management Plan (CEMP) – Public Information, which provides guidelines for disseminating and managing information for the public before, during and after emergencies.



A joint Public Information effort between Flagler County, the Sheriff's Office and the School Board was established for Hurricane Matthew. Flagler County issued 78 media advisories and press releases prior to, during, and after the Hurricane. Additionally, the Public Information team facilitated three press conferences with local elected and appointed officials. The press deliver consistent and unified information about the mandatory evacuation

and the progress of response efforts to the public and media partners. In addition to the above mentioned, communication and public information was disseminated using a call center, social media, the website, and radio. Using one or more of the mediums mentioned above, citizens were still able to obtain information during the period when most of the county had no power. The role of each area is outlined below.

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Call Center

Flagler County instituted a citizen's information Call Center, which consisted of a 22-station phone bank established in a dedicated space at the EOC. The Call Center received a large volume of citizen inquiries before, during and after Hurricane Matthew. A combination of County, City, Constitutional employees as well as volunteers staffed the citizen's information Center. During Hurricane Matthew, the Center operated for 111 hours and responded to 1,800 calls throughout the incident.



Social Media

During Hurricane Matthew, the County utilized social media to keep citizens informed and safe. The County's outreach remained consistent throughout the EOC activation. In total, Flagler County Facebook posts reached 73,919 people. In addition, the County's Twitter account reached 19,434 people. The outreach provided through social media granted County staff the opportunity to promptly respond to citizen's concerns, questions, and feedback.

It should be noted that Hurricane Matthew was the first hurricane to hit Florida since the advent and widespread use of social media. In the time since Hurricane Wilma hit Florida in 2005, social media has become a key part of our modern lifestyle, providing immediate access to a wide variety of information sources and connectivity to other people within one's network. As such, social media provides new opportunities to reach citizens during emergency events to quickly provide critical information to a vast audience.

Communication via Mobile Devices

After Hurricane Matthew, citizens were able to utilize mobile devices to access emergency information via the County's Emergency Management Websites and other sources. Despite power outages, several options were made available for citizens to keep their mobile devices charged – using car chargers, auxiliary batteries, charging their phones at work or other locations with power. In addition, the County worked with partnering agencies that provided phone charging stations around the County and at the Disaster Recovery Center. In addition, response teams in the field provided access to hand held portable chargers to assist the residents.

Mass Notification System

On multiple occasions, both AlertFlorida and CodeRED systems were used extensively during Hurricane Matthew to provide alerts and notification to the citizens. In mid-2016, the Florida Division of Emergency Management (FDEM) entered into a contract with the mass notification company Everbridge Inc. to develop and implement a new mass notification system called AlertFlorida. This system provided the ability to issue statewide emergency alerts and notifications to Florida residents, businesses and visitors, including mobile devices in the County itself. Flagler County citizens were able to self-register for notifications

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using the CodeRED system.

Radio Communications

During Hurricane Matthew, Flagler Broadcasting staffed the on-site EOC radio studio. This enabled the broadcasting staff to conduct interviews and release timely information to the public. Flagler County maintains a telecommunications link with Flagler Broadcasting which includes the following stations. WNZF-106.3.9 FM / 1550 AM, WBHQ 92.7 FM, WPLC 98.7 FM, and W265CF 100.9 FM which allows FCEM to broadcast live over those frequencies from the EOC.

Beyond traditional radio communications, from October 6th through 8th, volunteers provided on-going communication using amateur radio operators at the various shelter locations for back up communications. The operator provided real time information via amateur radio on storm reports and storm surge levels. The reporting provided was critical in determining when conditions were unsafe.

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Flagler Disaster Recovery Center

On October 12th, following the Hurricane, Flagler County opened a Disaster Recovery Center at the Flagler County Library, located at 2500 Palm Coast Parkway NW. The Center provided residents with information and resources to address some of their immediate needs. Upon their arrival, the Flagler County Disaster Center transitioned to the FEMA Disaster Recovery Center.

Multiple agencies were onsite at the Center. The agencies represented included, United Way, Stewart-Marchman-Act Behavioral Healthcare, American Red Cross, Salvation Army, Flagler County Health Department, Flagler County Human Services, Flagler County Senior Services, Flagler Volunteer Services, Flagler County Homebuilder's Association, and the Department of Children and Families.



The Flagler County Innovation Department worked with local cell service provider, Verizon Wireless to provide two charging stations for citizens to charge their devices free of charge. For citizens who were without transportation, the Flagler County

Transportation Department provided free bus service to and from the Center. The Center remained open until October 15th. Once closed, volunteers at the Library provided contact information for various services.

Volunteer Assistance

During emergency events, Flagler Volunteer Services (FVS) took the lead role in obtaining and organizing both volunteers and donations. This includes the overall management, coordination and prioritization of volunteer support and distribution of donated resources to meet the needs of impacted areas following a disaster.



In response to Hurricane Matthew, Flagler Volunteer Services reported that more than 1,000 volunteer resources were mobilized to meet the needs of the community. Assistance provided included call center, food and water distribution, comfort stations operation, and assistance to residents with clearing fallen trees and debris from private properties.



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Emergency Shelters

During Hurricane Matthew, on October 5, 2016, Flagler Schools opened emergency shelters at Rymfire Elementary, Bunnell Elementary, and the large cafeteria area between Wadsworth Elementary and Buddy Taylor Middle Schools. Overall, 1,814 citizens were served by emergency shelters. The General Population Shelters were staffed by the Flagler Schools staff members, the Special Needs Shelter was staffed by both the Florida Department of Health - Flagler County and Flagler Schools.

In addition to the general population shelters, sheltering for those with special medical needs was also provided. Prior to Hurricane Matthew's arrival, Flagler County and Florida Department of Health in Flagler County (FDOH) contacted individuals on the special needs registry to identify those who needed shelter accommodations. The (FDOH) was the lead agency for the medical operation of the Shelter, while Flagler Schools and the County handled the logistics and support operations.



The Special Needs Shelter was opened on October 5th at Rymfire Elementary. FDOH organized 12 staff members to operate the special needs shelter. Transportation services to the shelter were provided primarily by way of County Transportation. In those instances, when an individual could not be safely moved using standard transportation, Flagler County Fire Rescue transported the patient via ambulance. In addition to the special needs shelterees included in the registry, a number of elderly and medically needy patients who were not listed on any special needs lists or registries sought special needs shelter services.



Provisions were made for Bunnell Elementary School to also serve as a Pet Friendly Shelter. The Flagler Humane Society staffed and deployed resources to the shelter. The Humane Society coordinated with the Pet's Mart to obtain pet food and supplies. The Department of Agriculture - Disaster Animal Response Team provided the Humane Society kennels and additional support staffing. Flagler County also deployed resources for the pet-accessible shelter.

Deactivation occurred on October 8th for the shelters at shelters at Rymfire Elementary and the large cafeteria area between Wadsworth Elementary and Buddy Taylor Middle Schools. Due to classes resuming on October 12th, the Bunnell Elementary shelter location transitioned to the Church on the Rock on October 9th and was fully deactivated on October 13th.

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Emergency Medical Service

On October 5th, the Flagler County Emergency Medical Service (EMS) initiated its Emergency Operations Plan for tropical system impacts and issued a situational report advising staff to take protective measures at home by activating their personal emergency plan and to be prepared for possible full staff recall and the likelihood of extra shift assignments. EMS administrative staff was assigned to the EOC to provide assistance to the FDOH in contacting individuals on the special needs registry, coordinate the movement of special needs patients, and



help setup medical equipment at the special needs shelter. EMS also identified strategic ambulance staging locations and areas of last refuge throughout the County for deployment. Alternate response plans were finalized based on the locations which included County, schools, fire stations and hospital facilities.

EMS handled over 900 requests for services from October 5th through October 11th. Requests for service during the peak period was 60% higher than typical call volumes. During the evenings of October

6th through the morning October 7th, a third crew member was assigned to most ambulances to be ready if crews needed to move patients.

In a larger-scale event, EMS has the ability to request through the Florida Division of Emergency Management, the deployment of one or more Ambulance Strike Teams. An Ambulance Strike Team consists of five equipped and staffed ambulances and a team leader. Ambulance Strike Teams are deployed through the state's emergency management system, in coordination with the FDOH, and are sent from non-impacted jurisdictions. An Ambulance Strike Team was not requested as all service needs were handled in-house.



Flagler County EMS maintained constant communication with Florida Hospital Flagler throughout the incident. Only the Hospital's Emergency Department remained operational and capable of accepting patients throughout the event. In the EOC, EMS provided support to the FDOH with the coordination of needs at nursing homes, assisted living facilities and citizens with special medical needs around the County.

Following the storm, EMS assisted citizens in evacuating buildings, refreshed oxygen cylinders, coordinated services with their medical supply provider, and assisted citizens who were without power until they were able to make arrangements with their durable medical supply provider. EMS also assisted with the assessment of medical facilities and nursing homes regarding their ability to sustain services on generator power.

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Law Enforcement

Local and State law enforcement agencies played a crucial role in efforts to prepare, respond to, and recover from Hurricane Matthew. Flagler County Sheriff's Office (FCSO), Bunnell Police and Flagler Beach Police Departments representatives worked together in the EOC to address law enforcement and public safety needs during the incident. In addition the Florida Division of Law Enforcement (FDLE), Florida Highway Patrol (FHP), Florida Wildlife Commission (FWC) and Florida - Army National Guard. The various law enforcement agencies worked continuous 12-hour shifts until staffing was de-mobilized.



The specific role of law enforcement before, during, and after the Hurricane was to provide for public safety and keep law and order. With the damage to homes, businesses, roads and limited access, especially east of I-95, these agencies provided

support dealing with possible looting, traffic control, and coordination with governments and non-governmental agencies.



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Summary of Issues and Recommended Solutions

As previously stated in the document and publically several times it is believed that the overall response to Hurricane Matthew went well. The level of cross agency cooperation was tremendous, the dedication of many public employees and volunteers was unmatched, and the caring for residents and the gratitude from residents seemed to bring us together as a community in new ways.

However, having said that everything generally went well in a disaster does not mean everything was perfect or went as planned. We would be remiss if we did not candidly seek ways to improve our response in the future and be better prepared for our residents. Had the storm not shifted as it did, the pressure of any missteps could have compounded other issues and/or hurt our response efforts.

To develop these comments we sought out constructive criticism from many different agencies, departments and individuals inside and outside the County. As one might imagine the issues came in a variety of forms, which were in turn paraphrased and if repetitive combined together in more manageable groupings. With the solutions shown a similar process was followed. In no way should the solution(s) presented be deemed as the only solution(s) to address these issues. Additionally, it is not anticipated that every solution listed will be financially or functionally practicable, nor that it can be achieved in a short timeframe.

1. Issue: The Hidden Trails public water fill station lost power causing the public water supply to fail.

Solution: Secure a portable or permanent generator for the public water fill station.

2. Issue: Primary debris sites were not fully permitted and contracts were not in place for secondary debris processing.

Solution: Re-evaluate the County's debris plan to ensure it is fully developed and can be utilized for all types of debris.

3. Issue: Some private utilities did not have back-up generators and/or disaster contingency plans causing a utility facility failure.

Solutions:

- Ensure there is a comprehensive list of private utilities including plant details, generator needs and operator contacts.
- Ensure each private utility has contingency plan for power outages and similar utility failures.
- Establish a list of potential experts associated with the largest utility provider, i.e., Palm Coast, to consult and manage this effort.

4. Issue: Some nursing homes and ACLF did not evacuate when ordered.

Solutions:

- Order evacuations for special facilities earlier and enlist state help for non-compliance.
- Consider implementing regulations within the Land Development Code

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discouraging new facilities in Zones A and C.

5. Issue: Some nursing home and ACLF evacuation plans were inadequate and/or unrealistic.

- Solutions:
- a) Conduct a detailed review of plans provided to the County and if necessary enlisting ACHA's assistance.
 - b) Prior to each hurricane season review facility contacts and plans.
 - c) Prior to each hurricane season, request that facilities in Zones A and C compile a list of patients and medical considerations for evacuation.
 - d) Consider conducting annual meeting of facility providers to review hurricane/disaster preparedness.

6. Issue: Getting information to citizens without electricity is difficult, especially when their electronic devices are not charged.

- Solutions:
- a) Create pre-planned comfort/information stations throughout the County with backup power (potentially at community centers and libraries) that provides residents the opportunity to charge devices, check emails, contact relative and receive information.
 - b) Implement a Disaster Recovery Center earlier and seek to improve on the assistance to residents based on the lesson learned.

7. Issue: When traffic signals became inoperable due to power failures, needed generators were not always readily available, nor was generator requirements which would have expedited placement.

- Solutions:
- a) Develop a comprehensive list of generators specifications needed for every traffic signal in the county.
 - b) Consider securing several of the most commonly needed generators used for traffic signals to have on hand or ensure they are readily available.

8. Issue: Private subdivision debris agreements were not approved in advance of the storm causing a delay in the process and adding work to limited resources.

- Solutions:
- a) Re-evaluate and update private debris ordinance in relation to FEMA policy changes and lessons learned from Hurricane Matthew.
 - b) Obtain private subdivision agreements during blue skies.
 - c) Map the areas and color code the specific road status due to the different levels of privatization of roads.



9. Issue: Debris assistance request for private subdivisions were not specifically called out in the County's request for debris assistance to FEMA.

- Solutions:
- a) Specifically communicate to FEMA the County is seeking approval for debris removal from private roads immediately after a storm.
 - b) Specifically call out and document the hazards of debris on private streets versus just identifying all threats to public health and safety regardless of street ownership.
 - c) Demand that FEMA debris monitors evaluate private debris to avoid issues later in the process.

10. Issue: Meal preparation/operations at times was challenging.

- Solutions:
- a) Appoint a food service coordinator in blue skies.
 - b) Assign a full service meal team to plan and ensure the distribution of meals internally and externally.
 - c) Develop contracts with outside vendors for pre-storm meal periods.
 - b) Develop pre-set menus and pre-set order quantities for an EOC lock down period (24hr/3 meals) and any other planned meals to be served from EOC.
 - e) Develop outside contracts for post-storm feeding periods, preferably with vendors with generators, outside of Zones A and C, and located in structures built after 2000.
 - f) Have a supply of meals-ready-to-eat MREs and bottled water for issuance as a contingency.

11. Issue: EOC/other positions were manned by some individuals not previously assigned to the positions and, therefore, not fully prepared/trained.

- Solutions:
- a) Develop a comprehensive manning roster during blue skies.
 - b) Based on the manning roster developed, implement appropriate training based for individual/teams/groups/units and multi-disciplines.
 - c) Integrate the review of the manning roster into an annual hurricane season preparation calendar.
 - d) Because of size during a disaster seek an IMT team to assist in the EOC and give depth in the positions.

12. Issue: Although shelter operations overall went very well, some shelters experienced facility limitations such as lack of generators, wiring failures, and other physical limitations.

- Solutions:
- a) Develop a more comprehensive sheltering plan, building on the positives and successes from the recent hurricane.
 - b) Re-evaluate all shelter physical capabilities and seek grant funding to address deficiencies.

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13. Issue: Although shelter operations overall went very well, shelters experienced some supply issues that could have made sheltering better. For example, supply issues included items such as cots, oxygen supply, domestic animal crates, etc.

Solutions:

- a) Work with shelter operators to develop a list of issues encountered related to specific supply during Hurricane Matthew.
- b) Establish a list of vendors to be able to secure needed supplies.
- b) As part of an overall sheltering plan, develop a shelter “to go kit” with pre-set meal plan and planned supply list based on each shelters capacity.

14. Issue: Additional auxiliary shelter staffing and shelter staff training was needed.

Solutions:

- a) Develop detailed manning roster for shelters and conduct annual shelter training through the Red Cross and others for shelter staffing.
- b) Conduct a shelter simulation exercise annually for one of these primary shelters.
- c) Work to expand staffing shifts and ensure outside support is established for shelter.

15. Issue: Positions in the EOC were not manned at times, reducing the coordination and effectiveness of the EOC.

Solutions:

- a) Ensure staff is clearly identified as A and B shifts to avoid fatigue and unmanned ESF stations.
- b) Consider additional staffing depth in key positions.
- c) Mandate staffing of assigned positions for shift periods.
- e) Establish a clear delineation for shift changing and transition of duties to next shift.
- d) Strongly encourage the shift coming of duty to rest.

16. Issue: Processes and procedures within the EOC were often manual, lacking in battle rhythm and the traditional planning process was never fully implemented.

Solutions:

- a) Ensure trained Planning Section personnel are in place and functional.
- b) Conduct more training and exercises to establish a battle rhythm and practice implementing the planning process.
- c) Research securing an integrated software system for the EOC.
- d) Develop better ESF station information booklets with EOC extensions, ESF-specific information, roster and contact information for their section, responsibilities, forms and procedures.

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17. Issue: Emergency workers and their immediate family members experienced challenges with sleeping arrangements and sheltering.

- Solutions:
- a) Develop a sleeping and sheltering plan for the EOC.
 - b) Recruit staff and family members to assist in managing family shelter areas.
 - c) Consider developing a daycare for working team members with no alternatives
 - d) Consider developing a sheltering plan for other disaster related groups.

18. Issue: Although the call center was helpful to many citizens, additional changes/improvements can make it more valuable to the community.

- Solutions:
- a) Develop a comprehensive manning roster and training for the call center positions.
 - b) Improve information flow directly to the call center and connect detailed resources for members via computers and other informational resources to better equip call takers with the dissemination of information.
 - c) Consider developing a specialty call center section to address complex issues.
 - d) Create additional shifts to reduce intense online time fatigue.
 - e) Streamline and organize information flowing from the call center into action areas of the EOC.

19. Issue: Improve on pre-storm preparedness activities and pre-disaster documentation by utilizing checklists and creating specific assignments for implementation pre-disaster checklists.

- Solutions:
- a) Create or add to existing preparedness checklists
 - b) Create and/or add to existing documentation checklists
 - c) Assign these responsibilities to Departments within the County.
 - d) Review the lists periodically to ensure every facility is included.

20. Issue: Maps and other geographic information were in high demand during the hurricane; additional maps and similar capabilities would have proven helpful in making decisions/planning.

- Solutions:
- a) Have multiple standard Flagler County maps available within the EOC.
 - b) Request staff to forward to EOC, for storage, the old Universal wall maps as they are replaced.
 - b) Prior to the storm, have the GIS department produce the following maps:
 - 1) All ACLF/nursing and special needs individuals with hazard zones overlaid on the map.
 - 2) Create a color coded hardened and/or generator facilities map to include all public and private (non-residential) facilities.
 - 3) Create a critical facilities map.
 - 4) Electric transmission and feeder map.
 - 5) Create a public/private road map acknowledging those with agreements in place

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- c) Post-storm, produce the following maps:
 - 1) An electric outage map link that can be displayed in the EOC and if possible in a more helpful format.
 - 2) Restricted curfew areas.
 - 3) Damaged facilities plotted.
 - 4) Comfort / information center / and public food and water stations / open gas stations / retail / restaurant / lodging.

21. Issue: Information was lacking on available countywide resources and their potential availability for use elsewhere in the community.

- Solutions:
- a) Work with all the Cities and School Board to develop a master list of vehicles and equipment that may be available for use during hurricane/disaster response.
 - b) The list may expand in the future by adding neighboring entities, such as the Water Management District and other City and County partners.
 - c) Update master list of vehicles and equipment list annually.
 - d) Develop a local resource availability process to indicate the current status of all governmental and know private resources during a disaster.

22. Issue: Gaps in financial and payroll procedures and documentation were discovered during the disaster that could be improved upon.

- Solutions:
- a) Work with the Clerk of Court to involvement staff in the training and manning of the Finance Section during activation.
 - b) Establish payroll procedures to be utilized during a disaster to include emergency pay, time sheets etc.
 - c) Detailed training for completing the 214s should be conducted every year as well as documenting time for payroll entry during activation.
 - d) Enhance controls for fuel keys by developing procedures to be implemented during activation.
 - d) Evaluate replacing fuel system software/hardware to eliminate concerns and streamline process.
 - e) Consider establishing a time clock or controlled check in/check out system for the EOC.

23. Issue: In addition to debris, monitoring and other contracts that were in place pre-storm, additional contracts were needed that had to be bid out quickly, which took time and resources during the disaster response, slightly slowed the process, and potentially lessened the optimal price.

- Solutions:
- a) Evaluate developing a more extensive list of contracts meeting federal standards during blue skies period for the following needs/areas:
 - 1. Meal contractors for feeding responders
 - 2. Security contract for shelter
 - 3. Planning Services
 - 4. Cleaning Services
 - 5. Emergency Roofing Repairs



6. Contractor for Hauling materials
7. Food Supplies for cooking
8. Equipment
 - a. Generators - rental and purchase
 - b. Pumps – rentals and purchase
9. Regular rental Moving Trucks to move shelter supplies, etc.
10. Coastal Engineer
11. Beach sand supplies
12. Other Road Material Supplies

- b) Each year review the contract list as part of an annual Hurricane Preparation Calendar ensuring they are up to date and ready to be utilized.
- c) Ensure the responsible parties that will oversee the implementation of the contract is involved in the procurement process, if possible.
- d) Contact all vendors/contracts each year to touch base during blue skies.

24. Issue: Consider physical changes to the EOC Center to allow it to function better. Various suggestions include but are not limited to the following:

- Solutions:
- a) Look into organizing the EOC Operations room more by Sectional work groups.
 - b) Expand the space available for larger staffed functions.
 - c) Identify meeting rooms with scheduled times for the Planning Cycle and unscheduled use for solving breakout issues
 - d) Consider relocating the PIO team, giving them more room and in turn co-locating to the social media team with them.
 - e) Move out functions and equipment/furnishing in the EOC Operations Center which are not necessary to be physically located in the EOC or main EOC areas.
 - f) Ensure there are assigned location for everyone expected to be in the EOC to include some of the outside agency partners.
 - g) Look into additional technology and equipment such as Smart Boards, Radio Station tie-in equipment, Large Section Monitors, static county maps, and similar tools.

25. Issue: Consider procedural or operational changes to the EOC to allow it to function better. Various suggestions include but are not limited to the following:

- Solutions:
- a) Develop a battle rhythm schedule that functionally will allow proper implementation of the planning process.
 - b) Conduct more EOC mini-briefings throughout the day and have an ongoing update screen with scrolling real-time situational updates.
 - c) Look at developing the SitRep as a constantly, updated online report with multiple inputs and capable of being widely shared.

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- d) Potentially Utilize GIS (GEO) forms for debris, call center reported issues, and other informational items that will allow electronic deployment and GIS plotting.
- e) Develop better process flow for resource requesting, information sharing, submitting ICS paperwork, and chain of command for flows.
- f) For larger scale events designate an EOC manager to oversee/coordinate the logistic operations of the EOC.

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Conclusion

Hurricane Matthew tested the County's ability to respond to a large coastal storm—from providing shelter to residents of coastal areas to removing tons of damaged trees to providing food and supplies to affected residents. Damage caused by the storm left thousands without electricity for days, flooded whole neighborhoods, destroyed beach dunes and access, and severely damaged/closed down State Road A1A. Although these challenges presented a significant test of Flagler County's plans, training, partnerships, resource and response capabilities, overall the County was able to coordinate large-scale response and recovery activities involving a variety of partnering response agencies to quickly and effectively to meet most citizens' needs following the disaster.

While the impacts of Hurricane Matthew were severe, Flagler County recognizes that it must continue to enhance its plans and capabilities and communication processes to prepare for even larger, more severe disasters. The strengths and recommendations for continuous improvement contained in this After-Action Report will help to further enhance Flagler County's preparedness for future emergency events.

In reviewing all aspects of Flagler County plans, preparations, response, and recovery efforts from Hurricane Matthew, staff has identified the 25 issues and recommended solutions presented in this report. In recognition of the importance of these issues, Flagler County has already begun to address a number of the recommended solutions for improvement. For example, Flagler County and many of our cities have adopted a list of mitigation projects and budgetary items seeking funding to enhance the disaster resilience of critical facilities throughout the County. Additionally, County staff has begun the outreach efforts to other entities and within the County to increase disaster staffing and in turn training levels. Lastly, work and updates on a variety of non-monetary items are also underway. Together with the County's latest Comprehensive Emergency Management Plan, these actions demonstrate Flagler County's commitment to learning lessons from every emergency event, developing solutions to identified issues, and following through with implementation to better serve the community in future disasters.