

Tropical Storm Debby & Hurricane Isaac

June 24, 2012 – July 13, 2012

August 23, 2012 – August 29, 2012

After Action Report/Improvement Plan

10/31/2012



Florida Division of Emergency Management

TABLE OF CONTENTS

TABLE OF CONTENTS	1
ADMINISTRATIVE HANDLING INSTRUCTIONS.....	2
SECTION 1: EVENTS TIMELINE	5
SECTION 2: BEST PRACTICES.....	6
SECTION 3: IMPROVEMENT PLAN	10
APPENDIX A: ACRONYMS	15

ADMINISTRATIVE HANDLING INSTRUCTIONS

1. The title of this document is Tropical Storm Debby & Hurricane Isaac After Action Report.
2. This AAR was developed using the Department of Homeland Security – Homeland Security Exercise and Evaluation Program (HSEEP) processes.
3. The information gathered in this AAR is classified as For Official Use Only (FOUO) and should be handled as sensitive information not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from The Florida Division of Emergency Management (DEM) is prohibited.
4. At a minimum, the attached materials will be disseminated only on a need-to-know basis and when unattended, will be stored in a locked container or area offering sufficient protection against theft, compromise, inadvertent access, and unauthorized disclosure.
5. Points of Contact:

Brian Richardson, Planning Manager
Florida Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399
Brian.Richardson@em.myflorida.com

Rachel Sparling, Planner
Florida Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399
Rachel.Sparling@em.myflorida.com

Erika Smith, Government Operations Consultant
Florida Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399
Erika.Smith@em.myflorida.com

EXECUTIVE SUMMARY

Tropical Storm Debby

Tropical Storm Debby was the fourth tropical cyclone and fourth named storm of the 2012 Atlantic hurricane season. It caused extensive flooding, several tornadoes, and high winds across much of Florida. Debby developed from a low pressure area in the Gulf of Mexico on June 23. As the low already had gale-force winds, it skipped tropical depression status and was immediately classified as Tropical Storm Debby. Becoming a tropical storm on June 23, Debby was the earliest fourth named storm on record, surpassing Hurricane Dennis in 2005. Marginally favorable conditions allowed Debby to strengthen slightly and reached sustained winds of 60 mph in the east-central Gulf of Mexico. In contrast with predictions, Debby curved northeastward and approached Florida. While offshore the Florida Panhandle, wind shear and dry air caused it to weaken to a minimal tropical storm. On June 26 at 5:00 PM Debby made landfall in Steinhatchee, Florida.

The first official forecast from the National Hurricane Center on Saturday afternoon showed a landfall point near Corpus Christi, Texas. Due to a northeast movement by the storm, the forecast then shifted to southeast Louisiana Sunday morning, and then to the eastern Florida panhandle at 5:00 PM Sunday. A forecast landfall in the northern Florida Peninsula did not occur until the 11:00 AM Monday advisory, where the official forecast showed a landfall near Steinhatchee on Thursday morning. Rather, the storm did not slow down as much as anticipated and made landfall at 5:00 PM on Tuesday (about 36 hours ahead of the Monday morning forecast). It wasn't until six hours before landfall that the National Hurricane Center forecast track began to show a Tuesday evening landfall.

The lack of a pre-disaster declaration in place, large swings in forecast track and uncertainty in each advisory's track, speed and intensity inhibited some aspects of response and preparedness efforts. Such significant forecast uncertainties can lead to hesitancy in ordering protective actions due to cost as well as eligibility for reimbursement.

Franklin County did not order evacuations until after the storm's forecast track was aimed at the Florida Panhandle (eight hours after TS Warnings were issued). No local states of emergency were declared until the June 25 (one day before landfall). Region 1 counties never called for evacuations even though warnings were issued and the forecast called for landfall at Panama City during the Monday morning forecast. Only three Region 2 counties ordered evacuation orders, most of them being declared about 24 hours prior to landfall and impacts were already being felt along the coast.

Starting on June 24, Debby produced torrential rainfall throughout the state of Florida, resulting in significant flooding, especially in Central and North Florida. In some areas of North Florida, more than 20 inches of precipitation was recorded.

Hurricane Isaac

Isaac began as a tropical depression east of the Lesser Antilles on the morning of August 21, 2012, reaching tropical storm strength later that afternoon. Isaac moved west across the Lesser Antilles on August 22 and into the eastern Caribbean Sea where it passed south of Puerto Rico. The center of Tropical Storm Isaac passed over western sections of Hispaniola and eastern Cuba on Friday night, August 24, and Saturday, August 25, as it moved northwest. Isaac then moved west-northwest through the Straits of Florida on Sunday, August 26, with the center passing across the lower Keys late that afternoon. Isaac continued on a west-northwest track over the southeast Gulf of Mexico Sunday through Monday, August 27. Initial forecasts from the National Hurricane Center showed Isaac potentially making a direct hit on mainland south Florida, with subsequent forecasts shifting the track slightly to the south, keeping the center of the storm offshore.

A Flood Watch was issued on August 26 for all of mainland south Florida due to the potential for significant flooding from the outer rain bands of the storm. As the center of Isaac passed by the lower Keys late Sunday afternoon, a series of heavy rain bands formed over the Atlantic and began to move onshore southeast Florida Sunday evening. The bands of heavy rains and squalls continued through the night and into early Monday morning.

The heaviest of the rain bands concentrated over Palm Beach and Broward counties, producing between 10 and 13 inches of rain mainly west of the Florida Turnpike from The Acreage south to northern metro Broward County. Other rain bands developed during the day on Monday over the same area in eastern Palm Beach County that received the heavy rainfall Sunday night. The final result was an area of 10+ inches of rain across roughly one-third of Palm Beach County from Jupiter Farms south to Boca Raton, then into northern metro Broward County from Coral Springs to Lauderhill. Maximum rain amounts were both measured and estimated in the 15 to 20 inch range across the Wellington and The Acreage communities.

These rains led to severe flooding, with the western communities of metro Palm Beach County hardest hit. Many streets were left impassable. Neighborhoods were isolated by several feet of water as a result of excessive rainfall overtopping canals. Damage was estimated at over \$8 million directly related to the flooding.

Purpose

The purpose of this report is to analyze the actions of the State Emergency Response Team (SERT) by identifying strengths to be maintained and built upon, identifying potential areas for further improvement, and to support development of corrective actions.

Major Strengths

The major strengths identified during these events are as follows:

- Vector Control
- Preliminary Damage Assessment Process
- Incident Action Planning Process
- Public Outreach
- EMConstellation Contingency Messaging

Primary Areas for Improvement as Identified by the State Coordinating Officer (SCO)

Throughout the event, several opportunities for improvement in the SERT's ability to respond to the incident were identified. The primary issues and challenges—as identified by the SCO—are as follows:

- Better Integration of GIS Data
- Automation of PDA
- Data Presentation
- Improve EOG Interaction
- FEMA Kickoff Meeting
- Waterway Clearance
- Utilization of Universities

SECTION 1: EVENTS TIMELINE

Table 1.1: Events Summary (All times are EDT)

Date	Time	Event/Action
June 24, 2012	1200hrs	State Emergency Operations Center activated to a Level 2 operation in response to Tropical Storm Debby
June 25, 2012	1200hrs	State Emergency Operations Center activated to a Level 1 operation in response to Tropical Storm Debby
June 25, 2012	NA	Executive Order #12-140 was sign to declare a State of Emergency due to Tropical Storm Debby
June 29, 2012	1900hrs	State Emergency Operations Center returns to a Level 2 operation in response to Tropical Storm Debby
July 12, 2012	NA	A Joint Field Office (JFO) became operational and assumed operational control for FEMA-4068-DR-FL
July 13, 2012	1630hrs	State Emergency Operations Center returns to a Level 3 operation
August 23, 2012	1300hrs	State Emergency Operations Center activated to a Level 2 operation in response to Tropical Storm Isaac
August 25, 2012	0830hrs	State Emergency Operations Center activated to a Level 1 operation in response to Tropical Storm Isaac
August 25, 2012	NA	Executive Order #12-199 was sign to declare a State of Emergency due to Tropical Storm Isaac
August 26, 2012	0800hrs	State Emergency Operations Center activated to a Level 2 operation for the Republican National Convention (RNC)
August 29, 2012	1130hrs	State Emergency Operations Center returns to a Level 2 operation in response to Isaac, remains at Level 2 for the RNC
August 31, 2012	1100hrs	State Emergency Operations Center returns to a Level 3 operation for the RNC, remains at Level 2 for Isaac
September 4, 2012	1700hrs	State Emergency Operations Center returns to a Level 3 operation

SECTION 2: BEST PRACTICES

Vector Control

Vector Control was both a success and challenge during Tropical Storm Debby. Prior to the arrival of the storm there had been above average amounts of rainfall in the panhandle and parts of north Florida. With the addition of Debby's rainfall there were vast areas of standing water not normally present in many counties. Managing vector control successfully is crucial immediately following a storm like Debby in order to protect the safety of those fulfilling recovery operations and for the citizens already affected by the storm.

A total of 16 counties requested state assistance with vector control following Tropical Storm Debby, all of these counties received assistance through the State Agricultural Response Team's (SART) - Mosquito Control Incident Response Team. Three additional counties were also assisted with their own vector control responses. The SART helped with spray assistance as well trapping, mosquito identification and the creation of spray maps for counties with limited resources.

Spraying began on July 16 and last through July 28. In all, over 800,500 aerial acres and over 2,100 ground acres were sprayed in 19 counties. Impacts of the vector control efforts were effective, with the SART recording 90% kill rates of mosquitoes in these areas.

Preliminary Damage Assessments

The Preliminary Damage Assessments (PDAs) were conducted in a fast and aggressive process during Tropical Storm Debby. PDA Teams were on the ground in counties before the 96 hour period was reached after initial heavy rainfall. Some 80 PDA (IA, PA, and beaches) missions were ultimately conducted within a 2 week period generating 34 counties with declarations.

The SERT used a two-pronged approach moving southwest to northeast in the peninsula and west to east in the Panhandle. Teams were moved rapidly as the event unfolded rather than waiting for complete clearance of the storm system. This allowed fast action on the declaration process in order to begin moving assistance into the counties. It also allowed the teams appropriate rest (reducing unnecessary travel), split the force between the Panhandle and Peninsula to gain some continuity within the regions, and move quickly into areas as further damage developed.

A large amount of data was generated by the PDAs, which was jointly vetted between the SERT, FEMA, and USACE in the most transparent means possible, and perhaps the best ever observed in the SEOC. Nightly updates of reports were compared and generated jointly which meant that next morning decisions for county declarations could

be made with confidence between the SCO and FCO. This added further to the speed of aid being delivered to eligible counties.

Most counties did an outstanding job of conducting Initial Damage Assessments (IDAs) as a means to prepare for a joint PDA. Pasco County was the first to request a PDA and then to submit an IDA to support it. Communications with this county went very well during this entire process which benefited all partners. Clay County submitted their IDA in a very comprehensive manner and the PDA team was able to use this information readily and quickly for this county. The more a county knows of their damage when the PDA teams arrived, the faster and more effective the entire PDA process can unfold and therefore the faster a declaration can be made in many cases.

Incident Action Planning Process

The Planning Section charged each of the Branches with implementing the use of Tactics Meetings. A Tactics Meeting allows a group to determine how the selected strategy will be accomplished in order to achieve the incident objectives, assign resources to implement the tactics and identify methods for monitoring tactics and resources to determine if adjustments are required.

Each Branch, along with the Logistics Section, held a Tactics Meeting daily prior to the Incident Action Plan (IAP) Meeting. These tactical planning meetings allowed the ESFs within a Branch the opportunity to coordinate with each other, which streamlined the IAP process. The collaboration amongst partners within each of the various Tactics Meetings enabled for a smoother flow of IAP meetings and cut down on the time spent in them.

Public Outreach

During the Tropical Storm Debby activation, ESF 14 responded to over 100 media calls. Coordinating a high volume of media inquiries required staff to work closely with each other as well as other SERT partners to ensure all information was accurate and consistent, as well as properly tracked for reporting. Effective communication, proactive leadership and close coordination with all emergency partners proved successful with very little misinformation in the media and positive stories on Florida's response to and recovery from Tropical Storm Debby. During the entire response to Tropical Storm Debby there was no negative feedback by the media regarding the State's actions.

ESF 14 also established an efficient tracking system for daily tasks that included staffing information, time sensitive deadlines and other tasks that had to be completed. This ensured that all staff were informed of important details for the ESF and were working together to accomplish the mission. Additionally, the distribution of the SERT Situation Report, customized for media consumption, became another tool used by ESF 14. This

release proactively answered many of the questions received from the media and reduced the number of daily media inquiries. More than 40 press releases were issued to local, state and national media outlets during the Debby activation.

Following the activation from Tropical Storm Debby, ESF 14 staff was still helping to coordinate information about the recovery phase of Tropical Storm Debby and also receiving increased media coverage and attention due to the Republican National Convention in Tampa. Sensitivity was greatly increased due to Tropical Storm Isaac and its potential impacts on the RNC; as a result close coordination with the Governor's Communications Office was necessary. More than 150 media calls were responded to by the ESF 14 team and many of these calls were live interviews with the State Coordinating Officer (SCO) by major national media outlets.

ESF 14 conducted 14 press conferences over a five day period with the Governor and State Coordinating Officer, as well as with FEMA and local emergency managers. ESF 14 staff worked closely with the Governor's Office and WFSU TV to inform the media and broadcast the press conferences from various locations. ESF 14 and the Joint Information Center released 16 press releases, including the daily situation reports and other relevant information. In addition, the Florida Emergency Information Line received more than 870 calls.

Contingency Info Message and Mission Message Planning for EMConstellation

In the time between Tropical Storm Debby and Hurricane Isaac, the SERT transitioned between two versions of EMConstellation. The newest version was updated to include a dashboard with customizable widgets to provide faster access to information for users such as the battle rhythm, weather alerts and mission updates. The new version also provides more search and sort features in the Missions and Info tabs. The upgrade to the new version of EMConstellation was a best practice in itself; however there were some glitches to the new system that became apparent shortly after the start of activation for Tropical Storm Isaac.

The major issue that many users noticed occurred when attempting to upload PDF attachments to Info or Mission Messages. EMConstellation seemed to "time out" when attaching these files and would not allow for timely submission of sometimes critical information.

However, the Planning Section and Operations Section had plans in place should an EMConstellation outage ever occur. Both sections created, prior to Tropical Storm Debby, paper and PDF versions of blank Info and Mission Messages. PDF versions of these documents were uploaded into EMConstellation at the start of each event and provided instructions on submitting these files via email, telephone or hard copy to the Planning and Operations Sections.

These contingency message forms were utilized by many ESFs within the SEOC as well as regional coordinators and counties. Because the forms were easy to use and simple forwarding instructions were provided, mission requests and the flow of information into the SEOC were not hindered from the EMConstellation glitch. The Planning and Operations Sections were able to receive messages promptly and upload them into EMConstellation as time permitted.

SECTION 3: IMPROVEMENT PLAN

This Improvement Plan has been developed specifically for the State Emergency Response Team as a result of the SERT’s responses to Tropical Storm Debby and Hurricane Isaac. These recommendations draw on both of the SERT Hotwashes following the SEOC activations. Information in this section was provided by SERT Sections, Branches, and ESFs.

Table 3.1: Improvement Plan Matrix

Opportunities for Improvement	Recommendations	Primary Responsible Agency
Need to clarify tactical role of Operations in management and operation of the SEOC including: tactic meetings, branch briefings, coordination calls and future operations planning	Conduct an internal Operations meeting to identify the issues and follow up with Planning Section and SERT Chief	Operations
Displaying and integrating multiple operational battle rhythms	Develop system for displaying concurrent battle rhythms	Planning
Need to revisit organization of the RECON Unit, multiple sources contacting multiple entities within SEOC	Conduct a meeting with information gathering units to discern when and why overlapping sourcing occurs	Planning/ Operations
Need to unify status reports. There are multiple reports being generated by multiple sections including: Situation Reports & Summaries (ESF 5), Daily Summaries (ESF 14), Protective Action Worksheets (RCs)	Transition from use of manual Protective Action Worksheets to a more robust Essential Elements of Information tool in EMConstellation that also drives primary indicators from GATOR	Planning/ Operations
Need to reinforce that day-to-day responsibilities are secondary to activation responsibilities	Discussion with DEM managers and leadership about priorities during gray skies vs. blue skies	SERT/DEM
Issues with too many Sections and/or Branches involved in assignment of missions leading to duplicity	Training on EMConstellation and the roles within EMConstellation	Operations Support
PDA data collection plan didn’t result in data GIS could use or compare to other event data sources	Work with Recovery to have GIS better integrated into the damage assessment process	GIS
Collecting and synthesizing road closure data continues to be a challenge	Working to integrate FHP, 511 and SWO feeds for road closure data	GIS
Collection of high water marks was not effectively managed or completed	Develop a high water strike team and SOP; work closer with RECON to target areas of concern and provide more operationally significant information during response	GIS/Planning

Understanding that data collection has limits and cutoff times for reports	Note on reports that "Information is current as off XXXX hrs"; Conduct a review of which data is appropriate to present in a static format (situation reports) and which data should be presented in a dynamic environment (GATOR, Google Crisis Map, etc.)	Planning
Experienced delays in obtaining approval of the situation report prior to distribution. The goal is to have the report distribute no later than 1130	Formalize approval process for SERT Chief approval and create other vetted approval routes in lieu of SERT Chief	Planning
Still some lack of interconnection between the IAP and the SERT briefings	Instituting a Command and General Staff Meeting at the start of each operational period before the morning briefing would assist in obtaining priorities and objectives.	Planning
Information sourcing continues to be a challenge given the multiple source of information	Transition from use of manual Protective Action Worksheets to a more robust Essential Elements of Information tool in EMConstellation that also drives primary indicators from GATOR	Planning/ Regional Coordinators
Need to nail down ownership of Air Operations for RECON as well as missions outside the scope of RECON	Add an Air Operations desk in EMConstellation to better coordinate air assets for both RECON and non-RECON missions	Planning/ Operations
Lack of depth in many SERT roles including ESF positions and volunteers	Recommend SERT leadership reaches out to state agency/division heads and share the importance of SERT functions and the need to enlist new staff to be trained and able to assist with SERT functions	SERT
Conflicting requests for overhead sound in ESF rooms	Ensure all sound systems work in all ESF and break out rooms; Investigate technology and cost for providing customizable audio for each position in the EOC	DMS/Tech Services
Disaster Recovery Center managers had very short notice to deploy; upon arrival, managers did not have needed tools and resources; partly due to reducing staffing, DOT did not have sufficient managers identified; communications about DRC was lacking	Work with Recovery to get additional state agencies involved in DRC manager training and staffing; Recovery could assist managers with booking travel, issuing mobile telephones, vehicles, computers and P-cards/cash; DOT will identify and train up to eighty potential DRC managers to have them available for deployment	Recovery/ ESF 1/3
Lacking a process for opening the FEIL on a weekend	Establish a process for weekend FEIL activation	ESF 14/15
Unclear who is responsible of managing casket/vaults disturbed by flooding	Recommend development of a protocol by DFS	ESF 8

EO was not circulated in a timely manner resulting in delays in filling 30-day prescriptions	Push the media message about EO and prescription needs and allowances; Improve the distribution network to required stakeholders	Operations/ Planning/ ESF 8/14
Issues getting mosquito control protocol/approval out through proper channels	Recommend ESF 8 and Recovery create viable process for approval	ESF 8/Recovery
Agencies should look to field responders as force multipliers to reach survivors	Recommend ESF 14 collaborate with other ESFs to identify all responder positions that may interact with survivors; Provide training to staff filling these roles so they can effectively communicate important information to survivors	ESF 14
Delays in mission request. Not all county requests were vetted prior to ESF tasking. Cross-ESF missions were difficult to track. Sometimes sub-missions were tasked as updates within the existing mission, sometimes entered as separate mission	Recommend an EOC-wide review of "how we task" to promote consistency	SERT/ Operations
Resources were spread thin to cover RNC and make preparation for possible storm landfall	Identify and train other personnel within state agencies that could fill ESF and other SERT roles	SERT
Initially there was not a centralized location for information on County Government Closures	Planning resolved the issue during the event	ESF 11
Need to accurately and consistently communicate National Guard capabilities, limitations and request procedures to the State, County and Local EM community to include local political leadership	Address in CIEM. The FLNG will also emphasize this using our DSCA coordinators as a conduit of information	ESF 13
Difficulties in developing a comprehensive list of all media calls received in the days prior to and during the activation	Purchase an online public relations software system (Vocus) with project-tracking and media contact tracking capabilities	ESF 14
Issues identifying resources at County EOCs for press conferences including capabilities for uploading feed to satellite	Meet with the Governor's Press Office, WFSU and representatives of local television stations to create a capabilities list for each county EOC and determine which local stations have the capability to upload to satellite	ESF 14
Some assisting state agency PIO staff were inexperienced in the SEOC/ESF 14 system and lacked situational awareness	Training and task assignments of new PIO staff and routine exercise and contact with them to ensure their retention	ESF 14
Difficulties in coordinating available resources without compromising the RNC security missions	Identify individuals with specific high level security clearances within each agency	ESF 16
Difficulties in identifying the collective contribution of the private sector in response and recovery activities	Assign ESF 18 liaisons to network with other ESFs that are engaging businesses	ESF 18
Obtaining input and guidance from local emergency management officials on response and recovery matters related to the private sector	Verify persons listed on the ESF 18 private sector contact list with County Emergency Management Directors	ESF 18

Due to budget constraints the EOG and the OPB take a more stringent look at the purchases, even during disasters, purchasing during activations may be limited.	Better coordination to determine if purchases will be made using funds identified for the disaster. Leadership may decide to purchase items/services with other funds, therefore would not need to be entered into EMConstellation	Finance
Communication issues due to DEM phone upgrades	Delay upgrading technology until after an activation; Priority is to accomplish upgrades off-season but recommend developing alternatives for how to accomplish during hurricane season as well	IT

SECTION 4: CONCLUSION

Tropical Storm Debby and Hurricane Isaac offered the State Emergency Response Team (SERT) an opportunity to assess its capability to provide multi-agency coordination and support to its counties. With the added challenge of Hurricane Isaac occurring during the Republican National Convention in Tampa, the SERT was also tested in its capability to handle simultaneous and dissimilar activations.

Activations for both Debby and Isaac, along with the RNC, provided a chance to test operational plans and procedures, which will be refined as required. Best practices discovered during these events have been noted and will become invaluable tools for future activations and exercises.

Finally, networking with individuals within the various disciplines of the SERT allowed for knowledge enhancement for new staff as well as veterans.

APPENDIX A: ACRONYMS

Table A.1: Acronyms

Acronym	Meaning
CEMP	Comprehensive Emergency Management Plan
CIEM	Current Issues in Emergency Management
DEM	Florida Division of Emergency Management
DEP	Florida Department of Environmental Protection
DFS	Florida Department of Financial Services
DOH	Florida Department of Health
DOT	Florida Department of Transportation
DRC	Disaster Recovery Center
DSCA	Defense Support of Civil Authorities
EEI	Essential Elements of Information
EO	Executive Order
EOC	Emergency Operations Center
EOG	Executive Office of the Governor
ESF	Emergency Services Function
FCO	Federal Coordinating Officer
FEIL	Florida Emergency Information Line
FEMA	Federal Emergency Management Agency
FHP	Florida Highway Patrol
FLNG	Florida National Guard
FOUO	For Official Use Only
FWC	Florida Fish and Wildlife Conservation Commission
GATOR	Geospatial Assessment Tool for Operations and Response
GIS	Geographic Information System
IA	Individual Assistance Program
IAP	Incident Action Plan
IDA	Initial Damage Assessment
HSEEP	Homeland Security Exercise and Evaluation Program
LNO	Liaison Officer
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OPB	Florida Office of Policy and Budget
PA	Public Assistance Program
PAW	Protective Action Worksheet
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
RC	Regional Coordinator
RECON	Reconnaissance
SBA	Small Business Administration
SCO	State Coordinating Officer
SEOC	State Emergency Operations Center
SERT	State Emergency Response Team
SOG	Standard Operating Guideline
SOP	Standard Operating Procedure
SWO	State Watch Office
USACE	United States Army Corps of Engineers