



FEMA

Region IV Future Planning 3-5 Day Outlook

October 11, 2018 (1700 EDT)



Impacted RIV Lifelines (or, Cascading Effects, Potentiality Impacted Lifelines)
RED, YELLOW, GREEN, GREY

****This Document is a summary of potential impacts in the next 3-5 days based on information available****

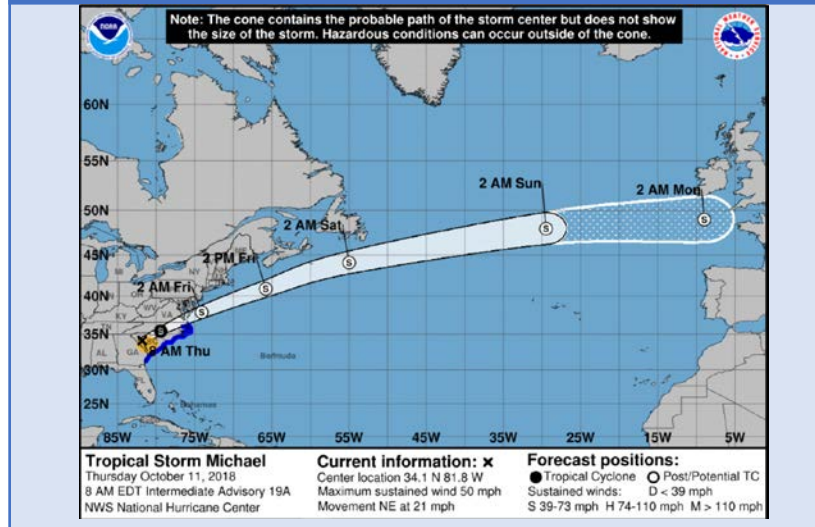
CURRENT SITUATION: Heavy rainfall from Michael could produce life-threatening flash flooding over portions of Georgia and the Carolinas. Tropical storm conditions will continue to affect portions of the southeast US coast from Georgia through North Carolina, and tropical storm warnings remain in effect for these areas.

3 Day Impact Summary (Based Upon Advisory 17 – AL, FL, and GA)

Based on NHC Advisory 17

Exposed Population (source: USACE)	Population: 1,895,572 Households: 654,915 Debris (cubic yards): 2,185,140 Temporary Roofing: 7,029	
Exposed Infrastructure / (Source: R4 GIS Wind Probability Impacts Advisory 15)	Communications: 128 Public Schools: 348 Health Care: 35 Nursing Homes: 42 State/Local EOCs: 26 Airport Primary: 3 Water (Waste/Treatment): 65 Mobile Home Parks: 457	
Commodities Available (Maxwell ISB staged NLTAs of 1300 on 10/11/2018)	Meals 3,283,282 Water 1,098,433 Gen 57 Tarps 30,773 Blanket 40,830 CUSI 72 I/T kits (3 TLs) 5 CME/DMS (1 TL) COT 16,637	Fuel Diesel 35K Gallons Mogas 20K Gallons Propane 12K Pounds Total 70,088 Shipped to GA Meals 221,184

3-5 Day Flood Impact Area & Current Activation Status



RIV RRCC	Level I (all ESFs, DCE, and DHS IP) effective 10/09/18
IMATS /LNOs	LNOs – AL, FL, GA, NC IMATs – National IMAT and RIV IMAT-2 @ FL SEOC, RII AL SEOC, RIV IMAT-3 GA EOC
Logistics	ISB Maxwell Operational 10/09/18, commodities staged 10/10/18

BLUF:

- IMATs are in place in all impacted states.
- Majority of the damage was due to Hurricane Force winds.
- Shelter populations may spike due to residents returning to residences that are inhabitable.
- Power should be restored within 5 days.
- Debris clearance will contribute to the opening of the transportation network.
- Additional impacts are still being assessed in FL and GA as local teams conduct assessments
- Local Emergency Management Services have been disrupted however contingency plans are in place to restore operations.
- Contingency plans are being developed for inoperable hospitals in the impact area.
- Recovery operations in NC and SC for Hurricane Florence have impacts to steady state operations in Region IV and the possible deployment of staff to FL post storm.
- Based upon the track of the storm damage to crops may have caused major economic losses for the impact area.
- DHS IP PSA is currently tracking IOC sites in FL and GA and AL

RIV Lifeline Analysis – 10/11/18 1800 ET

<u>Lifeline</u>	<u>Current</u>					<u>24 Hour Outlook</u>					<u>3 Day Regional Outlook</u>
	FL	GA	AL	NC	SC	FL	GA	AL	NC	SC	
Safety and Security	Yellow	Green	Yellow	Green	Green	Yellow	Green	Yellow	Green	Green	Yellow
Food, Water, Sheltering	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow	Green	Green	Yellow
Health/Medical	Red	Yellow	Green	Green	Green	Red	Yellow	Green	Green	Green	Yellow
Energy	Yellow	Red	Yellow	Green	Green	Yellow	Red	Yellow	Green	Green	Yellow
Communications	Yellow	Yellow	Green	Green	Green	Yellow	Yellow	Green	Green	Green	Yellow
Transportation	Yellow	Red	Yellow	Green	Green	Yellow	Red	Yellow	Green	Green	Green
Hazardous Waste	Grey	Green	Green	Green	Green	Grey	Green	Green	Green	Green	Green

Current – Based upon analysis of immediate o-period.

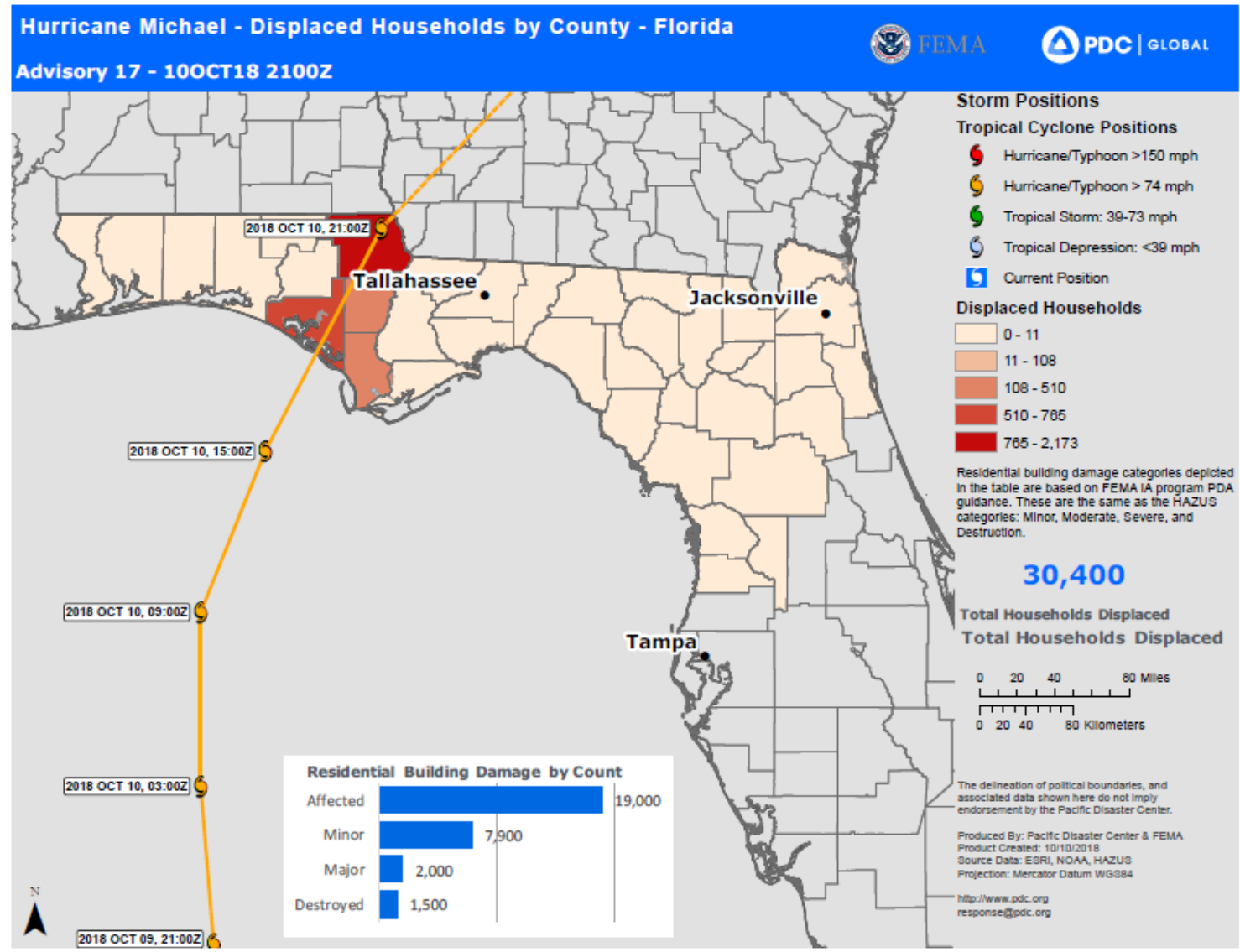
24 Hour Outlook – Based upon analysis of next o-period.

3-5 Day Regional – Based upon analysis of *regional* status in the next 3-5 days

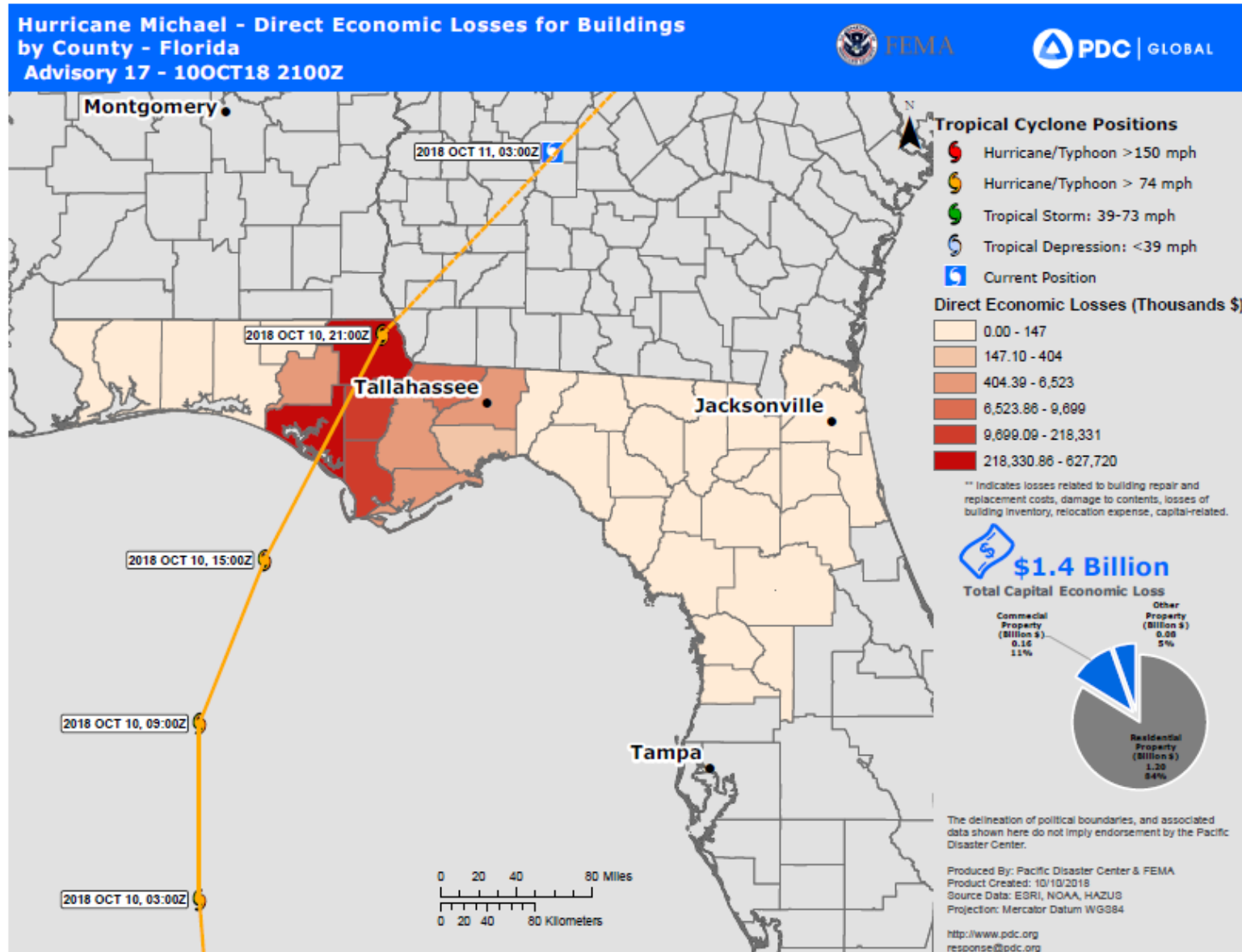
Recommendations for Stabilization

- Ensure coordination between power restoration plans and the communications sector plans and de-conflict priorities as necessary.
- Assure Coordination between Federal and State Logistics operations.
- Initiate interim housing concepts.
- Prepare to support long-term sheltering needs, which may require non traditional situations.
- Develop immediate action plans for reestablishment of health and medical network in the impacted area.
- Provide federal augmentation of health and medical services to rapidly stabilize impacted areas.
- Develop immediate action plans for emergency services in the impact area. (i.e. police, fire, 911 centers)
- Develop interim recovery plans and staffing requirements.
- Deploy resources and capabilities to conduct response and recovery operations as requested.
- Respond to IMATs and state requests for information and support.
- Provide assistance to the states for damage assessments utilizing traditional methods, remote sensing and modeling.
- Establish a housing taskforce in effected state and consider a regional housing task force to coordinate and support state efforts.
- Alert NDRF Assessment teams for deployment.

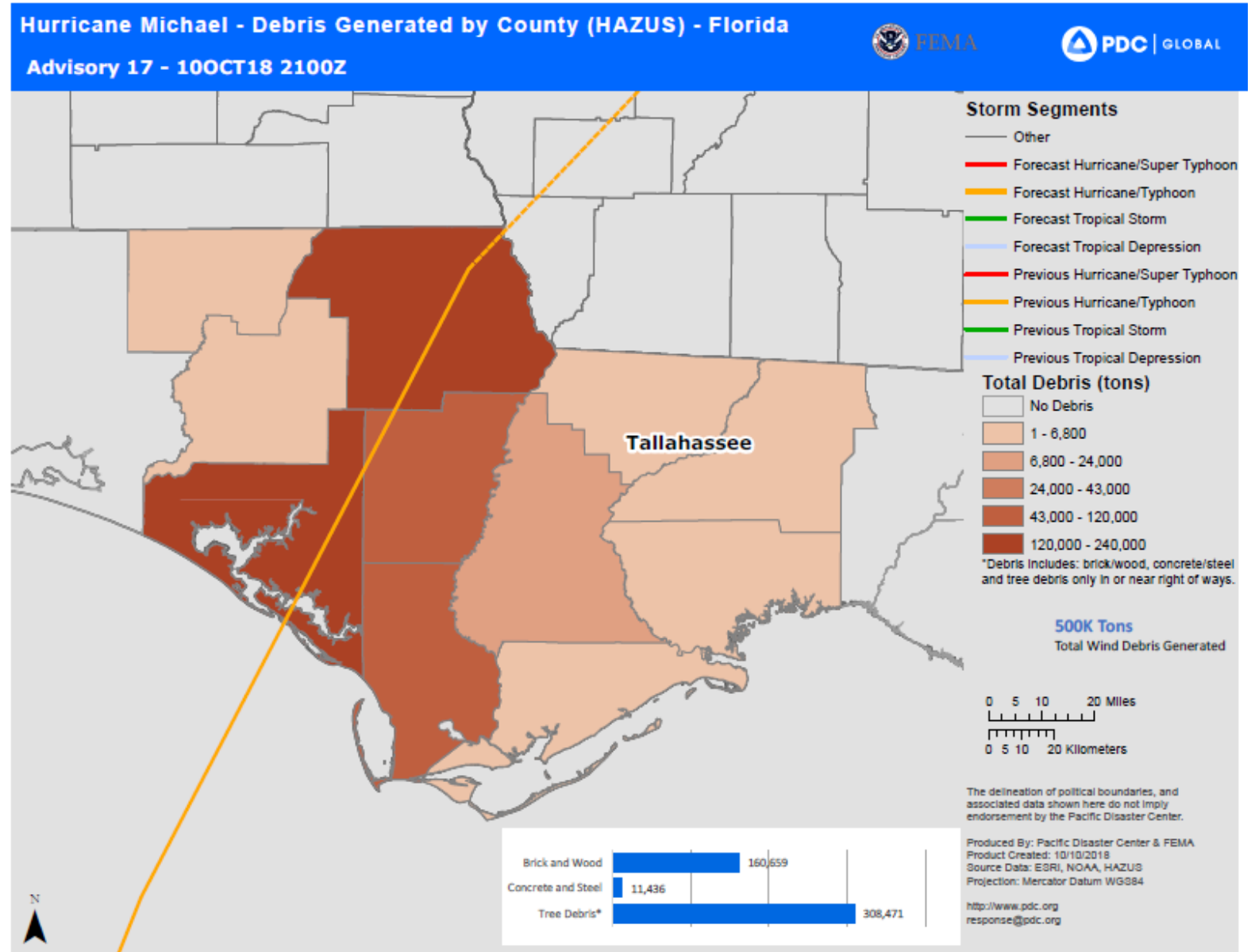
PDC Disaster Estimates – FL



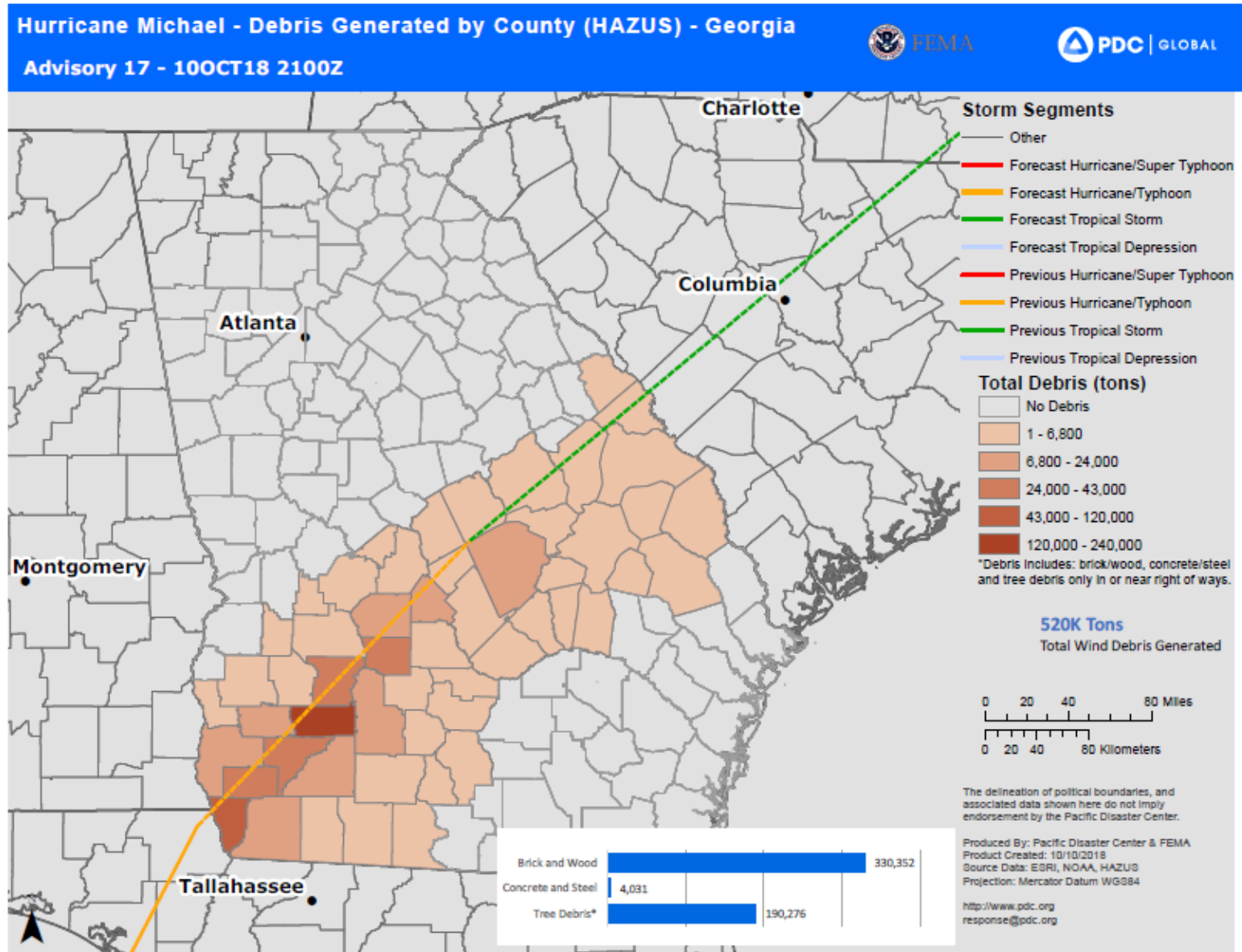
PDC Disaster Estimates – FL



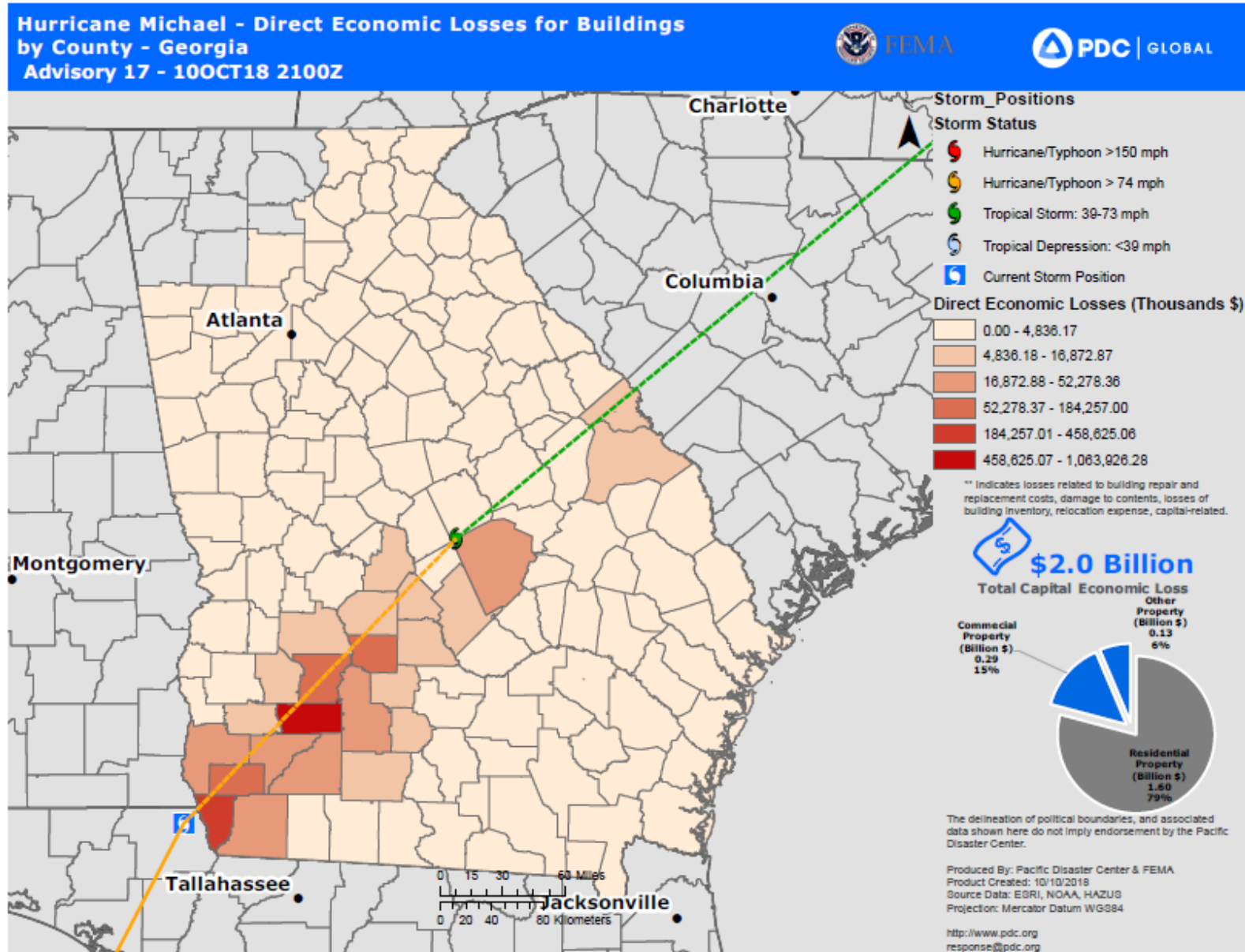
PDC Disaster Estimates – FL



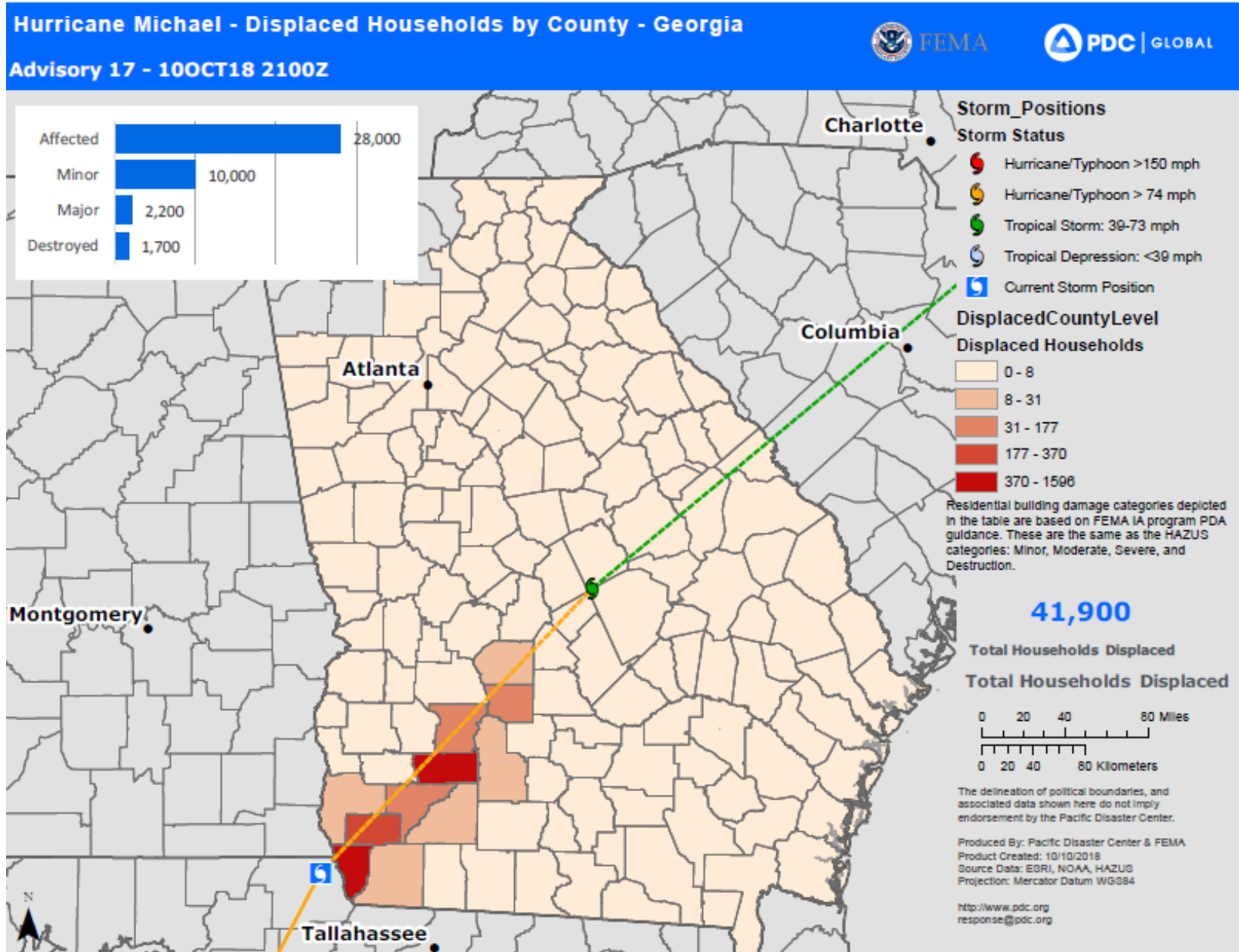
PDC Disaster Estimates – GA



PDC Disaster Estimates – GA



PDC Disaster Estimates – GA



USACE Damage Estimates - Final

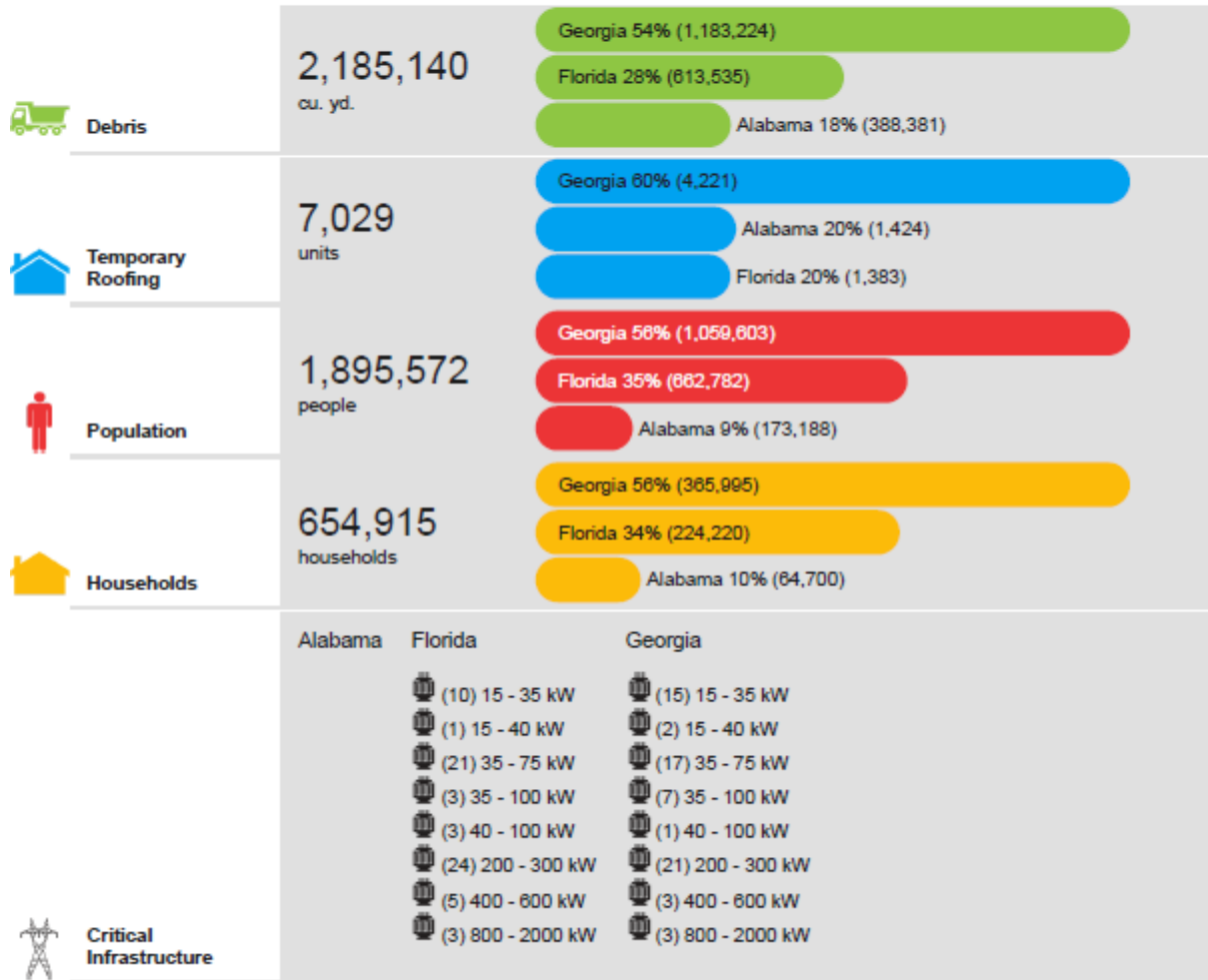


Hurricane Michael - Advisory #17

For Planning Purposes Only!

http://damsuite.usace.army.mil/web/v2.0/index.html?config=conf-mission-models_top&_25=54

Updated as of 10 Oct 2018 (6:31 PM Eastern Daylight Time)





Trend: deteriorating

Transportation *anticipated between 10/12/18 and 10/16/18*
Anticipated Impact Statement: Roadways will be congested due to re-entry operations post landfall.

Component	Key Element	What	So What	Now What	Limiting Factors
Highway/Roadway Motor Vehicle [RD]	Main Roads	Multiple major routes in the impacted area are closed due to debris on the roadways. The list of road closures should grow as assessments are complete.	Impacts: Emergency response personnel may encounter challenges as they attempt to reach impacted zones. Request all personnel operating in areas affected by the storm contact the USDOT Emergency Routing Call Center (1-833-STORM18) for assistance in identifying safe routes.	State DOT's are diligently working at clearing impacted routes and anticipate all roads will clear within the 3 day reporting period	None
Mass Transit [GR]	Bus Service	Mass Transit services in the impacted area are not operating, but the resources are available to resume operations when safe.	Impacts: Mass transit is operating limited or emergency services in the impacted areas.	Post storm assessments of transit facilities and equipment will occur when safe.	None
Railway [GR]	Infrastructure	Railroads' assessment and response crews are completing assessments and restorations in the impacted area.	Impacts: Cargo and passenger train service in the affected regions is disrupted	Post storm assessments of railroad facilities and equipment will occur when safe.	None
Aviation [YW]	Airport Status	All airports in FL and AL reopened. The lone closure is currently "ABY" in Georgia	Impacts: Airlines cancelled a significant number of flights at Charlotte (CLT) and Raleigh-Durham (RDU) airports in NC due to weather conditions.	Post storm Assessment of Southwest Georgia Regional (ABY) facilities and equipment will occur when safe.	None
Maritime [YW]	Port Status	Multiple ports in FL remain closed, with other regional ports operating with restrictions.	Impacts: No impacts to economy, safety or security.	Awaiting post storm, port assessments	None
Pipeline [GR]	Infrastructure	NSTR	Impacts: NSTR	NSTR	None

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Stabilization- Components of Transportation are able to support the Federal, State, Local, Tribal and/or Territorial Response by enabling all other Lifelines and is not a limiting factor for providing goods, resources and services to meet the immediate needs of the survivors



Trend: improving

Health and Medical *anticipated between 10/12/18 and 10/16/18*

Anticipated Impact Statement: Health and Medical resources may require augmentation to address shortfalls.

Component	Key Element	What	So What	Now What	Limiting Factors
Medical Care	Acute Medical Care	<ul style="list-style-type: none"> Many of the healthcare facilities are impacted in FL and GA. Displaced medical needs patients require medical support in a HCF or Medical Shelter 	<p>Impacts:</p> <ul style="list-style-type: none"> Patient and resident care affected in multiple compromised facilities across GA and FL Special Medical shelters may need federal medical and operational support in FL Multiple power outages to HCFs in FL and GA 	<ul style="list-style-type: none"> R4 ESF8 is coordinating with FL and GA ESF8 and monitoring status of healthcare facilities' essential service needs. 3 DMATs engaged in FL to support community medical and to support USAR operations. 3 DMAT staged, one on alert 2 RDF on alert 	<ul style="list-style-type: none"> HCF assessments ongoing. Full nature of compromise TBD
Patient Movement	Emergency Medical Services	<ul style="list-style-type: none"> Compromised hospitals and long-term care facilities may require evacuation. 	<p>Impacts:</p> <ul style="list-style-type: none"> Multiple HCF evacuations in FL Multiple HCFs on Generator power in FL and GA 	<ul style="list-style-type: none"> National Ambulance Contract implemented. HHS support with pharmacist and Pharmacy cache 	<ul style="list-style-type: none"> Identification of ambulance staging in FL Panhandle
Public Health	Hazard/Threat/Disease	<ul style="list-style-type: none"> Potential for public health compromise 	<p>Impacts: Unknown at this time</p>	<ul style="list-style-type: none"> Monitoring 	<ul style="list-style-type: none"> TBD
Fatality Management	Body Recovery and Processing	<ul style="list-style-type: none"> Potential for death 	<p>Impacts: Unknown at this time</p>	<ul style="list-style-type: none"> One DMORT-A enroute to Mobile for mission 	<ul style="list-style-type: none"> TBD
Medical Industry	Critical Pharmaceutical	<ul style="list-style-type: none"> Potential for healthcare infrastructure compromise 	<p>Impacts: Unknown at this time</p>	<ul style="list-style-type: none"> Monitoring 	<ul style="list-style-type: none"> TBD



Trend: improving

Hazardous Waste *anticipated 10/12/18 and 10/16/18*
Anticipated Impact Statement: Impacts did not exceed state capabilities.

Component	Key Element	What	So What	Now What	Limiting Factors
Facilities	Oil	Oil or hazardous substances discharge or releases from facilities that store oil or hazardous substances in quantities that require response plans.	Impacts: Post storm assessment of facilities may reveal discharges and releases that have occurred due to storm damage or loss of power.	Continued monitoring of National Response Center (NRC) Reports for incidents related to Hurricane Michael. Conduct overflight of prioritized facilities. Initiate facility outreach by email and phone to determine operational status and identify potential releases. All activities coordinated with state, tribal and local partners.	Facility access to communications.
Waste Water Systems	Delivery Systems	Impacts from inundation, power outage or broken lines	Impacts: Potential for limited to no public drinking water or wastewater service	Evaluate impacted facilities	Access, qualified assessment individuals
Incident Debris, Pollutant, Contaminant	Oil, Hazardous Materials and Contaminated Debris	Storm debris can inhibit recovery efforts	Impacts: potential for storm related debris to impact SAR, Response or Recovery efforts	Assess debris removal needs and magnitude of effort.	Availability of City, County, State Forces/Contractors or Federal Contractors to identify, assess, and begin debris removal operations.
		Oil or hazardous substances discharge or releases from various uncontrolled sources, including vessels displaced or sunken by storm	Impacts: Materials may be released due to storm impacts, resulting in a threat to human health, welfare or the environment	Continued monitoring of National Response Center (NRC) Reports for incidents related to Hurricane Michael. Field assessment to identify discharges or releases. Coordinated effort with state, tribal and local partners to ensure assessment and response.	Access to sites.
Conveyance	Pipeline	No anticipated unmet needs	Impacts: Unknown at this time.		

Stabilization-Hazardous Substance Facilities, Conveyance Assets, Waste Water Systems, Incident Debris/Pollution/contaminants, no longer requires an Emergency Response to mitigate imminent or substantial threats to Public health/welfare or the environment.



Trend: No Change

Communications *anticipated between 10/12/18 and 10/16/18*

Anticipated Impact Statement: Some loss of coverage resulting from potential disruptions of power and infrastructure damage (towers and antenna) – See Infrastructure. Not anticipated to exceed state capabilities.

Component	Key Element	What	So What	Now What	Limiting Factors
Infrastructure [YW]	Wireline & Wireless	Distruption of cell sites	Impacts:Alabama 90.78 cell sites up Florida 69.18 cell sites up Georgia 85.83 cell sites up	Continue to reestablish cellular network	
Alerts, Warnings, and Messaging [GR]	PSA Transmittance & Capability	Florida TV 1 reporting out-of-service. 10 FM radio stations out-of-service 1 AM stations out-of-service Georgia 1 TV out-of-service FM radio 9 stations out-of-service AM radio 3 stations out-of-service	Impacts: Unable to communicate messaging with the population of the impacted community	Contune to restore service	
911 & Dispatch [GR]	911 Telephone Access	PSAPS have been rerouted	Impacts:		
Finance [GR]	Access to Cash		Impacts:		
Responder Communication [GR]	IOF/JFO COMs		Impacts:		

Stabilization-Components of Communications are able to support the federal, state, local, tribal, and territory’s response by enabling all other Lifelines and is not a limiting factors for providing goods, resources, and services to meet the immediate needs of the survivors.



Trend: No Change

Safety and Security *anticipated between 10/12/18 and 10/16/18*

Anticipated Impact Statement: SAR and swift water rescue operations are anticipated to be ongoing through the outlook period.

Component	Key Element	What	So What	Now What	Limiting Factors
Government Service	Continuity of Government	No change for the next 72 hours. Landfall or wind conditions will result in changes.	Impacts: Potential impacts to disaster survivors who also provide government service	Initiate plan for county level division supervisors.	Availability of division supervisors.
Responder Safety	Conditions, Monitoring, and message	Responder Safety	Impacts: First Responders have been impacted by the storm.	In state EMAC is being initiated to augment first responder activity.	
Law Enforcement Security	Police	ESF13 staging and deploying LE resources (IMT, QRTs, and Logistics) in support of ESF-8 and ESF-9 teams. ESF13 LNOs on site at FL EOC, ESF8 IMT and ESF9 IST.	Impacts: There have been closures to emergency services in the area due to the storm.	Assess storm impact. Coordinate with State ESF-13 Coordinators in FL, GA, and AL, for potential DFA, EMAC, NG, or LE support. Coordinate with ESF8 and ESF9 for any force protection requirements.	None.
Search & Rescue	Resources	Activated (2) Type I USAR Teams TN TF1, TX TF1 **PA TF1 & NJ TF1 originally Type III's were augmented to become Type I teams** Activated (6) MRP-W Teams IN-TF1 OH TF1 VA TF1 VA TF2 MO TF1 MD TF1 Red IST (1) HEPP (TX)	Impacts: High wind damage require USAR operational support.	<ul style="list-style-type: none"> Support local government preparation, response, and recovery efforts priorities are life-saving, rescue, and evacuation for affected population. Rescue/assistance of any and all entrapped / isolated survivors. Provide for a "delivery of survivors" to a local recognized definitive care authority. Work with local Search and Rescue (SAR) authorities to complete all SAR missions. 	
Hazard Mitigation	Levee/Dams	Rainfall may increase water levels at dams.	Impacts: Increased water levels could result in large reservoir releases or overtopping of dams.	Federal and state dam safety programs are monitoring rainfall forecasts and advising dam owners to lower reservoir levels prior to rainfall as needed.	Access to private breached dams

Stabilization-The Safety & Security Lifeline is able to provide Search & Rescue, Law Enforcement/Security, Safety for responders to ensure SLTT life saving/sustaining services are adequate to meet the needs of the survivors



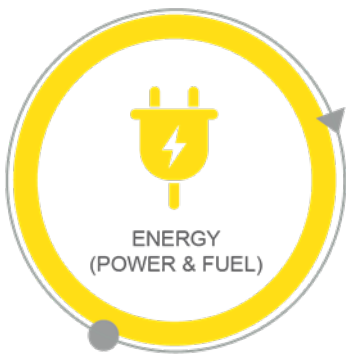
Trend: Improving

Food, Water, Sheltering *anticipated between 10/12/18 and 10/16/18*

Anticipated Impact Statement: Shelter operations ongoing as power is restored and re-entry routes are cleared.

Component	Key Element	What	So What	Now What	Limiting Factors
Food	Mass Feeding & Last Mile	Coordination with states on feeding and distribution plan	Impacts: May require extended feeding operations and identification rural or isolated areas requiring placement of resources that may operate below capacity.	Limited stock of shelf stable meals due to consumption by other events.	Access to utilities and transportation network; Personnel and resources returning from deployments to Florence; limited sources shelf stable meal and competing demands
Water	Water Utility & Systems	Coordination with states on feeding and distribution plan	Impacts: Power outages may result in limited operation for water treatment facilities and surge and flooding may contaminate wells.	Monitor for infrastructure outages and boil water notice.	Access to utilities and transportation network; Personnel and resources returning from deployments to Florence; limited sources for bottled water and competing demands
Shelter/ Housing/IA	Congregate Shelters	Shelters mobilizing to support evacuees and those impacted	Impacts: Tourist populations on fall break may require additional messaging and be utilizing hotel lodging. Populations shifts and shelter consolidation from evacuation shelters to post-impact shelters.	Analysis of shelter distribution and population/capacity and planning to reentry/post-impact sheltering Designation of and support for post-impact shelters Analysis and development of Multi-Agency Shelter Transition Teams, if required.	Access to utilities and transportation network; Personnel and resources returning from deployments to Florence
Durable Goods	Infant/Toddler Kits	Coordination with states on commodity distribution plan	Impacts: Local commercial sector resources may not be open and shipments may be delayed.	Conduct assessment of shelters, PODs and other sites for unmet needs and burn rates. Stage resources for availability.	Access to utilities and transportation network; Personnel and resources returning from deployments to Florence

Stabilization-Components are capable of supporting current and projected food, water, durable goods and sheltering needs of the Federal, State, Local, Tribal, & Territorial emergency response efforts.



Trend: improving

Energy Sector *anticipated between 10/12/18 and 10/16/18*

Anticipated Impact Statement: Power outages being reduced. Lifeline trending toward stabilization.

Component	Key Element	What	So What	Now What	Limiting Factors
Power Grid	Transmission and Distribution	Transmission and Distribution	Major damages to the coastal infrastructure. Inland has experienced significant damages that are wide spread across 4 states.	Impacts: wide spread power concerns across multiple sectors	Significant damage creates issues with restoration. Adverse weather has created delays and damage assessments are just beginning in areas where the weather is permitting
Temporary Power	Critical Facilities and Resources	Critical Facilities and Resources	Nothing to report	Impacts:	
Fuel	Critical Facilities	Critical Facilities	Bainbridge distribution facility off Colonial Pipeline spur experiencing loss of commercial power. No change for PS from yesterday- access an issue as noted in Transport lifeline.	Impacts: Operators report no expected issues at this time.	<ul style="list-style-type: none"> Expect commercial power to be restored before any distribution issues arise.

Stabilization-The Safety & Security Lifeline is able to provide Search & Rescue, Law Enforcement/Security, Safety for responders to ensure SLTT life saving/sustaining services are adequate to meet the needs of the survivors



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